MISSION STATEMENT

Valparaiso University, a community of learning dedicated to excellence and grounded in the Lutheran tradition of scholarship, freedom, and faith, prepares students to lead and serve in both church and society.
The General Catalog of Valparaiso University is designed to describe the programs of the University and to give that information needed to guide students in the successful achievement of their academic goals. Nevertheless, the material is for information only and does not make a contract between the student and the University. Students themselves are ultimately responsible for completion of the requirements for their degrees as well as for the value they receive from University programs.

The relationship between the University and its students is not custodial in nature. There is no special relationship with the University created by a student’s enrollment. The University does not assume any duty toward any student that is not otherwise required by operation of law or by the terms of this catalog.

In years when the General Catalog is not published an Announcement Bulletin gives information on important changes in courses, calendar, staff, program and policies. The University reserves the right to discontinue an academic program if it is deemed no longer central to the University’s mission.

Separate catalogs are issued for the School of Law, the Graduate Division and the Summer Session, which should be consulted for details about the related programs.

Statement on Equality of Opportunity. Valparaiso University provides equality of opportunity to its applicants for admission, enrolled students, graduates, and employees. The University does not discriminate with respect to hiring, continuation of employment, promotion, and tenure, other employment practices, applications for admission, or career services and placement on the basis of race, color, gender, age, disability, national origin or ancestry, sexual orientation, or (as qualified herein) religion. An institution committed to its Lutheran tradition, the University reserves its right to promote the teaching of the church and to exercise preferences in admissions and employment-related practices in favor of Lutherans.

Graduation Rate of Entering Freshmen. The graduation rate for all students entering Valparaiso University as first-time freshmen during the 1998-99 academic year was 73.6%. This graduation rate represents the percentage of students entering Valparaiso University as first-time (i.e., new) full-time degree-seeking freshmen during the 1998 Summer and Fall semesters who subsequently were awarded baccalaureate degrees by Valparaiso University within six calendar years (i.e., through August 2004).
December 9, Friday, 5:00 p.m. Deadline to officially withdraw from the University for Fall Semester. Last day to file petitions to change registration.
December 9, Friday, 10:00 p.m. Instruction ends.
December 10, Saturday, Reading day.
December 11, Sunday, December Commencement Ceremony.
December 12, Monday, 8:00 a.m. Final examinations begin.
December 16, Friday, 5:30 p.m. Final examinations end. Semester ends.
December 19, Monday, Noon. Deadline for reporting all grades.

SPRING SEMESTER 2006
January 9, Monday. Orientation and registration for new students.
January 11, Wednesday, 8:00 a.m. Instruction begins.
January 16, Monday. Observation of Martin Luther King’s Birthday.
January 18, Wednesday, 5:00 p.m. Deadline for adding first half short courses.
January 18, Wednesday, 5:00 p.m. Deadline for late registration for spring semester.
January 18, Wednesday, 5:00 p.m. Deadline to add or drop without a grade of W a regular course. All requests for adding a course during the official drop-add period (first six class days) shall remain at the discretion of the appropriate academic dean or department chair.
January 27, Friday, 5:00 p.m. Deadline to file for S/U grade for first half short courses.
February 10, Friday, 5:00 p.m. Deadline for withdrawing from first half short courses with grade of W.
February 10, Friday, 5:00 p.m. Deadline to file for S/U grade for regular courses.
March 3, Friday, 5:00 p.m. Deadline for arranging course intensification.
March 3, Friday, 6:30 p.m. Spring recess begins.
March 20, Monday, 8:00 a.m. Spring recess ends.
March 21, Tuesday, 5:00 p.m. Deadline for withdrawing from regular courses with grade of W.
March 24, Friday, 5:00 p.m. Deadline for adding second half short courses.
April 3, Monday. Last day to file application of candidacy for the associate’s and bachelor’s degrees to be conferred in December, 2006.
April 4, Tuesday, 5:00 p.m. Deadline to file for S/U grade for second half short courses.
April 14, Good Friday. No classes.
April 19, Wednesday, 5:00 p.m. Deadline for withdrawing from second half short courses with grade of W.
May 2, Tuesday. Last day for tests in courses of 3 credits or more. Last day to petition for change in date of final examinations.
May 9, Tuesday, 5:00 p.m. Deadline to officially withdraw from the University for Spring Semester. Last day to file petitions to change registration.
May 9, Tuesday, 10:00 p.m. Instruction ends.
May 10, Wednesday. Reading day.
May 11, Thursday, 8:00 a.m. Final examinations begin.
May 16, Tuesday, 8:30 p.m. Final examinations end. Semester ends.
May 17, Wednesday, noon. Deadline for grades for all candidates for all degrees.
May 19, Friday, 5:00 p.m. Deadline for reporting all other grades.
May 21, Sunday. 132nd Annual Commencement

Certain other dates are observed annually by the University: Reformation Day, Ash Wednesday, and Ascension Day.
Valparaiso in Brief

Faith and Learning

The University's concern for the personal and intellectual development of each student is rooted in its Lutheran heritage. This Christian philosophy of education guides both the design of its curriculum and the approach to learning that it fosters. Beyond the courses in theology which the curriculum provides, the University emphasizes a Christian freedom which liberates the scholar to explore any idea and theory, a vocation freely uniting faith and intellectual honesty. In its residential life the University leads students to accept personal responsibility for their development and encourages a sense of caring for one another. Standing together at the center of the campus, the Chapel of the Resurrection and the Christopher Center for Library and Information Services express the University's belief in the creative relationship between faith and learning. The University's motto, too, points up this relationship: In luce tua videmus lucem, "In Thy light we see light."

The Chapel is the focal point for worship, the proclamation of the Gospel and many cultural events. Both Sunday and daily services bring together members of the University community who choose to worship together. Students and professional Chapel staff offer a broad and creative ministry to the whole community. As the University welcomes students of varied denominations and religious traditions, so it welcomes the involvement of community churches in those students' lives. A Roman Catholic student center, for example, is located next to the campus, and some churches of other denominations offer transportation to their services in the town.

An Unusual History

In its 146 year history, the University has passed through three distinct phases. Begun by Methodists in 1859 as an institution pioneering in coeducation, the Valparaiso Male and Female College was forced by the reverses of the Civil War to close its doors in 1871. It was revived in 1873 by an enterprising educator, Henry Baker Brown, as the Northern Indiana Normal School. "Mr. Brown's School," a flourishing private, proprietary institution, was renamed Valparaiso College in 1900 and rechartered as Valparaiso University in 1907. During the next twenty years, it won national recognition as a low-cost, no-frills institution of higher learning which served thousands of students who might not otherwise have been able to afford a good education. Many alumni from this period achieved distinction in their fields as governors, legislators, scientists, business leaders and other professionals. However, after World War I the University went into decline and bankruptcy; then, in 1925, The Lutheran University Association purchased it, beginning the modern phase of the University's history. The Association, an Indiana corporation composed of men and women, the majority of whom are affiliated with Lutheran congregations, is a national organization whose members represent the principal regions of the United States.

Profile of Students and Faculty

The heart of an academic institution is its students and faculty. Valparaiso University's student body is selected from a large number of applicants from all states in the nation and from many foreign countries. Unlike most American colleges, which draw the majority of their students from their immediate location, Valparaiso enrolls slightly under 35% of its undergraduate students from Indiana; another 46% of undergraduates come from Great Lakes states. Major contingents come, too, from both East and West coasts. National and diverse in its student body, the University is still a distinctively Midwestern institution which enjoys the friendliness and hard work characteristic of the region. Exactly 57% of the students come from the upper fifth of their high school graduating classes. Approximately fifty National Merit Scholars are enrolled at the University in any given year.
A rich diversity characterizes the University faculty (about 250 full-time and 100 part-time professors), but they share important skills and attitudes as well. Educated at leading research universities, they are competent in their fields. They care about students, an attitude made visible by the frequent individual consultations they invite. Above all, they enjoy teaching and believe that their work enriches not only their students' but their own lives. At Valparaiso University there are no teaching assistants; senior faculty members and new-comers alike can be found teaching introductory and advanced courses. The University embodies in its faculty an ideal of the teacher-scholar, one who recognizes that teaching is based on continuing scholarship. Many members of the faculty have achieved significant reputations in their particular fields and are pursuing, with marked success, grants from government and private foundations to promote research and improve instruction. In addition to The Cresset, a periodical review of literature, the arts and public affairs, published by the University, faculty edit from the campus two other national learned journals.

University governance, too, reflects campus-wide involvement. Through the University Council, composed of faculty, students, administrators, and staff, students share in the development of University policy, including academic programs. Final responsibility for all academic programs, especially those which require certification, is vested in the faculty.

The modest size of the University, its organization into six small colleges, and especially the strong personal commitment of the faculty enhance its teaching effectiveness. In a school like this, with its concentrated residential focus and the immediate relationships it fosters between faculty and students, educational life is more vital and more intense than would be possible at massive institutions or at commuter colleges. Valparaiso University consciously fosters this tradition in the selection of both its students and its faculty in the development of its educational programs.

The Goals of Education at Valparaiso

While appreciating the importance of preparing students for useful careers, Valparaiso University holds to the ideal that its students want an education which treats them first as human beings rather than simply as future wage earners. These students want to think clearly, to analyze facts and ideas, to draw sound conclusions from their reasoning and to express themselves clearly and creatively. They want to understand their cultural and religious heritage, developing a sensitivity to the culture and the viewpoints of others while at the same time finding for themselves firm values and standards by which to live and make judgments. They want to become humane and responsible citizens in an ever changing society and to participate effectively in their institutions and communities.

There is no simple formula for acquiring these abilities. Every degree program at Valparaiso aims to assist students to attain these goals by offering a course of studies in general education which provides students with a broad base of knowledge and abilities, as well as in a particular area which leads to the mastery of concepts and tools of a single field of study. Both components, general education and the major field of studies, develop abilities in the student which go far beyond mere career preparation and provide intellectual enrichment for a lifetime.

Degrees

UNDERGRADUATE DEGREES
Associate of Arts
Associate in Science
Bachelor of Arts
Bachelor of Music
Bachelor of Music Education
Bachelor of Science
Bachelor of Science in Education
Bachelor of Science in Fine Arts
Bachelor of Science in Physical Education
Bachelor of Social Work
Bachelor of Science in Accounting
Bachelor of Science in Business Administration
Bachelor of Science in Civil Engineering
Bachelor of Science in Computer Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Bachelor of Science in Nursing
Summary of the Academic Fields of Study at the University

Most of the fields of study listed below are available as majors and minors or as interdisciplinary programs. A few are available only as minors. Some fields offer further specialized concentrations within the major itself. The index of this Bulletin indicates the location for further information regarding these programs.

The College of Arts and Sciences:
- Actuarial Science
- American Indian Studies Minor
- American Studies
- Art
- Biology
- Chemistry
- Chinese and Japanese Studies
- Classics
- Communication
- Computer Science
- Creative Writing
- Criminology
- Economics
- Elementary Education (Early/Middle Childhood)
- English
- Environmental Science
- French
- Geography
- Geology
- German
- Hebrew Minor
- History
- International Economics and Cultural Affairs
- International Service
- Japanese Minor
- Mathematics
- Meteorology
- Middle School/Junior High School (Middle Level Education)
- Modern European Studies
- Music
- Music Education
- Music Enterprises
- Music-Theatre
- Philosophy
- Physical Education
- Physical Education: Athletic Training
- Physical Education: Sports Management
- Physical Education: Exercise Science
- Physics
- Political Science
- Pre-Seminary Studies
- Professional Writing
- Psychology
- Secondary Education (Adolescence/Young Adult)
- Social Work
- Sociology
- Spanish
- Theatre
- Theology
- Writing Minor
- Youth, Family, and Education Ministry

Christ College:
- Scholar and Associate Honors Program
- The Humanities

The College of Business Administration:
- Accounting (two degree options)
- Finance
- Information and Decision Sciences
- International Business
- Management
- Marketing
- International Business and Global Studies Minor

The College of Engineering:
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering

Interdisciplinary Programs:
- Applied Statistics Minor
- Bioethics Minor
- Business Administration Minor
- Environmental Studies Minor
- Film Studies Minor
- Ethnic Studies Minor
- Gender Studies Minor
- Liberal Arts Business Minor
- Manufacturing Management Minor
- Political Communication Minor
- Urban Studies Minor

The College of Nursing:
- Nursing
- B.S.N. completion program for R.N. students
- Accelerated BSN degree option

Programs of the School of Law and the Graduate Division are described in separate catalogs.

The Freshman Year

Even though they may express clear-cut decisions, college freshmen are often uncertain about their long-range career goals. The University fosters this openness by encouraging them to discover new interests while cultivating their current ones. All students, with the help of their academic advisors, design a program that allows them first to explore various areas of interest and, in due time, to develop a plan of study focusing on a major area of interest.

The Valpo Core Course. The Valparaiso Core Course is a two-semester, ten credit course required of all first-year students not enrolled in the Christ College Freshman Program. The primary subject of this interdisciplinary course is the human experience as great thinkers, writers, and artists have represented it. The primary object of the course is to welcome and initiate new students into this university community and academic life generally, by putting them in dialogue with great teachers and great texts, and of course, with each other, to explore together some of the most essential aspects of human existence, past, present, and future.

The course is interdisciplinary because knowledge is interdisciplinary, and in the global community we now live in the world depends increasingly on people able to make connections across disciplines, across cultures, across oceans, across town. To prepare our students to succeed in this world and live meaningful lives of leadership and service, we recognize the need to introduce them to cultures and traditions other than their own. The reading list is multicultural and international because the world is multicultural and international. At the same time, we recognize the need to help students discover where they come from and where they are, which for the majority means exploring the Judeo-Christian intellectual tradition of the West, which produced, among other great things, this University.

Hence, at the core of this Core Course, in the best spirit of Lutheran higher education, is the desire to create dialogues of texts and traditions, and to help our students grow in their understanding of how the past speaks to the present, how the sacred informs the secular.
First-year students need special skills to enter fully into this dialogue and become successful students in the fullest sense. The Valpo Core is designed to help students develop those skills necessary for them to thrive in their studies, skills in close reading and critical thinking, in speaking, and especially in writing. Great opportunities also exist in the course for students to become more adept at retrieving, evaluating, and managing information, as they hook up to the rest of the world through our electronic information services.

Because of the interdisciplinary nature of the Core course, some institutions experience difficulties determining how to apply these credits toward their own general education requirements. CORE 110 may be distributed as 3 credits of English composition and 2 credits of philosophy/theology. CORE 115 may be distributed as 3 credits of non-U.S. History and 2 credits of philosophy/theology.

Off-Campus Study Programs in the United States

Washington Semester Program. Through an agreement between Valparaiso University and the American University, Washington, DC, students from Valparaiso may spend one semester of their junior year (or some other semester by arrangement) at American University. The program is a set of courses designed to give the students an opportunity to see at first hand the broad range of the governmental and political activity in Washington through field visits, consultation with officials and evaluations, and experiences led by academic instructors. The program includes sessions on National Politics, Urban Politics, Science and Technology, International Development, Foreign Policy, Economic Policy and Justice.

The Valparaiso University course POLS 120 is a prerequisite to this program. This program is not open to students who have participated in the Semester on the United Nations Program. Students register at Valparaiso University for the Washington Semester and pay to American University the normal general fee of this University and the usual tuition and fees of Drew University. Expenses for travel, meals and lodging are paid directly by the students. Semester on the United Nations courses are accepted for full credit toward graduation from Valparaiso University.

The Lutheran College Washington Consortium. Valparaiso University is a member of the Lutheran College Washington Consortium, sponsored by a group of eleven Lutheran colleges and universities. The consortium offers a full semester of courses designed to introduce students to the range of governmental activities in Washington, with an emphasis on ethical dimensions of public service. The Core Course is thus entitled "Ethical Issues and Public Affairs." The director of the program also places students in internships ranging from congressional offices to various public and private agencies.

The Valparaiso University course POLS 110 is a prerequisite to this program. This program is not open to students who have participated in the Semester on the United Nations Program or the Washington Semester Program at American University.

Students register at Valparaiso University for the Washington Consortium Semester and pay to this University the tuition and general fee. Expenses for travel, meals and lodging are paid directly by the students. Students are accepted for full credit toward graduation from Valparaiso University.

For information on the Washington Consortium Semester see the Dean of the College of Arts and Sciences.

Semester on the United Nations. Through an agreement between Valparaiso University and Drew University, Madison, NJ, students from Valparaiso may spend one semester of their junior year (or some other semester by special arrangement) at Drew University. The curriculum includes on-the-scene observations and analyses of the United Nations through direct contact with United Nations meetings and headquarters. For two days each week of the semester the student is in the proximity of the United Nations in New York under the supervision of a member of the Drew University faculty.

Valparaiso University course POLS 130 is a prerequisite to this program. This program is not open to students who have participated in the Washington Semester Program.

Students register at Valparaiso University for the Semester on the United Nations and pay to Valparaiso University the normal general fee of this University and the usual tuition and fees of Drew University. Expenses for travel, meals and lodging are paid directly by the students. Semester on the United Nations courses are accepted for full credit toward graduation from Valparaiso University.

Chicago Arts Program. The Chicago Arts Program is a 15-week guide to the contemporary art world. In addition to attending a wide range of cultural events, students live in Chicago and meet and work with local artists and arts professionals on part-time internships and independent study projects, and in two courses, the Core course, Negotiating the Artworld, and an elective special topics seminar or studio course. Possible internship placements include in an artist's studio; in a museum or gallery; with a theatre or dance company; with an orchestra or presenting venue; with a magazine or newspaper and more. Not limited to arts majors, the program benefits all students who have strong interests in the arts.

Chicago Urban Semester. Through the College of Arts and Sciences and with the cooperation of the Associated Colleges of the Midwest and many other institutions, students may spend one semester program involving residence in Chicago. This program offers students 16 credit hours of instruction including closely supervised internships and independent study projects. Through the course work, students learn the magnitude and complexity of an urban environment by analyzing and experiencing the political, social, economic and cultural forces shaping a city. For descriptions of courses and grading policies refer to page 233.

Sophomores, juniors and seniors are eligible to participate. The program is offered both fall and spring semesters.

Valparaiso students register at Valparaiso University for the Chicago Urban Semester and pay to this University the tuition and general fee. Extra fees for travel and meals are paid directly by the students. Chicago Urban Semester courses are accepted for full credit toward graduation from Valparaiso University.

Cooperative Education Program. Cooperative education is an academic program which combines professional work experience with academic coursework. Paid employment occurs in business, Industry, government, or other professional settings. The Cooperative Education experience is available in the Colleges of Arts and Sciences (page 56), Business Administration (page 188), Engineering (page 203), and Nursing (page 223).

All students in good standing who meet the grade point minimum declared by the particular college may participate in the program. Students may enroll in full-time (called alternating) or part-time (called parallel) programs, except in the College of Engineering where only the alternating program is available. Academic credit for Cooperative Education is granted by the college or participating department in which the student is enrolled. The number of co-op credits counted toward a major or a degree varies by college or department. Students should consult with faculty co-op coordinators to determine how co-op credits may apply to majors and/or degree requirements.

The Cooperative Education program enriches the total education of students by providing the opportunity to increase their sense of responsibility, judgment, and self-confidence through off-campus experiences that are closely integrated with their academic studies.

Students are considered to be continuing full-time students of the University while on co-op assignment.

Other Academic Opportunities

Internships. A number of internship opportunities have been established in several departments in the College of Arts and Sciences, in the College of Business Administration, and in the College of Engineering. Some of these are optional, others are required. These internships allow students to learn by direct experience under the supervision of a professional. Further information is given in departmental descriptions.

Service Learning. Service learning is a credit based educational experience in which students participate in an organized service activity that meets identified community
The Janet Lynn Kerr Memorial Lectureship in Asian Studies is an annual lecture made possible by the family, friends, and colleagues of Professor Kerr, a Christ College faculty member from 1991 until her death in 1999.

O. P. Kretzmann Lectureship in Christian Ethics, established in honor of the wife of President O. P. Kretzmann, is delivered annually. Earnings from the O. P. Kretzmann Memorial Fund underwrite the expenses. At the direction of the President of the University, the lectureship may periodically be replaced with a memorial sermon on a topic related to Christian faith and social issues.

A. J. W. and Elfreida LeBien Endowment Fund for Lectures on Liturgy provides income for lectures on liturgy and for publication of brochures related to the Chapel.

Monsanto Lectures on Tort Law Reform and Jurisprudence were established at Valparaiso University by the Monsanto Fund. This annual series is funded by a generous gift from the Monsanto Fund eleemosynary arm of the Monsanto Company. The gift enables Valparaiso University to invite distinguished scholars and professionals to re-examine the theory of tort as it has evolved in this country and to explore avenues for its reform.

J. W. Miller Memorial Lectures, delivered during Reformation Week by prominent religious leaders, were established in memory of Pastor J. W. Miller, who was an important influence in establishing Valparaiso as a Lutheran University.

The Arnold Moeller College of Business Administration Endowment Lecture was established in 1989. The fund supports faculty research and development with the Business College.

The Warren Rubel Lectures Endowed Fund was established in 1992 by alumni and friends of Christ College to honor Professor Rubel’s service to the University and Christ College.

Edward A. Seegers Lectures are presented annually by an eminent legal scholar. The lecture series honors Mr. Edward A. Seegers, a benefactor of the University who endowed the Louis and Anna Seegers Chair in Law. The series is under the supervision of the Seegers Professor of Law.
Academic Programs

Percy H. Sloan Memorial Lectures in Art, established as a memorial to Percy H. Sloan, who endowed the Sloan Collection of American Paintings, are presented by prominent artists and art critics.

Thomas F. Staley Distinguished Christian Scholar Lectures were established by Thomas F. Staley to further the evangelical witness of the Christian Church, with a particular concern for college students.

Tabor Law Lectureship in Ethics, established by Mr. & Mrs. Glenn J. Tabor to provide funds for a law lectureship with emphasis on ethics.

University Lectures on various topics of current interest are presented from time to time at University convocations as an integral part of the University’s educational program.

The Zahn Award and Lectureship Fund was established in 1971 by Irene Zahn in memory of her parents. The fund is to be used to provide for a scholarship for an art student and also provide for art lectures.

The annual Louis E. and Janice M. Zeile Lecture on Christian Vocation honors Valparaiso University graduates Louis E. Zeile (1950) and Janice M. (Kolterman) Zeile (1949). The lecture was established by their children and their spouses at the time of their parents’ 50th wedding anniversary.

Endowed Chairs and Professorships

Richard P. Baeppler Distinguished Professor in the Humanities, endowed by a challenge grant from the National Endowment for the Humanities and generous gifts from alumni and friends of the University, is a rotating two year appointment of a faculty member in a humanities discipline, established to honor the contributions of Richard P. Baeppler and to enhance the interdisciplinary teaching of the humanities in general education.

The Walter E. Bauer Professorship of Art History was established through a grant from the National Endowment for the Humanities and Friends of Valparaiso University to honor the late Dr. Walter E. Bauer in recognition of his leadership in advancing the study of art and its history at Valparaiso University.

The Paul H. Brandt Professorship of Business was established by Paul H. Brandt to promote excellent teaching and leadership in the College of Business Administration.

The Paul and Cleo Brandt Professorship of Engineering was established by Paul H. Brandt to promote excellence in teaching in the College of Engineering.

The W.C. Dickmeyer Professorship in Christian Education was established by the family and friends of W.C. Dickmeyer, who was instrumental in the purchase of the University by a group of Lutheran clergy and laymen and who served on the Board of Directors of the University for more than 40 years.

The Phyllis and Richard Duesenberg Chair in Christian Ethics is a University Professorship established by Phyllis and Richard Duesenberg to explore, research, write and teach the ethical implications of contemporary social issues from the Biblical perspective and the perspective of Lutheran Symbolic Writings.

The Phyllis and Richard Duesenberg Chair in Christianity and the Arts in Christ College supports the research and writing of a scholar of national repute engaged in the study of religion and art.

The Phyllis and Richard Duesenberg Chair in Law, recognizes and supports the work of a proven and productive scholar of national reputation and a teacher of demonstrated excellence.

The Phyllis and Richard Duesenberg Chair in Lutheran Music supports the teaching and study of a faculty member whose efforts focus on Lutheran music.

The John R. Eckrich Chair in Religion and the Healing Arts, a University Professorship established by the Lutheran Charities Foundation of St. Louis in memory of John R. Eckrich, supports the study of the interrelationship of faith, ethics and health.

The Walter G. Friedrich Professorship of American Literature was established with the support of the National Endowment for the Humanities and Friends of Valparaiso University to honor the late Dr. Walter G. Friedrich, Valparaiso University professor of English, and to support and encourage high quality teaching in American literature.

The Frederick F. Jenny Professorship in Technology was established by Catherine Jenny to honor the life and work of Frederick F. Jenny and to enable the selected College of Engineering faculty member to impart new knowledge to students.

The Emil and Elfriede Jochum Chair in Lutheran Music was established through a gift from Mr. Emil Jochum, supports the study of Christian values in public and professional life.

Kruse Organist Endowed Professorship was established by Frederich J. Kruse in memory of his parents, Edward A. and Anna L. Kruse, for advancing the integral role of organ music at the center of the University’s worship community.

The Richard E. Meier Professorship of Management was established by Richard E. Meier to advance the College of Business Administration.

The Louis S. and Mary L. Morgal Endowed Chair of Lutheran Business Ethics was established by Louis S. and Mary L. Morgal, with additional support from Proctor and Gamble, Inc., to promote the understanding and practice of Christian business ethics by students, faculty, and the business community.

The Surjit S. Patheja, M.D., Chair in World Religions and Ethics was established by Surjit S. Patheja, M.D., to promote appreciation of world religions, religious tolerance and world peace.

The Fredrick A. and Mazie N. Reddel Professorship of Music, established by the Reddel family to honor Frederick A. and Mazie N. Reddel, is a professorship in the Department of Music.

Leitha and Willard Richardson Professorship of Engineering was established by Leitha and Willard Richardson to promote excellence in the College of Engineering.

The Herbert H. and Agnes S. Schulz Professorship of Business was established by members of the Schulz family in honor of their parents to support the high goals of the College of Business Administration.

The Louis and Anna Seegers Chair in Law was established by Edward A. Seegers in honor of his parents to promote teaching and scholarship in the School of Law.

The Alfred W. Sieving Chair of Engineering was established by a gift from Esther C. Sieving and Frances H. Sieving to honor their brother, Alfred W. Sieving, and to advance the College of Engineering.

Special Academic Endowments

The Carl and Isabelle Brauer Business Ethics Fund. This endowment has been established to support activities in the area of business ethics.

The Carl and Isabelle Brauer Humanities Fund. The fund promotes professional activities in the humanities.

The Carl and Isabelle Brauer Music Endowment. This endowment is intended to enhance the music program of the University.

The endowed Fund for Faculty Research and Faculty Development-1975 Senior Class Gift. This endowment supports both research expenses and faculty development projects.

The Faculty Research and Development Endowment. This fund is being developed by contributions from the faculty and friends of the University.

The Albert G. Hugeli Library Fund. This fund was established by friends to honor the former President of the University.

The O. P. Kretzmann Memorial Fund for Research in the Healing Arts and Sciences. Established by the Wheat Ridge Foundation, this endowment annually supports faculty research.

The Library Humanities Fund. This endowment was created by a major grant from the National Endowment for the Humanities which was matched by friends of the University, and exists to fund acquisitions in the humanities.

The Sigrid Lindemann Faculty Development Endowment. This endowment was established by the late Helen Lindemann in memory of her daughter who had taught in the College of Nursing. Its earnings support professional activities and research in nursing.
Academic Programs

The Mechanical Engineering Research Fund and the Civil Engineering Research Fund. These funds have been developed by the faculty of the College of Engineering to support research.

The Arnold H. Moeller College of Business Administration Endowed Fund. This fund is available to the College of Business Administration for purposes of underwriting professional growth.

The Moody Laboratory Fund. This endowment supports the development of laboratories in the Department of Mechanical Engineering.

The Rusch Memorial Library Fund. The earnings from this fund are used for library materials.

The Janet Sievers Accounting Faculty Development and Research Endowment. Established by alumni in memory of Professor Janet Sievers, this fund is used to support professional activities and research in the area of accounting.

The Judge Luther M. Swygert Memorial Endowment. Established by his family in memory of the late Judge, this fund supports the Moot Court Program of the School of Law.

The Michael and Dianne Swygert Research Fellow. Awarded to a faculty member or librarian who, through his or her scholarship, teaching, and service to students, exemplifies the highest standards.

The Michael and Dianne Swygert Teaching Fellow. Awarded to a faculty member or librarian who, through his or her teaching and service to students, exemplifies the highest standards of teaching and service.

The Endowed Ziegler Family Research Fund for the Humanities. This fund supports faculty research in the humanities.

In an age of global interdependence, the University strongly encourages its students to acquire part of their education abroad. A variety of opportunities exist which enable students to spend a summer, a semester or a whole year in another country as participants in study-abroad programs sponsored by Valparaiso University.

The University sponsors fourteen programs abroad; two of which (Cambridge and Reutlingen) are exclusively Valparaiso University programs; the other twelve (Tübingen, Puebla, two programs in Paris, Hangzhou, two programs in Japan, Oak Hill in London, Anglia Polytechnic University in Cambridge, College Year in Athens, Namibia, and Granada, Spain) are offered in conjunction with host-institution programs. Students considering study abroad should consult the Director of International Studies as well as their academic advisor early in their academic program, to ensure the coherence and continuity of that program.

Most financial aid that students receive while attending Valparaiso University may be applied to the fourteen Valparaiso University-sponsored programs. Exceptions may include on-campus employment, and some music and athletic scholarships. Please inquire in the International Studies Office for more specific information. Credits and grades earned through these programs are treated as though they were earned on campus.

In order to facilitate planning, both by students and the administration, students should apply two semesters in advance of the semester in which they plan to participate. The deadline for applications is the sixth week of each semester, and selections take place in the seventh week. Applications may be submitted through the sixth week of the semester immediately preceding the semester abroad, if spots are still available.

Students are encouraged to participate in study-abroad programs during their junior year. However, sophomore standing during the year or semester abroad is a minimum requirement for admission to all of the programs except the Tübingen and Granada programs, which require junior standing for participation. Beyond this, the programs have varying requirements for admissions. Some programs have a minimum foreign language requirement for admission.
While the course offerings available through these programs vary considerably, students may frequently satisfy some Major, Minor, and/or General Education Requirements through courses taken in these programs. Students should consult with Department chairs and their academic advisor prior to participation in any program to verify that courses will satisfy certain requirements. General Education Requirements which have in the past been fulfilled or partially fulfilled by courses taken through these programs include the following: Fine Arts/Fine Arts-Literature, Foreign Language, History/Philosophy, Social Analysis, and Theology. Participation in any VU study-abroad program fulfills the Global Diversity Requirement.

For the programs in Cambridge, Reutlingen, Puebla, and Hangzhou, students pay regular tuition, the general fee, the double-room fee, and a study-center fee, if applicable (see page 259). For the other programs, students should check with the Director of International Studies concerning payment procedures.

In most cases, the International Studies Office handles the round-trip flight arrangements, but students pay the travel agent directly.

Students who choose to participate in programs sponsored by different institutions, at their own expense, should consult with the Director of International Studies. When students decide on a program, it is necessary to obtain the prior approval of an academic advisor, the Director of International Studies, and the Dean of the College in order to assure in advance that the credit for courses taken abroad will transfer to Valparaiso University. The Registrar's Office provides a form for this as well as a form which enables students to apply for a leave of absence from the University for the specified time period.

**Athens, Greece**

Valparaiso University has a study-abroad option in Greece through the College Year in Athens program. College Year in Athens is an independent study-abroad program offering college-level courses in Ancient Greek Civilization. Enjoying an excellent reputation among North American colleges, College Year in Athens enrolls approximately one hundred students per semester.

**Program Requirements.** Students in good academic standing with at least 16 credits of Greek or eight credits of Greek and nine credits of classical civilization courses are eligible to apply. The junior year, however, is the best time for most students to leave the home campus for study abroad.

**Program Curriculum.** Students choose from a wide variety of courses dealing with the classical and cultural aspects of the Greek civilization, which represent such disciplines as Archaeology and Art, Classical Languages and Literature, History, Philosophy, Politics and Religion. Some courses may count towards a minor or major in Classics with the approval of the Chair of the Department of Foreign Languages and Literatures. Normally four courses constitute full-time study.

Valparaiso University's arrangement is for fall semester only.

**Cambridge, England**

Directed by a resident professor from Valparaiso University, the Cambridge Study Center provides an ideal setting for eighteen students each semester to integrate their academic work with the rich heritage of Britain. Students live and study in facilities provided by the University, take four or five courses (12-15 credits) taught by distinguished British professors and the resident director, and participate in two or three group tours to various historical regions of Britain. British professors accompany students on these tours, helping them to integrate their cultural experience with their academic learning. Students may also take a class at nearby Anglia Polytechnic University by special arrangement. One long break provides two full weeks of time for independent travel.

**Program Requirements.** Sophomore standing and a grade point average of 3.0 are required.

**Program Curriculum.** Students may take four or five of the following courses. The first three courses are taught by British faculty, the other two by the resident director.

- **ART 311** Art Appreciation 3 Cr.
- **ART 312** Art History 3 Cr.
- **GEO 318** European Geography 3 Cr.
- **HIST 351** English History and Culture 3 Cr.
- **GS 390** Topics in English Life and Culture 3 Cr.
- **ENGL 200/390** Literary Studies 3 Cr.

Courses may apply toward fulfillment of the following General Education Requirements:

- Fine Arts/Fine Arts-Literature (ART 311 or GS 390), Social Analysis (GEO 318).

This program is available in either the fall or spring semester.

**Anglia Polytechnic University.** A one-on-one exchange agreement makes it possible for Valparaiso University students to study for a semester or a full year at Anglia Polytechnic University in Cambridge.

Students pay the double-room fee, travel, and General Fee to Valparaiso University, and pay room and board costs in Cambridge.

**Program Requirements.** Junior standing with a grade point average of 3.0 and approval from the Director of International Studies are required.

**Program Curriculum.** Students can select courses from the full range of undergraduate programs in Liberal Arts, Science, and Business. For additional information, contact the Director of International Studies.

**London, England — The Oak Hill Semester**

As a member of the Concordia Consortium for Study Abroad (CCSA), Valparaiso University is able to send a limited number of deaconess, theology, and pre-seminary students to Oak Hill College, an Anglican seminary in Southgate, London. A visiting professor from one of the CCSA colleges or universities directs the Oak Hill Program and teaches two courses, one on British cultural heritage and one in his or her field of expertise. Students also take two Oak Hill courses, for a total of 15 semester credits. A variety of field trips round out the program.

**Program Requirements.** Deaconess, theology, and pre-seminary students only. Sophomore standing with a grade point average of at least 3.0.

**Program Curriculum.** The program includes the following courses:

- British Cultural Heritage ........ 4 Cr.
- Course offered by Visiting Professor (varies) ........ 3 Cr.
- Theology (varies) ........ 3 Cr.
- Oak Hill College ........ 4 Cr., each.

Courses may apply towards theology requirements with approval from the Chair of the Department of Theology at Valparaiso University and towards General Education Requirements upon evaluation. This program is available in the fall semester only.

**Granada, Spain**

In cooperation with Central College in Pella, Iowa, Valparaiso University offers the opportunity to a limited number of students to study at the Center for Modern Languages at the University of Granada in Spain. The semester begins with a three-week orientation program. This program is designed to improve students' oral and written proficiency as well as introduce them to Spanish daily life. At the end of this orientation program, a placement test is given to determine the students' level of Spanish: Intermediate, Accelerated, Honors, or Superior.

**Program Requirements.** Spanish 204 and at least one additional 200-level Spanish course, junior standing, a grade point average of 3.00 (both overall and in Spanish courses), and approval by the Spanish faculty are required.

**Program Curriculum.** After successful completion of the three-week orientation program, students may take courses from general categories including the following: Spanish Business, Spanish Civilization and Culture, Contemporary Spanish Economics, History, Regional Geography, Spanish Literature and Language. It is also possible to arrange a service-learning opportunity for two credit hours. All courses are conducted in Spanish and students usually enroll for 12-15 credit hours.

This program is available for the fall semester or for the full year, but NOT for the spring semester.

**Hangzhou, China**

The city of Hangzhou is well renowned for its cultural history, its tea and silk production, and according to Chinese tradition, for being a paradise on earth. Zhejiang University, which lies just north of West Lake, is the host institution for students wishing to study Chinese language and culture. Students generally study Chinese intensively, while having the opportunity to experience facets of Chinese culture through tours, lectures (in English), and demonstration classes of such arts as calligraphy and tai chi chuan. The Chinese Culture and Civilization course (EAST 385) involves the creation of a project which combines academic reflection with observation and experience. Additional courses may be offered, depending on the resident director. Students may also pursue independent study of China-related topics while in Hangzhou, with the assistance of
International Study Programs

faculty from Chinese and Japanese Studies and other departments. Classes are conducted from early September to mid-December, allowing for periods of travel.

Program Requirements. Sophomore standing and a grade point average of 3.0 are required, but there is no prior Chinese language requirement.

Program Curriculum. Students are placed in language courses according to an exam given at Zhejiang University. The following courses are offered:

EAST 109 Intensive Elementary Chinese .................. 5 Cr.
EAST 110 Intensive Elementary Chinese: Conversation .................. 5 Cr.
EAST 209 Intensive Intermediate Chinese .................. 5 Cr.
EAST 210 Intensive Intermediate Chinese: Conversation .................. 5 Cr.
EAST 395 Chinese Culture and Civilization .................. 3 Cr.
EAST 495 Supervised Reading and Research .................. 3 Cr.

One additional course is offered by the resident director in his or her field of expertise. EAST 109 and 110 are for students with no prior knowledge of Chinese and must be taken concurrently. Students may take both EAST 109 (Reading/Writing) and EAST 110 (Conversation) for credit, or they may take EAST 109 for credit and audit EAST 110. EAST 209 and 210 are for students with prior knowledge of Chinese and must be taken concurrently. Students taking EAST 495 in China must have their proposal approved before going to China.

These courses may apply toward a major in Chinese and Japanese Studies. EAST 109, EAST 110, EAST 209, and EAST 210 may apply toward the General Education Foreign Language Requirement. EAST 395 will satisfy the Fine Arts/Fine Arts Literature and the Global Cultures and Perspectives General Education Requirements. This program is available in the fall semester only.

Japan

Valparaiso University has two exciting exchange opportunities with sister universities in Japan. The program at Kansai Gaidai, which is located in the culturally rich area between Osaka and Kyoto, offers Japanese language instruction and a number of East Asian studies courses taught in English, including topics in business, art, economics, and history. Students have the option of living with host families or in dormitories located on campus. Students pay all fees, including room, meal plan, tuition, and general fee to Valparaiso University. The program is available fall and/or spring semester.

The program at Osaka International University also offers language study, but has the added feature of a 2- to 4-week internship with a Japanese company or organization. Students engage in intensive language study for the first semester, then spend an interim period in an internship setting, before returning to the Osaka International University campus and taking Japanese language courses and courses taught in English. Tuition and General Fee are paid to Valparaiso University; all other fees, including room and board, are paid directly to Osaka International University. Students have the option of a homestay with Japanese families. This program is offered for the whole Japanese academic year only (from September to July), and is especially suitable for business students.

Program Requirements. A grade point average of 3.0 and sophomore standing are required. Two semesters of college Japanese are recommended but not required for the program at Kansai Gaidai; four semester of college Japanese are required for the program at Osaka International University. All students are required to take the Osaka International University placement exam.

Program Curriculum. The theme for both semesters is Nation Building, Globalization, and Decolonizing the Mind: Southern African Perspectives, and the offerings include courses in four of the following disciplines: political science, religion, interdisciplinary studies, and sociology. An internship is also possible. Much of the coursework involves encounters with the people and culture outside the walls of the study center, thus making the semester an outstanding learning experience.

A limited number of Valparaiso University students may study in Namibia either semester.

Namibia

As a result of a partnership with the Center for Global Education at Augsburg College, Valparaiso University offers a challenging study-abroad program in Windhoek, Namibia, in Southern Africa. Valparaiso University students live together with other students from the United States, as well as with a family for a two-week stay in Northern Namibia. The program also includes a two- to three-week trip to Southern Namibia and South Africa.

Program Requirements. Sophomores, juniors, and seniors with a grade point average of 3.0 are eligible to apply. Enrollment is limited to twenty-three students each semester, drawn from colleges and universities throughout the United States.

Program Curriculum. The theme for both semesters is Nation Building, Globalization, and Decolonizing the Mind: Southern African Perspectives, and the offerings include courses in four of the following disciplines: political science, religion, interdisciplinary studies, and sociology. An internship is also possible. Much of the coursework involves encounters with the people and culture outside the walls of the study center, thus making the semester an outstanding learning experience.

A limited number of Valparaiso University students may study in Namibia either semester.

Paris, France

As a cooperating member of the Central College (Pella, Iowa) program in France, Valparaiso University offers its students a semester or an entire year of study in Paris. The program is especially designed to strengthen students’ facility in the French language and their knowledge of French civilization. Students enroll at either the Sorbonne or the Institut Catholique, where the medium of instruction in all classes is French. The academic environment in France is quite formal. Courses offered at the Sorbonne (with the exception of the speaking and grammar courses) are large lecture format with grades based on one final essay exam. Lecture courses at the Institut Catholique are similar in style to those on a liberal arts college or university campus in the United States. Advanced Program students at the Sorbonne may also enroll in the Business Program, which allows students to prepare for the certificate or the diploma given by the Chamber of Commerce and Industry of Paris, certifying proficiency in business French.

Program Requirements. French 204 or the equivalent of 3.0, sophomore standing, and approval of the head of the French section are required.

Program Curriculum. All students participate in an exciting two-week intensive French language course at the Alliance Française in Nice prior to taking the placement exams and beginning their classes at the Sorbonne or at the Institut Catholique in Paris. Based on these exams, Valparaiso University students are placed into one of the following levels:

Regular Level (Sorbonne)—students take eight semester credits in French Speaking and Phonics/Grammar and Structure plus seven or eight credits in Central College seminars and Sorbonne intermediate civilization lectures for a total of 15 or 16 semester credits.

Regular Level (Institut Catholique)—students take eight semester credits in Advanced Speaking, Structure and Composition plus four to eight credits in advanced civilization lectures for a total of 15 or 16 semester credits.

Business Level—designed for advanced students who wish to concentrate on business studies, students take nine semester credits of required courses plus two to four lecture courses from the advanced program for up to 17 semester credits.

Honors Level—designed for exceptional French students who may enroll in either the Business II or Literature tracks. Students take 13 semester credits of required courses plus two more lecture courses from the advanced program for up to 17 semester credits.

Central College seminars and Sorbonne/Institut Catholique courses vary from year to year, but are generally available in the following fields: Art Appreciation, French Literature, History, Geography, Music, Philosophy and Political Science. It is also possible to arrange a service learning opportunity or an internship after the placement exams at the

International Study Programs
International Study Programs

Sorbonne or the Institut Catholique. Courses are two credits each.

In the Regular Program, courses may apply toward the French or the International Economics and Cultural Affairs majors. In the Advanced Program, certain courses may apply toward the French, International Economics and Cultural Affairs, or International Business majors, or toward certain General Education Requirements, including Fine Arts/Fine Arts-Literature, History/Philosophy, Social Analysis. This program is available for either a full academic year or for spring semester only.

Paris Internship Program

Students of French may also choose to participate in a study-abroad and internship program in Paris, administered by Boston University.

Program Requirements. Minimum requirements for enrolling in this program as a Valparaiso University student are completion of French 204 and an overall grade point average of 3.00. An internship is an enormous valuable experience, but one that places great demands on students' communication and work skills. For that reason, it is recommended that students with strong French language skills enroll in this program after completion of their sophomore year.

Program Curriculum. Students begin the program with a one-week orientation and seven weeks of intensive language course work to prepare them for the internship. Upon successful completion of the language component, students intern in French businesses in Paris for eight weeks. They are assisted in finding internships in one of the following areas: Advertising and Public Relations; the Arts; Business and Economics; Film and Television; Health and Human Services; Hospitality Administration; Journalism; and Politics. Past internships have included Galerie Maeght, Antenne 2 Télévision, l'Office de Tourisme de Paris, and le Ministère des Affaires Étrangères.

This program is one semester only. Students may enroll for either the fall or spring semester.

Puebla, Mexico

The Puebla Study Center is directed by a resident Valparaiso University professor, who also teaches one course. Students take the remaining courses at the Universidad de las Américas-Puebla. These courses are designed for foreign students and are taught by Mexican professors in Spanish. Valparaiso University students live in on-campus residence halls with Mexican suitemates. Students with advanced Spanish proficiency may take courses in the regular curriculum of the University. Numerous field trips led by the resident director enhance the students' academic and cultural experiences.

Program Requirements. Spanish 102 or the equivalent, a grade point average of 3.0, and sophomore standing are required.

Program Curriculum. Students are placed into language courses by examination. Courses offered include:

**SOC 333** Points of Intersection: Mexico and the United States . . . . 3 Cr.
Intermediate or Advanced Spanish 4-12 Cr.

Additional course offerings vary each year. Past offerings taught in Spanish include courses in Art, Psychology, and Political Science. Courses taught in English have included the areas of Economics and Political Science. Sociology 330 may fulfill part of the General Education Social Analysis requirement. Other courses may apply toward the Spanish major or minor, or toward certain General Education Requirements, including Social Analysis, Fine Arts/Fine Arts-Literature, Foreign Language and/or Global Cultures and Perspectives.

This program is available in spring semester only.

Reutlingen, Germany

The Reutlingen Study Center, located on the campus of its partner institution, the Hochschule Reutlingen, is under the direction of a resident professor from Valparaiso University. Students take four or five courses (13-18 credits), which are taught by the resident director and German professors from neighboring institutions. Except for the German language courses (beginning or advanced), all courses are conducted in English. Several field trips as well as the students' own travel experiences complement the in-class learning and encourage the development of broad language skills. Internship opportunities with German professionals are also a possibility for students with good German language skills.

Program Requirements. Sophomore standing with a grade point average of 3.0 is required; no prior knowledge of German is required.

Program Curriculum. Courses offered include:

**ECON 290** Topics in Economics . . . . 3 Cr.
**FLGR 101** First Semester German . . . . 4 Cr.
**FLGR 204** German Composition and Conversation . . . . 4 Cr.
**ART 311** European Art and Architecture . . . . 3 Cr.
**GS 300** Technology and Society . . . . 3 Cr.
**GS 390** Topics in German Life and Culture . . . . 3 Cr.

German 101 and German 204 may apply toward the General Education Foreign Language Requirement. German 204 may apply toward a German major or minor or International Economics and Cultural Affairs major. Other courses may be used to fulfill General Education Requirements as follows: ART 311 will fulfill the Fine Arts/Fine Arts-Literature requirement; ECON 290 may be used to fulfill one of the Social Analysis course requirements.

This program is available in either the fall or spring semester.

Tübingen, Germany

Through a special one-on-one student exchange agreement with the Eberhard-Karls-Universität Tübingen, Valparaiso University may send a limited number of students there each year.

Program Requirements. German 204 or the equivalent, junior standing, a grade point average of 3.0 or better, and approval of the department are required.

Program Curriculum. The Language and Orientation Program, a six-week intensive course before the beginning of the German academic year, is conducted by the University of Tübingen for foreign students. During the academic year, students may choose courses from among the varying offerings of the University of Tübingen.

The six-week Language and Orientation Program allows students to earn three elective credits towards the German major or minor requirements. Other courses may apply toward certain General Education and/or minor requirements; students must consult with relevant department chairs before departure for Tübingen.

This program is available for the full academic year only.

American School of Classical Studies

Valparaiso University is a corporate member of The American School of Classical Studies at Athens which provides Valparaiso University students opportunities for summer study in Greece. Two sessions, directed by the School's Gertrude Smith Professors, are offered annually. These sessions are designed for students who wish to complement their training in the language and literature of ancient Greece with an introduction to the country and its monuments. Housing and meals for participants are provided by the School. Enrollment in each session is limited to twenty students. Students interested in this program should consult with the head of the Classics section.

Program Requirements. Six semesters of Greek, History 311, and a grade point average of 3.50 are required. Admission to the summer sessions is highly competitive. Participants include college and university professors, graduate students and highly qualified upper class students.

Program Curriculum. The program of the summer sessions focuses on the relationship between the country (its monuments, landscape and climate) and its history, literature and culture. Each session is divided almost equally between the study of sites, monuments and museums in Attica and trips to places chosen by the director in Central Greece, the Peloponnese, Macedonia, Northwest Greece and the Islands. Participants are required to prepare reports on assigned topics.

Credits may be applied toward a Classics major through Greek 495 (Independent Study). Students must consult with the chair of the Department of Foreign Languages and literatures.

This program is available in the summer only, from late June to early August.

American Schools of Oriental Research

Valparaiso University is a corporate member of this organization, which has institutes in Jerusalem, Amman, Baghdad, and Cyprus. Several summer training programs in archeology are open to undergraduate students of this University through these institutes.
FACILITIES FOR LEARNING

University Library Facilities

The new Christopher Center for Library and Information Resources has an important place in student academic achievement. It is home to all University Library Services (except Law), the instructional and user support elements of Electronic Information Services, and the campus Writing Center. At 105,000 square feet, it provides a comfortable atmosphere for research, inquiry, discussion, and study. With more than 200 public computers, three fireplace lounges, a gourmet coffee café, dozens of group study spaces, and a beautiful 4th floor outdoor terrace, students will find the Christopher Center to be a modern, state-of-the-art campus facility to meet their every need. It can hold a total of 600,000 library volumes, both on open bookshelves throughout the Center and in its robotic high-density storage and retrieval system.

Being information literate means that students know how to identify, locate, and evaluate information in today’s complex environment of electronic, print, video, and audio media. Students can turn to the Christopher Center to reach a level of independence in finding resources and in understanding the mechanics of information, utilizing computers for retrieval, and reading, interpreting, and writing citations. They learn information-seeking skills, including how to articulate their research needs. Most importantly, students learn how to evaluate information, find different viewpoints, and recognize the biases of any author. The library gives customized assistance to enable students to research any question and fulfill their information needs. It also provides course-specific assignment-based information literacy instruction in collaboration with each academic college.

Library services play an important role in scholarly communication by organizing print and electronic information for easy retrieval. An on-line public catalog of its holdings called Galileo is searchable in a variety of ways. Galileo is accessible throughout the world via the Library Services Home Page (http://www.valpo.edu/library). The holdings in Galileo include books, periodicals, government publications, videos, audioscassettes, and musical compact discs. The Christopher Center holds the Moellering Collection, which is comprised of 424,000 volumes, adding approximately 9,000 new volumes each year. Students may view their circulation records electronically and renew books borrowed electronically via Galileo. Some periodicals and many government publications are accessible in microformat.

The library’s collection in microforms includes more than one million units. The Library Services Home Page offers direct access to a rich menu of electronic databases, many with the full text of articles retrieved through topical searches, to provide ready access to scholarly information across the academic disciplines. Students may send the text of articles retrieved to their e-mail boxes for later printing. When articles retrieved are found in one of the 2,600 periodicals subscribed to by the library, students may make photocopies on one of the photocopy machines located on each floor of the Christopher Center. They may request interlibrary loan service for articles that are not held locally. An electronic interlibrary loan form is accessible from the home page to streamline the process. The average turnaround time for interlibrary loan requests is seven working days. The library is a member of several consortia, including Academic Libraries of Indiana and the Center for Research Libraries, to give scholars access to such materials.

The Law Library at Weesemann Hall holds a collection of 146,000 bound volumes and 749,500 microforms, with 3,258 current periodical subscriptions. LEXIS and WESTLAW subscriptions add to the rich information resources available for use by Valparaiso University students and scholars. The Christopher Center and the Law Library provide the resources and services that connect the University community to the information that each member needs. New services and resources are continuously evaluated for selection, acquisition, and organization to support the mission of the University.

Electronic Information Services (EIS)

Electronic Information Services coordinates and manages servers; data networks (wired and wireless) including Internet access; communication resources including electronic mail, voice mail, telephone service, video cable, and satellite reception resources; general-access computing facilities; and general-purpose software related to the academic and administrative functions of the University. Valparaiso University’s dynamic information environment provides support for excellent teaching and learning, quality research, effective decision-making, efficient administration, and open communication among the members of the University community.

Computer Network Access.

Residence hall rooms, faculty and staff offices, all general purpose computer clusters, classrooms and laboratories, and many special-purpose computer clusters are connected to the Valparaiso University Network via wired or limited wireless access. This network provides access to the Internet, electronic mail, USENet News, library resources, and a variety of software. For those living off campus or away from campus on internships or trips, most resources on the University network, including individual and shared storage space, are accessible via other Internet domains, including commercial Internet Service Providers. Limited dial-up facilities are available for emergency access from off campus when a person’s commercial Internet Service Provider is unavailable.

Computer Access for Students.

Most residence halls have a computer site open around the clock for residents. All residence hall rooms have a network connection for each resident, allowing those who bring their own computers to connect to the campus network (computers may not be able to access some resources if they are not Novell Tested and Approved). Each residence hall is assigned at least one Technology Assistant who maintains the local computer site and assists students. The computer site in the Union is available 24 hours per day during the fall and spring semesters for all members of the Valparaiso University community. Many computer facilities in the Christopher Center for Library and Information Resources are available for general use.

The Christopher Center has a variety of electronic sources of information, including on-line public access catalog, databases, and references to useful web sites. Patrons may
view their circulation record on-line and renew books electronically. Computer clusters provide network access for the full range of academic activities.

Adaptive Technology workstations are available in several locations including the Christopher Center and the Union, for the visually- or aurally-impaired members of the University community.

With few exceptions, students may use Valparaiso University computing resources without direct charge.

Features and Functions. General applications supported include electronic mail, web browser, anti-virus, word processing, spreadsheet, database, desktop publishing, a course management system, web page editing, statistics, and presentation graphics. Many departments have discipline-specific applications on the network or in departmental computing clusters.

Assistance with Resources. The EIS Help Desk, located on the first floor of the Christopher Center, is managed by professional staff and student consultants who will answer technology-related questions and route service requests to technical staff. EIS offers free enrichment courses in specific applications, web resources, electronic mail, and basic computer skills throughout the year.

Students and faculty will find much useful information in the Technology Resources Guide distributed jointly by the Library and EIS each fall; in the EIS newsletter Bits & Bytes; and in the weekly electronic mail newsletter, EISNews.

The Valparaiso University Network. UNIX servers handle electronic mail, web pages, USENet News, administrative data, and many other functions. Shared file space, some library functions, general productivity software, and programs for over 135 discipline-specific applications are handled by Novell servers.

Internet Service is provided by Indiana Higher Education Telecommunication System with a 45 million bit-per-second circuit. The campus backbone network is fiber optic, currently running 100 megabits (Mbps) per second or 1 gigabit per second Ethernet. Intra-building networks are 10 Mbps switched Ethernet or Ethernet. Internet bandwidth is managed to ensure proper flow of academic and administrative traffic.

Planning. An ongoing strategic planning process, involving students, faculty, and staff, helps apprise the University of technological developments and ensures consideration of budget requests for technology.

Graduation with Honors

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.80 in their work at this institution are graduated Summa Cum Laude.

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.60 in their work at this institution are graduated Magna Cum Laude.

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a standing of at least 3.40 in their work at this institution are graduated Cum Laude.

Semester Honors

Undergraduate students who achieve a standing of 3.50 in any semester are awarded honors under the following restrictions:

1. The student received no grades of I or U at the official end of the semester concerned;

2. The student completed at least fourteen credit hours of work for that semester on campus or at least twelve credit hours in an International Studies Semester, Special Off-Campus Semester or any other approved cooperating program.

Christ College. Graduates who complete the requirements of the honors college, Christ College, are designated Christ College Scholars or Christ College Associates.

Departmental Honors. Students in many departments of the College of Arts and Sciences may be awarded honors in their field of study provided they meet the specific requirements described on page 54.

Honor Societies

National Freshman Honor Society

Alpha Lambda Delta. This national honor society recognizes women and men who achieve high scholastic standing during their freshman year.
Honors and Awards

NATIONAL SENIOR HONOR SOCIETY

Phi Beta Kappa. This national honor society recognizes outstanding men and women for leadership, scholarship and character.

NATIONAL COLLEGE HONOR SOCIETIES

Alpha Epsilon Delta. This national honor society recognizes students who have achieved academic distinction while pursuing a premedical or pre-dental program.

Beta Gamma Sigma. This national honor society is restricted to students in business schools who have achieved academic distinction.

Tau Beta Pi. Engineering students who have demonstrated high academic achievement, exemplary character and a breadth of interest in the field of engineering are eligible for membership in this national engineering society.

VALPARAISO HONOR SOCIETIES

Lumina Award. This honor is presented in the fall of the senior year to students enrolled in the College of Arts and Sciences whose cumulative grade point average for the five preceding semesters is 3.60 (level of Magna Cum Laude) or above. It is awarded by the Arts and Sciences Scholarship and Advising Committee and the Dean of the College.

DEPARTMENTAL HONOR SOCIETIES

Accounting - Accounting Society
Chemistry - Phi Lambda Upsilon
Classics - Eta Sigma Phi
Decision Science - Alpha Iota Delta
Drama - Alpha Psi Omega
Economics - Omicron Delta Epsilon
Education - Kappa Delta Pi
English - Sigma Tau Delta
French - Pi Delta Phi
Geography - Gamma Theta Upsilon
German - Delta Phi Alpha
History - Phi Alpha Theta
Journalism - Society of Collegiate Journalists
Marketing - Alpha Mu Alpha
Meteorology - Chi Epsilon Pi
Music - Pi Kappa Lambda
Philosophy - Phi Sigma Tau
Physical Education - Phi Epsilon Kappa
Physics - Sigma Pi Sigma
Political Science - Pi Sigma Alpha
Psychology - Psi Chi
Social Science - Pi Gamma Mu
Sociology - Alpha Kappa Delta
Spanish - Sigma Delta Pi
Theatre - Alpha Psi Omega

AWARDS AND PRIZES

Bauer Award. This prize is presented annually by the History Department to the history major who has written the best historical paper during the year. The award is made in the name of Dr. Walter E. Bauer, Distinguished Service Professor Emeritus of History.

The Bluejewel Award. Awarded to a College of Nursing graduating senior who demonstrates determination, perseverance, a sense of humor, a desire to elevate the standards of nursing, recognition of the importance of the role of the nurse in prevention of illness, and a concern for human worth and dignity, regardless of race, creed, or culture.

Delta Sigma Pi Award. Awarded to a College of Business Administration senior with the highest cumulative grade point average after seven semesters of study.

The Donnelley Prize. The Donnelley Prize annually rewards the best student essays on humankind’s relationship to the environment with a cash award of $750 and support for summer internships or research in environmental issues, particularly in the Chicago region. Environmental and biomedical ethicist Strachan Donnelley, Ph.D., a former Christ College faculty member and Vivian Donnelley, a Valpo alumna, endowed the prize.

Bruce and Linda Eastmond Award. These are annual awards presented to an outstanding senior student in the College of Engineering and an outstanding senior student in the College of Arts and Sciences.

The Ronald G. Reidenbach Prize in Music. An annual award honors a graduating student of church music who has made a significant contribution to campus life. The award is made in memory of Ronald G. Reidenbach, alumnus of the University and musician to Lutheran churches in Ohio, Illinois, and Maryland.

The Dorothy Paulsen Smith Award. Awarded to a College of Nursing graduating senior whose quest for excellence has reflected the spirit of the College of Nursing. Criteria for choice include demonstrated scholarship and leadership, openness and enthusiasm, energy and creativity, empathy and compassion.

The Donna Spanopoulos Memorial Scholarship in Pediatric Nursing. This award is presented by the Spanopoulos family each spring to a student entering the senior year, in memory of the founder of Infant and Child Special Care, Valparaiso, now part of Children’s Memorial Hospital. The $1,000 award was established to encourage interest in the practice of pediatric nursing. The student must demonstrate academic and clinical excellence in the nursing care of children and an expressed interest in specializing in pediatric nursing.

Anna Zink Springsteen Prize. This prize is awarded to a senior, preferably an English major who has made a substantial contribution to campus life with special gifts in poetry composition.

Margot Ann Uehling Endowed Scholarship Prize. Awarded annually to an undergraduate student who writes the best non-fiction prose essay.

The Wall Street Journal Award. Awarded to the outstanding senior business administration student in the College of Business Administration.

MEDALS

Lumen Christi Medal. This medal is awarded to a lay person for distinguished service to Lutheranism. It is the highest honor Valparaiso University can bestow.

Medal of Merit. This medal is an award to recognize the outstanding service to society by the recipients through their chosen calling and by their exceptional activity in the advancement of the mission of Valparaiso University.
STUDENT LIFE

The University accepts and practices the view that a liberal education concerns the whole person. Its residential and co-curricular life encourages students to develop their full potentials, complementing and enriching their academic curricula.

The Office of the Vice President for Student Affairs coordinates the services offered to students and promotes a wide range of campus activities which enhance residential living at Valparaiso.

Student Residences

The majority of undergraduate students live in one of the eleven university residence halls and apartment buildings or in one of the eight fraternity houses located on or near the campus.

Alumni, Brandt, Lankenau, and Wehrenberg Halls are residence halls with rooms for two students. All are coed halls with men and women living on alternate floors. Guild and Memorial Halls are recently renovated with two, three, and four student rooms. Guild Hall houses all women, while Memorial Hall is coed. The two buildings share a main entrance and large public area on the first floor. 807 Mound provides triple-occupancy rooms in a two-room suite layout.

The hall is coed by floor. Scheele Hall is divided into individualized areas to provide accommodations for sororities and other upperclass women. Each hall has its own student council and peer judicial board. In addition, Compass Pointe Apartments and Linwood Apartments provide apartment-style living options for upperclass students. And, the Kade-Duesenberg German House and Cultural Center offers students the opportunity to live in a German language house.

Two dining halls and the Valparaiso Union provide food services.

Student Conduct and the Honor System

Valparaiso University holds to the ideal of a community of Christian scholars living together in freedom and civility, in an environment conducive to Christian faith and supportive of the Christian ethic. A minimum number of rules and regulations is necessary for this community; these are found principally in the Student Guide to University Life.

Each student enrolling at Valparaiso University thereby accepts the rules, regulations and procedures as found in this catalog and the Student Guide. Conformity to the traditions and regulations of the University is expected. The University reserves the right to suspend or dismiss any student at any time when, in the judgment of its authorities, that action is deemed to be in the best interests of the institution. Such a decision is normally made by the Vice President for Student Affairs on the recommendation of the Campus Judicial Board.

The student-initiated Honor System has a long history at Valparaiso University and is a strong distinguishing characteristic of the institution. It is in every way consistent with the highest principles of Christian ethics and morality. In sanctioning the Honor System, the University presumes that students are able and willing to accept the duties and responsibilities of honorable conduct for the sake of the Valparaiso University community. Before they can enroll at the University, all entering students must sign and submit a statement that they understand the Honor System and are aware that all of their academic work must be submitted under their signature and that they have done this work in agreement with the Honor Council.

The statement "I have neither given or received nor have I tolerated others' use of unauthorized aid" must be written out and signed on all written work.

Under the Honor System, all written examinations of any length are taken in an atmosphere free from the surveillance of a proctor, unless requested by a student member of the class. Every student has the responsibility to keep academic work free of dishonesty; that is, neither give nor receive unauthorized aid. All students must report to the Honor Council any violation of the System of which they become aware. Students are required to sign a pledge on all work submitted for academic credit as indicated above.

The Honor Council is an educational, preventive, remedial and judicial body with the duty of maintaining the Honor System in the academic community. The Council hears Honor Code cases and then makes decisions about whether or not a student has violated the code and assesses any penalties. The Council is composed of students and faculty who are chosen by the incumbent members subject to the approval of the President of the University.

The Arts

The mission of the program in the visual and performing arts at Valparaiso University is to educate the minds of students by opening their eyes and ears to the best of their artistic heritage and the joy of artistic expression. The University offers its students a range of arts education opportunities through its general education curriculum; co-curricular activities in art, music, theatre, dance, and creative writing; and academic majors in the departments of visual and performing arts which permit students to make the arts the focus of a liberal education for personal and professional development and for creative leadership and service. At Valparaiso University, the arts serve primarily the students, while also serving the faculty and staff and the larger community of the region.

Music. The Department of Music offers all students the opportunity to study and perform as singers and instrumentalists in an array of curricular and co-curricular ensembles. Students wishing to perform in selective ensembles may audition for the Valparaiso University Chorale, the University Symphony Orchestra, the Kantorei, and the Conduct Band, as well as a variety of chamber ensembles including Wind Quintet, String Quartet, Percussion Ensemble, Brass Ensemble, and others. Other auditioned ensembles include: University Singers, Luce Band, and Jazz Band. The University-Community Band is open to all students with no audition required. Additional student-organized performing groups include Crusader Band, Handbell Choir, and Matins Choir. For an additional charge, a limited number of students may enroll in private music lessons in voice, piano, guitar, organ, and most orchestral and band instruments.

Theatre. The University Theatre brings the best of classic drama, new plays, musicals, and operas to the Valparaiso University Center for the Arts. Soul Purpose, a touring liturgical drama troupe, travels to churches throughout the nation, and Theatre Outreach Performances (TOP) performs plays on social issues for local and regional schools, colleges, and social service...
organizations. Theatre opportunities are available for any student interested in dramatic arts. Theatre work is focused in the areas of performance, production, and management. Advanced students regularly supervise in all areas. 

**Art.** The Art Department offers basic studio courses in painting, drawing, digital art, design, graphic design, sculpture, photography, ceramics, fibers, art education, and art history. Galleries exhibit student work as well as distinguished work by visiting artists. The Sloan Collection of American Paintings is the core of the Brauer Museum of Art, with holdings of over 2,000 works of art. Summer programs of study overseas provide students with immediate experience of Western cultural heritages. 

**Dance at Valparaiso University.** Through learning and participating in dance, students are able to reflect on the ways dance is part of the human experience in general, and more specifically, is part of one's own life. Each semester students may choose from two different dance courses offered through the Department of Theatre. Styles covered are ballet, tap, jazz, and modern. In addition to these mainstay courses, a one-semester dance course is usually offered every other year. Topics covered in the course may include dance improvisation, musical theatre styles, or another topic that relates directly to an upcoming theatre department production.

**University Dance Ensemble.** Under the leadership of the Department of Theatre faculty, the University Dance Ensemble meets regularly throughout the academic year for technique classes and choreography. All university students are welcome to join. Academic credit can be given for those students choreographing or performing in the annual Concert of Dance. The University Dance Ensemble regularly invites dancers from the surrounding northwest Indiana community to perform with the ensemble as part of its mission to make dance a more visible part of the community.

There are numerous performance opportunities for interested dancers and student choreographers. Past performances have included the opening of the Center for the Arts, museum openings, Advent Vesper services, liturgical dance at area churches, Department of Theatre productions, Festival of Dance (Fall Semester), as well as the annual Concert of Dance (Spring Semester). This annual concert highlights faculty, student, and guest choreographers. Auditions for this concert are held at the beginning of the fall semester.

**Creative and Professional Writing.** The English Department offers majors in creative and professional writing. The department sponsors the Margot Ann Uehling Scholarship, awarded annually for the best essay written by a Valparaiso University student. WORDFEST annually brings established writers to campus and awards prizes for fiction, poetry, and nonfiction prose. The Crescent intern magazine provides experience in editing and publishing. The Lighter, a campus literary magazine, presents student work in award-winning form.

**Athletics.** Valparaiso University provides a varied athletics program that assumes that sports can play a major role in college life by encouraging wide participation by the student body. The Athletics-Recreation Center is a major indoor facility. Outdoor facilities include tennis courts, all-purpose intramural fields, and fields for varsity baseball, football, and soccer. Although the University provides an experienced staff and takes every precaution to avoid injury to all participants in the intercollegiate and intramural programs, it assumes no responsibility for accidents; students participating in these activities do so at their own risk.

**Recreational Sports/Intramurals.** Valparaiso University is committed to a comprehensive program of recreational sports. A wide variety of team and individual sports are scheduled throughout the academic year. Students are also encouraged to participate in the many informal recreational activities, special events, and clinics offered by the Athletics-Recreation Center staff.

**Intercollegiate Competition.** Women's sports offered are: basketball, cross country, soccer, softball, swimming, tennis, indoor and outdoor track and volleyball. Membership is maintained in the National Collegiate Athletic Association. The women's teams participate in the Mid-Continent Conference.

Men's sports offered are: football, basketball, baseball, soccer, cross country, swimming, tennis and indoor and outdoor track. Membership is maintained in the National Collegiate Athletic Association. The men's teams participate in the Mid-Continent Conference and the Pioneer Football League.

**Publications and Broadcasting.** Students are encouraged to work in any aspect of campus publications and broadcasting, including writing, editing, advertising, sales, photography, and layout. A student/faculty Committee on Media is responsible for the policies and regulations governing these activities. 

**The Beacon.** The Beacon, the University yearbook, is designed and edited by students. It offers experience in art work, editorial work and advertising. 

**The Lighter.** The Lighter, a student literary magazine, is published twice a year and welcomes contributions from all members of the University student community. Art work, especially photography, is also a feature of this publication.

**The Torch.** The Torch is the student newspaper. A weekly publication, it covers a wide range of campus activities and involves students interested in all aspects of journalism.

**WWUR.** The campus radio station WWUR (95.1 FM) offers students the experience of on-air work, management, sports broadcasting, news and weathercasting, and various production work.

**Organizations.**

**Student Senate.** The Student Senate is empowered by the Instrument for Internal Governance of the University with executive, legislative and judicial powers over the student body. The Student Senate affords students the opportunity to assume the privileges and responsibilities of self-government. It also coordinates the major committees of Media, Residences, Union Board, Finance and Administration.

**Committee on Media.** The Committee on Media is responsible for policies and regulations of the University's student publications, as well as policies and regulations for the campus radio station, WWUR.

**Committee on Residences.** The Committee on Residences is responsible for making recommendations regarding residence hall policies, procedures, and programs.

**Administration Committee.** The Administration Committee recognizes and monitors all Student Senate recognized organizations.

**Finance Committee.** The Finance Committee is responsible for developing and submitting a budget to the Student Senate and for reviewing all requests for special appropriations by student organizations.

**The Valparaiso Union Board.** The Valparaiso Union Board develops, presents and coordinates social, recreational and educational events and programs to broaden student interaction and improve student life.

**Fraternities and Sororities.** Active chapters of national Greek-letter social and philanthropic fraternities on campus include Lambda Chi Alpha (colony), Phi Kappa Psi, Phi Sigma Kappa, Sigma Chi, Sigma Phi Epsilon, Sigma Pi, Sigma Tau Gamma and Theta Chi. National Greek-letter social and philanthropic sororities include Chi Omega, Delta Delta Delta, Gamma Phi Beta, Kappa Delta, Kappa Kappa Gamma, and Pi Beta Phi.

The governing body of the sororities is the Panhellenic Council. The governing body of the fraternities is the Interfraternity Council. Fraternities are housed in their own individual residences. Sororities are housed in Scheele Hall, in individualized units with chapter rooms on the main floor of the building.

**Clubs and Interest Groups.**

Clubs and interest groups abound on the campus. They focus on a variety of activities including academic and professional interests, hobbies, recreational activities, cultural interests, activities connected with the Chapel, religious interests, politics and service projects.

**Alpha Phi Omega** is a national, co-ed service organization with chapters in
approximately 700 institutions of higher education. For over seventy-five years, it has set the standard for college campus-based volunteerism; the Valparaiso University chapter was chartered in 1948. Alpha Phi Omega strives to help each member develop leadership skills, secure lasting friendships, and provide service to others. Membership is open to all students of the University, and in no way interferes with membership in a social fraternity or sorority. For more information, see the APO web site at <http://www.valpo.edu/student/apo>.

Asian American Association (AAA). The Asian American Student Association at Valparaiso University was formed to promote awareness of Asian cultures. Events include ethnic food night, Asian Film Fest, cultural celebrations, and forums. The association is open to all students and to those interested in Asian cultures.

Black Student Organization (BSO). The Black Student Organization promotes cultural awareness of African-American culture through various programs and activities and provides avenues for networking and socializing. BSO event highlights include presenting at MLK Day, coordinating field trips, attending regional and national Leadership Conferences, sponsoring BET Comedy Night, planning Black History Month celebrations, and participating in forums and campus committees.

Latinos in Valparaiso for Excellence (LIVE). LIVE’s main focus is to promote academic excellence among Hispanic students and to support and cultivate the interest of Hispanic students through forums, socials, and other planned activities. LIVE also promotes programs and activities that encourage an appreciation for and an awareness of the many different Hispanic cultures represented on Valparaiso University’s campus. LIVE event highlights include Hispanic Heritage Month activities, Leadership Conferences, Cinco de Mayo, Hispanic Film Fest, and participating in forums and campus committees.

Valparaiso International Student Association (VISA). VISA sponsors a number of social and cultural events throughout the year aimed at bridging cultural differences. Most notable are the annual international dinner, which features cuisine from around the world and an international talent show, International Education Week, and the international food bazaar. Although VISA serves as the main support group for international students, it welcomes American members. The International Student House serves as the headquarters for VISA and has rooms for studying, cooking, meeting friends, and many other purposes. The International Student House is a tangible symbol of Valparaiso University’s commitment to serve international students and to demonstrate the importance of international relationships between all members of the University community.

Volunteer Programs

Volunteer Opportunities in Community Engagement. The Volunteer Programs Office (or V.O.I.C.E.) provides a clearinghouse of opportunities for students who wish to volunteer their time in service to the community. Students learn the rewards of volunteering, building self-esteem, assuming social responsibility, developing new friendships, all while providing help to those in need. Students placed by V.O.I.C.E. serve in a variety of positions including tutoring adults, teenagers and children; visiting with the elderly; working with the disabled and mentally challenged; and participating in the Relay for Life program. To learn more about Volunteer Programs please call #6710. The Volunteer Programs webpage is <www.valpo.edu/organization/volpro>.

The Valparaiso Union

The Valparaiso Union, a community center for all the members of the campus, strives to provide quality facilities, services and conveniences needed by members and guests of the University. The Union also develops programs that are responsive to student developmental needs and to the cultural, social, recreational, and educational needs of the campus community.

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The Valparaiso University

As one of Valparaiso University's largest student organizations, the Union Board provides films, lectures, concerts, outdoor recreation trips, coffeehouses, special events activities, diversity programs, trips to Chicago, and much, much more. Union Board offers a telephone activities hot line (#640), which provides a message listing the latest in campus activities.

The Union staff help plan and present such programs as the Union Jazz Festival, the One Planet, One People Festival, the Activities Fair, College Bowl (an academic question and answer tournament), merchandise sales in the lounge, and performing arts events. Many events planned by student organizations, faculty and staff departments also take place in the Union. Student Senate, Union Board, and other student organizations have offices, work and meeting space in the Union where they plan programs and perform their duties.

The Valparaiso Union also offers students the opportunity to explore and develop their leadership potential through participation in student activities. These experiences allow students to explore the dynamics of effective leadership, making the Union an invaluable resource where education takes place as students and others come together on common ground to meet and exchange ideas. Assistance is available in the Union to support student groups with their activities and to promote the development of leadership skills.

The Union Director's Office processes reservations for meetings and events that take place in the Valparaiso Union and in academic buildings and facilitates the arrangements for numerous summer conferences, camps and workshops. The Union Director's Office also compiles, prints and distributes a monthly Activities Calendar, and Cultural Arts Calendars to help inform the campus of activities.

The Union Games Area (The Rack) offers billiards, electronic games, table soccer and table tennis. Outdoor recreation equipment availability allows students the option of a variety of outdoor recreational activities. Equipment such as mountain bikes, tents, backpacks, cross country skis and sleeping bags are available to rent. Union Board offers trips such as skiing, canoeing, camping, whitewater rafting, and backpacking.
Student Life

Sunday and weekday services. Students plan chapel decorations and decorate the chapel for the seasons of Advent, Lent, Holy Week and Easter, as well as assist in the contribution of the arts for other chapel services.

Students chair chapel ministry groups of worship, social concerns, and outreach, as well as programs such as Altar Care, acolytes and ushers. All students are invited to participate in these and other areas of ministry.

St. Teresa’s, the Roman Catholic Student Center at Valparaiso University, is located across the street from the university campus at 1511 LaPorte Avenue. The center is staffed by a full-time chaplain. Sunday and weekday Masses, as well as a full program of pastoral ministry, are conducted at the center.

Every courtesy is shown to pastors of other Christian churches in Valparaiso who wish to conduct a ministry for students of their denomination. The Chapel Office will assist anyone seeking information regarding worship opportunities at area congregations and their ministry.

Services For Students

Leadership Programs. The staff of the Valparaiso Union and the office of the Dean of Students provide students the opportunity to explore and develop their leadership potential through programs such as the Student Leaders Workshop, The Leadership Experience, and the All Campus Leadership Conference. These experiences allow students to explore the dynamics of effective leadership.

The Office of Multicultural Programs. In collaboration with the campus community, the Office of Multicultural Programs (OMP) provides a variety of support programs and services designed to address the specific academic, cultural, and social needs of underrepresented groups (African-American, Asian/Pacific Islander, Hispanic/Latino, and Native American students). OMP develops and implements programs that build collaborative communities, improve human relations, and promote multicultural education and awareness.

The Student Counseling and Development Center. The services provided by the Student Counseling and Development Center emphasize both the prevention and remediation of problems of individuals and groups through office hours and counseling, individual and group counseling sessions for persons with emotional, interpersonal, family, or academic problems; psychological testing of personality and personal development; training on a wide variety of topics; a website and resource room; personal development materials; crisis intervention; and consultation services. The center is staffed by psychologists, counselors, social workers, a consulting psychiatrist, and support personnel. The counseling relationship is founded on respect for the individual and their belief in his or her potential for growth. In the counseling process, the student and the professional work collaboratively to set and achieve mutually agreed upon goals. Choice and responsibility by the individual are emphasized. The Center’s Outreach Services work to develop proactive outreach programs to student residences and organizations by means of various presentations, seminars, and workshops on topics related to mental health and wellness.

Sexual Assault Awareness and Facilitative Education Office. The Sexual Assault Awareness and Facilitative Education (SAAFE) Office provides advocacy services to individuals (male and female) who are survivors of sexual assault. Advocates meet with survivors at their request at a confidential location and provide the survivors with information about their rights, options that exist in dealing with the assault, and support in their decision-making process. All of this occurs within the context of confidentiality. The SAAFE Office also provides support services to the significant others of the victim, and support services for victims of sexual harassment. The Office provides individual and group counseling related to issues of gender, sexual issues, and relationship issues. The SAAFE Office also provides peer education as a means to broaden awareness of gender, sexual and relationship issues and to aid in the prevention of sexual assault. The SAAFE Office Center contains videos and written materials available to students. All students organized and through various events such as a coffee house forum. The SAAFE Office is located on the LaPorte Avenue side of Alumni Hall. If an appointment is desired, please call 464-6860. Emergency access is available by calling 464-6789.

Office of Alcohol and Drug Education. The Office of Alcohol and Drug Education provides substance abuse prevention efforts on campus through proactive outreach programs to student residences and organizations by means of peer educators and professional staff. It also offers education to at-risk students through the combined efforts of a referral, assessment, and group program. A Masters level mental health clinician provides screening and referral services to those experiencing problems with substance abuse, whether those problems lie in themselves or in those close to them. The office is located on the LaPorte Avenue side of Alumni Hall.

The Valparaiso University Student Health Center. The Student Health Center provides an environment that encourages individual students to seek responsibility for maintaining good health. It provides professional health care through the services of nurses, registered nurses, and a consulting physician. Confidential services covered by student fees include assessment, some minor laboratory analysis, and treatment of minor illness and injury. Allergy injections, gynecological exams, and hormone injections are provided at the Health Center for a nominal fee. Students with illnesses or injuries that require more extensive treatment are referred to physicians in the community.

Student Life
expected to pay for the costs of such treatment if it is not covered by the student medical plan.

A basic student medical plan is provided to all full-time undergraduate and full-time law students. The cost is included in the student’s general fee, which is paid at the beginning of each term. Please review the Student Medical Plan brochure for information about services covered under this plan.

To attend Valparaiso University, all full-time students are required to have on file at the Health Center, a completed Valparaiso University Health form. This form requires documentation of completed immunizations and must be signed by a health care professional. Only health records in English or health records accompanied by certified translations into English will be accepted. A student is not considered in compliance with the University until his/her Health form has been reviewed and approved by Health Center staff. A $50.00 nonrefundable charge will be added to the student’s account if the Health form is not received and approved prior to the start of his/her first semester.

Students who require immunotherapy (allergy shots) for their treatment at the Health Center. The student’s allergist must complete the Health Center Immunotherapy forms prior to the first injection, and the student must provide the vials. Orders on the allergist’s stationary are not acceptable. Students who plan to take advantage of the program should contact the Health Center for further instructions.

The Health Center is located at 1406 LaPorte Avenue, just west of Scheele Hall and north of the tennis courts. The Student Health Center is open from 8:00 a.m. to noon and 1:00 p.m. to 4:30 p.m. Monday through Friday when undergraduate classes are in session. Contact the Health Center by phone (219) 464-5090, fax (219) 464-5410, or e-mail <Health.Center@valpo.edu>. In case of emergency, when the Health Center is closed, students may use the services of the Emergency Room at Porter Memorial Hospital located at 814 LaPorte Avenue.

The ASK Center--Academic Support Keys. The ASK Center provides a referral service to various academic support programs at Valparaiso University and promotes academic success for all undergraduate students. The ASK Center is located in Huegli Hall 132 and the hours are 8:00 a.m. to 5:00 p.m. Monday through Friday. By calling 219/464-5275 (ASK) referrals can be made for Academic Advising, Disability Support Services, the Writing Center, and DataVU Strategies.

Academic Advising. One of the benefits of an education at Valparaiso University is the availability of experienced faculty members for personal conferences and advising. Many of these sessions develop informally. A formal system of advising is in place in each of the colleges.

Entering students are assigned to an academic advisor to assist them in selecting a curriculum, meeting University requirements and making the most of their studies.

In the College of Arts and Sciences, students who have not declared a major are assigned a general advisor. As soon as students declare a major, they are assigned to a departmental advisor by the chair of their major department. Students in a special program are assigned a program advisor.

The major field or interdisciplinary program advisor allocates courses at the beginning of the sophomore year.

Some majors and programs, for example teacher certification and premed, require students to declare their intentions and begin the programs at the beginning of the freshman year to make it possible to complete the degree or certification requirements in four years.

All students must have their proposed schedule for the next semester electronically approved by their academic advisor before it is entered on the web. If the student has more than one advisor (e.g., departmental, special program, Christ College), the student should consult with all other advisors; the primary advisor, however, is the only one to sign off electronically. Advisors’ approval indicates only that they have counseled the student, not that they approve the schedule.

Nor does the advisor’s approval guarantee that the schedule will meet the requirements of the student’s program. Students should use the program evaluation (degree audit) option on DataVU to track their graduation requirements.

Disability Support Services. Valparaiso University, through its Mission Statement, strives to maintain a supportive environment which will promote the learning and well-being of all students. The following information is provided to assist those students with disabilities who are seeking academic accommodations and support.

The student must meet all qualifications for admissions and be officially admitted to the University prior to seeking disability support services provided by Disability Support Services.

Inquiries should be directed to the ASK Center at Huegli Hall, 464-5275. The University is committed to meeting its obligation to provide effective auxiliary aid and assistance to students who are disabled. The provision of auxiliary assistance is primarily the responsibility of the Department of Rehabilitation Services of the state in which the student maintains legal residence.

If the request for assistance is denied by the local agency, Valparaiso University’s provision of academic accommodations will be based upon a case by case analysis of an individual student’s need and his/her eligibility under the ADA and Section 504 of the Rehabilitation Act of 1973 and its regulations.

In order to be considered for academic accommodations, the student:

1. May, but is not required to, apply to his/her local Department of Rehabilitation Services Office before attending Valparaiso University, or as soon as is reasonably possible upon diagnosis of a disability, in order to allow time for funding to be allocated. Upon request the University will assist in the application.
2. Should be admitted to one of the colleges of the University.
3. Must submit a written diagnosis of the disability and its impact on learning from appropriate professional personnel.
4. Should notify the Director, Disability Support Services in writing before the first day of classes, or as soon as is reasonably possible upon diagnosis of a disability. Such notice is required to determine eligibility and to give the various academic and service areas a reasonable period of time to plan to meet the individual’s special needs.

The Writing Center. At the Writing Center, undergraduate or graduate students may discuss writing projects with peer consultants or the professional staff member. Conferences center on planning, revision, editing, and bibliography or citation matters. Help with writing application essays, personal statements, and employment materials is also given.

Confer by drop-in or appointment, Sunday–Friday. Call 464-5216 for conference times that include most weekday hours 9-5 and Sunday–Thursday evenings. Phone and e-mail conferences are also available. For more detail about appointments and for online resources, visit www.valpo.edu/writctr.

The Writing Center’s home on the first floor of the Christopher Center for Library and Information Resources places it near the Help Desk for Electronic Information Services, the Media Library, Meadow Reading Room, and the cafe. Its proximity to other services, as well as group study areas, creates a perfect spot for writing.

Core Colleagues. The Writing Center supports the Freshman CORE, the Human Experience, by offering conferences with sophomore consultants. Since the consultants have firsthand experience with the texts and issues students consider as they prepare for class.

International Student Support. Writing consultants work closely with international students and visiting scholars, working with them in their first courses on campus, or in the MBA, School of Law, or other graduate work.

Tutoring. The ASK Office, located in Huegli Hall (phone 5ASK), supports various levels of tutoring. A semester-by-semester schedule of departmental help/study sessions is one of the services provided. In addition to publishing the departmental help sessions schedule, the ASK Office supports the following types of tutoring:

1. Work with the professor—It is strongly suggested that the first option for help in a course is for the student to work directly with the professor. Frequently simple problems can be made more understandable with this communication.
2. Study Groups—it is often suggested that students gather in small groups and work with each other in mastering
Student Life

Class problems. This reinforces points from daily lectures and supports good study habits. On occasion the ASK Center will select a leader who has been successful in the course to help the group. This student is selected by the professor's recommendation. The ASK Center also hires a tutor who has satisfactorily completed the course or is a major in that discipline, who can lead the study group.

3. One-on-One—In many instances a student will want direct and private tutoring. The ASK Center maintains a list of tutors for various subjects and will arrange for a student to have a tutor. These tutors are students who have completed the course with a satisfactory grade, and/or are majors from that discipline.

A student experiencing difficulty in a course should not hesitate to go directly to the professor for assistance. Departmental help sessions are posted in the departmental offices and at various locations around campus. The ASK Center maintains a posting also. Students may start a study group and the ASK Center staff can assist in organizing the group. If a tutor is needed, students should not hesitate to call the ASK Center to get assistance.

All tutoring sessions supported by the ASK Center uphold the standards set by the University's Honor Code. It is the student's responsibility to know what is authorized and unauthorized aid.

VU Strategies. This course is designed for first year students who want to enhance their adjustment to college academic life by strengthening such skills as time management, assertiveness, organization, test-taking, note-taking, determination of learning style and study techniques. It is a seven-week course repeated three times throughout the year. It carries a Satisfactory/Unsatisfactory outcome.

Valparaiso University Center for the Arts

Albert R. Trost, Ph.D., Dean
Stacy E. Maugans, D.Mus., Assistant Dean
John R. Ruff, Ph.D., Director of the Freshman Core

The College of Arts and Sciences, the largest college of the University, consists of twenty-one departments and provides the University with its program of general education for all students as well as advanced work in the liberal arts, the sciences and in several professional areas. Each degree in the College consists essentially of two parts: 1. The general education component; 2. The major field or interdisciplinary program.

To these two parts, the student adds elective courses chosen from all the offerings of the University, often including a minor or minors.

General Education
An overview of the general education program is presented on page 10. Although this pattern applies to every degree in the College, certain variations are specified in the detailed presentation of degree requirements below.

The Major Field
Each student must complete a major field of study or an interdisciplinary program. Ways of meeting this requirement are presented in detail in connection with the degree requirements listed below. These options are intended to offer maximum flexibility so that students may find the courses of study best fitted for their interests and needs.

Degrees and Degree Requirements

ASSOCIATE OF ARTS DEGREE
(61 CR.)

A. General Education Requirements 37-40 Cr.
This degree is available only to students enrolled in the College of Adult Scholars.

1. CORE 110 5 Cr.
2. CORE 116 5 Cr.
As stated on page 102, College of Adult Scholars students who have completed Level II of a foreign language in high school but have not studied that language for at least 6 full years may be allowed to count credit earned for level 101 toward the foreign language requirements. Students opting for a different language from their high school experience begin with course 101 in the new language.

**B. Concentrations**

Beyond completing the general education requirements, students elect one of the following concentrations. Coursework used to meet general education requirements for the A.A. degree may not be used to meet concentration requirements.

1. **Culture and Humanity**

   21 credit hours drawn from at least two of the following subjects:
   - English (ENGL), History (HIST), Philosophy (PHIL), Theology (THEO), or Classical Civilization (CLC).

2. **Social and Behavioral Science**

   21 credit hours drawn from at least two of the following subjects:
   - Economics (ECON), Political Science (POLS), Psychology (PSY), Sociology (SOC), and approved courses in Geography (GEO 101, 102, 200, 210, 274, 301 and approved 490).

3. **Communication and Expressive Arts**

   21 credit hours from at least two of the following subjects: Art (ART), Foreign Languages (FL), Communication (COMM), Music (MUS), Theatre and Television Arts (THTR).

**C. Electives**

   0-3 Cr.

   0-3 elective credit hours, depending on whether the diversity requirement was fulfilled by another course.

**ASSOCIATE IN SCIENCE DEGREE**

(60 CR.)

**A. General Education Requirements**

   1. First Year Core .................................. (10 Cr.)
      CORE 110 ........................................ 5 Cr.
      CORE 115 ........................................ 5 Cr.

   2. Social Analysis .................................. 3 Cr.
      PSY 110 ........................................ 3 Cr.

   3. PE 101-105 ....................................... 1 Cr.

**B. Major Field Requirements**

   At least 30 credit hours in Natural Science and Mathematics. Students preparing for admission to one of the allied health fields should develop an appropriate program of study with the Associate Degree Advisor.

**C. Other Requirements**

   1. The following work must be completed in residence at Valparaiso University:
      a. 30 of the last 34 credit hours for the degree.
      b. At least 15 credit hours in Natural Science and Mathematics.
      c. A foundational level Theology course.

   2. The student must earn a cumulative grade point average of 2.00 on all work in residence and on courses in Natural Science and Mathematics taken in residence.

An Associate in Science degree with concurrent cytotechnology certification may also be obtained. See page 51.

**BACHELOR OF ARTS DEGREE**

(124 CR.)

**A. General Education Requirements**

   1. First Year Core .................................. (10 Cr.)
      CORE 110 ........................................ 5 Cr.
      CORE 115 ........................................ 5 Cr.

2. **Academic Area Studies**

   a. **Theology** ..................................... 6 Cr.
      1) One foundational level Theology course .... 3 Cr.
      2) One upper level Theology course taken in the junior or senior year ... 3 Cr.

   b. **Literature and Fine Arts** ............... 6 Cr.
      1) ENGL 200 .................................... 3 Cr.
      2) One course in Fine Arts or Fine Arts-Literature 3 Cr.

   c. **Foreign Language** .......................... 8 Cr.
      Course number 102 in a foreign language in which the student has no more than one year of high school credit, or course number 103 or 203 in any foreign language. A student who has completed a second year language course in high school will not be granted credit toward degree requirements for course 101 in that language at Valparaiso University.

   d. **Diversity: Global Cultures and Perspectives** .......................... 3 Cr.
      Courses which fulfill this requirement are ECON 336, GEO 102, GLST 150, HIST 232, 240, 250, 304, 311, 342, 350, 355, 393; FL 251; PHIL 220; POLS 130, 335; SOC 150, 230; FLS 250; THTR 101, 238, 239, 337.

   e. **Diversity: United States Cultural Diversity** .......................... 3 Cr.
      Courses which fulfill this requirement are ECON 136, 233, GEO 200, 274; HIST 225, 226; PHIL 120; POLS 110, SOCW 330; SOC 160, 275, 347;

   f. **Philosophical and Historical Studies** ...... 3 Cr.
      One course in either philosophy or history. (CLC 311 will also fulfill this requirement.)

   g. **Studies in Social Analysis** ............... 6 Cr.
      Two courses from the following selection: ECON 136, 210, 221, 222, 223, 233; GEO 101, 202, 200, 201, GNST 201; POLS 110, 120, 130, 220; SOC 110, 150, 160, 275. The two courses must be from two different departments.

   h. **Studies in Natural and Behavioral Sciences/Mathematics** ....... 12 Cr.
      Three four-credit courses, to be selected as follows:
      1) Two laboratory science courses to be selected from one of these options:
         a. Two courses from different departments, from the following: ASTR 101 and 101L, BIO 104, 112S, 115, 151, 171, CHEM 111, CHEM 121, CHEM 131, 7GEO 104, MET 103, PHYS 111 and 111L, PHYS 141 (or 151) and 141L, PSY 110 and 111.
   2) A third course from the list in 1) a, from a different department.

   i. **Studies in Science** ....... 3 Cr.
      1) Two courses in the same department, from the following pairs:
         a. BIO 151 and 152, BIO 171 and 172, CHEM 121 (or 131) and 122 (or 132), PHY 111 and 111L and 112 and 112L, PHYS 141 (or 151) and 141L and 142 (or 152) and 142L.

   j. **Studies in Communication** ............... 6 Cr.
      A minimum of 12 credit hours in Communication, including a senior year course. One course may be applied to the major or minor in Communication.

   k. **Studies in the Arts** ............... 3 Cr.
      A minimum of 12 credit hours in the Arts, including a senior year course. One course may be applied to the major or minor in the Arts.

   l. **Studies in Foreign Languages** ....... 3 Cr.
      A minimum of 12 credits in Foreign Languages, including a senior year course. One course may be applied to the major or minor in Foreign Languages.

   m. **Studies in History** ............... 3 Cr.
      A minimum of 12 credit hours in History, including a senior year course. One course may be applied to the major or minor in History.

   n. **Studies in Philosophy** ............... 3 Cr.
      A minimum of 12 credit hours in Philosophy, including a senior year course. One course may be applied to the major or minor in Philosophy.

   o. **Studies in Theology** ............... 3 Cr.
      A minimum of 12 credit hours in Theology, including a senior year course. One course may be applied to the major or minor in Theology.

   p. **Studies in Writing** ............... 3 Cr.
      A minimum of 12 credit hours in Writing, including a senior year course. One course may be applied to the major or minor in Writing.
department than either of the first two courses, or a four-credit mathematics or computer science course. MATH 110 and 114 will not fulfill this requirement.

NOTE: In the cases above where a three-credit lecture and a one-credit laboratory are listed together, such as PSY 110 and 111, the two courses count as a single four-credit science course for this requirement, and both must be taken.

i. PE 101-105       1 Cr.

B. Major Field Requirements

Students may fulfill the major field requirements of the Bachelor of Arts degree by completing either a Departmental Major or an Individualized Major and by meeting one of the completion requirements listed below; or by completing an Interdisciplinary Program (see page 47).

Departmental Major. In order to fulfill requirements under the Departmental Major, students must complete a minimum academic major. Departments in the College of Arts and Sciences offer the following major fields for the Bachelor of Arts degree: Art, Biology, Chemistry, Classics, Communication, Computer Science, Economics, Economics and Computer Analysis, English, French, Geography, German, History, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology, Spanish, Theatre and Television Arts, and Theology.

Individualized Major. An approved individualized major of thirty credit hours may be presented instead of the departmental majors listed above. This major is intended for students with clearly defined career objectives who feel that their specific needs are not met by the departmental major option nor by the interdisciplinary program option described below. A student in the College of Arts and Sciences may propose a plan for an individualized major, using the form available in the Dean’s office. The major must satisfy the following conditions:

1. The proposed major must include at least 30 credit hours but not more than 48 credit hours chosen from two or more departments.
2. None of the courses chosen may be courses used to meet the General Education Requirements.
3. The proposed major must be supported and supervised by a faculty advisor.
4. A comprehensive statement by the student justifying the major must accompany the Individualized Major form. This form must list the specific courses to be taken, and will be signed by the student and the faculty supervisor before it is presented to the Dean’s office for approval. Any revisions must also be approved by the Dean of the College.
5. The proposed major must be submitted to the Dean of the College of Arts and Sciences for approval, preferably by the beginning of the junior year, but no later than the deadline for filing for degree candidacy.

The selection of courses for the individualized major should reflect serious deliberation on the part of the student and advisor. Normally, the individualized major will not include lower division courses or courses of an introductory nature.

The individualized major may be freely substituted for a departmental major in any of the various combinations available to students in meeting major requirements for the Bachelor of Arts degree. Courses taken for this major may not be counted for credit toward a minor or a second major.

Completion of Major Field Requirement

In addition to completing either a departmental or an individualized major, students must complete one of the following:

1. An academic minor. The faculty recommends that students choose a minor that is related to their major. No course may be used to fulfill two majors or both a major and a minor requirement except with the permission of the Dean of the College. This restriction refers to courses within the major or minor field, not to additional courses required from outside of the major or minor field.

2. An approved individualized minor of 15 credit hours may be presented in lieu of the departmental minor. At least 9 credit hours must be taken beyond the introductory level of the courses chosen may be courses used to meet the General Education Requirements. Forms for individualized minors are available in the Dean’s Office. A student may not graduate with both a minimum individualized major and an individualized minor as the method of fulfilling major area graduation requirements.

3. A second academic major. In addition to the first major areas listed above, Physical Education may also be selected. An approved individualized major may also be presented in fulfillment of requirements of a second major.

4. A complementary major. A major which enhances and expands a first major. This major may not be a first major.

5. A first major with at least forty credit hours. However, no more than forty-eight credit hours from one department may be applied toward the 124 required for graduation. This limitation does not apply to students pursuing an English major and an English Writing minor, students pursuing a double major in Geography and Meteorology or pursuing a Meteorology major and a Geography minor in the Department of Geography and Meteorology, students pursuing double majors in the Department of Foreign Languages and Literatures, students pursuing double majors in Mathematics and Computer Science in the Department of Mathematics and Computer Science, the Bachelor of Music or Bachelor of Music Education degrees, or students pursuing a Bachelor of Fine Arts degree.

6. An interdisciplinary minor, see listing below.

Interdisciplinary Programs

The College of Arts and Sciences offers nine Interdisciplinary Programs of study which students may pursue instead of the major options outlined above. These programs are coordinated by special administrative committees composed of faculty members drawn together by their interest in a particular subject not defined by the boundaries of the traditional academic disciplines. Interdisciplinary Programs are currently offered in Actuarial Science, American Studies, Chinese and Japanese Studies, Environmental Science, International Economics and Cultural Affairs, International Service, and complementary majors in Modern European Studies and Pre-Seminary Studies.

A departmental second major, a complementary major, or a departmental minor may be added to the Interdisciplinary Programs with approval of the Dean of the College. In addition, minors in Interdisciplinary Programs in American Studies, Applied Statistics, Bioethics, Business Administration, Chinese and Japanese Studies, Environmental Studies, Ethnic Studies, Film Studies, Gender Studies, Human Aging, Liberal Arts Business, and Political Communication may be added to departmental majors. It would not be appropriate to add a second academic major in addition to an interdisciplinary program.

BACHELOR OF MUSIC DEGREE (128-136 CR.)

To be eligible for the Bachelor of Music degree, students must complete the required curriculum for the program area. In addition, they must pass all performance tests set for them by the Department of Music. They must earn 136 credit hours for the Church Music program or 128 credit hours for the Composition or Performance program. They must maintain a grade point average of 2.00.

Two options are offered the student in the church music program: organ and voice. Each student is expected, however, to acquire sufficient skill in organ performance and choral directing to assume a position as a qualified parish musician.

A. General Education Requirements

For details see the Bachelor of Arts degree.

1. First Year Core ..... 10 Cr.
2. Academic Area Studies
   a. Theology: one foundational and one upper level course 6 Cr.
   b. ENGL 200 Cr.
   c. Foreign Language 8 Cr.
   d. Global Cultures and Perspectives 3 Cr.
   e. U.S. Cultural Diversity 3 Cr.
   f. Philosophical and Historical Studies 3 Cr.
   g. Studies in Social Analysis 6 Cr.
   h. Studies in Natural and Behavioral Sciences/ Mathematics 4 Cr.
   i. PE 101-105 1 Cr.

B. Music Requirements

The requirements for the major fields are given on pages 136-137.

BACHELOR OF MUSIC EDUCATION DEGREE (138-142 CR.)

To be eligible for this degree, students must complete the curriculum described below. In addition, they must pass all performance tests set for them by the Department of Music.
They must have a grade point average of 2.50. In addition to meeting the music requirements for the Bachelor of Music Education degree, each student must be formally admitted into the Teacher Education Program and the Professional Semester. See requirements listed in the Department of Education under Secondary Education, page 85.

A. General Education Requirements
For details see Bachelor of Arts degree.
1. First Year Core 10 Cr.
2. Academic Area Studies
   a. Theology: one foundational and one upper level course 6 Cr.
   b. ENGL 200 3 Cr.
   c. Global Cultures and Perspectives 3 Cr.
   d. Historical and Social Studies 3 Cr.
   e. Courses in Social Analysis 3 Cr.
   f. Courses in Natural and Behavioral Sciences/ Mathematics 8 Cr.
   g. PE 101-105 1 Cr.

B. Professional Education Requirements
1. ED 203 2 Cr.
2. ED 204 3 Cr.
3. ED 305 2 Cr.
4. ED 370 3 Cr.
5. ED 459 3 Cr.
6. ED 460 3 Cr.
7. ED 485 3 Cr.
8. ED 489 3 Cr.
9. SPED 440 3 Cr.

C. Music Requirements
The requirements of the major field are given on page 137.

BACHELOR OF SCIENCE DEGREE (124 CR.)

A. General Education Requirements
For details see Bachelor of Arts degree.
1. First Year Core 10 Cr.
2. Academic Area Studies
   a. Theology: one foundational and one upper level course 6 Cr.
   b. ENGL 200 3 Cr.
   c. Global Cultures and Perspectives 3 Cr.
   d. U.S. Cultural Diversity 3 Cr.
   e. Courses in Social Analysis 6 Cr.
   f. Courses in Natural and Behavioral Sciences/ Mathematics 12 Cr.
   g. BIOM 151, 152 and CHEM 111.
   h. Sports Management Majors fulfill the natural science requirement for the Bachelor of Science degree, see page 48.
   i. PE 101-105 1 Cr.
3. Academic Area Studies Option
   Select two of the following:
   a. Fine Arts or Fine Arts-Literature 3 Cr.
   b. Foreign Language, one course above 101 3-4 Cr.
   c. One course in Philosophy or History 3 Cr.

B. Major Field Requirements
A student must complete one science major of at least 32 credit hours (biology, chemistry, computer science, geology, mathematics, meteorology, physics, psychology) and:
1. A science minor, or
2. A non-science major, or
3. The Liberal Arts Business Minor (page 230), or
4. The Business Administration Minor (page 226), or
5. A Secondary Education Major (page 85), or
6. An Applied Statistics Minor (page 228), or
7. An Engineering Minor (page 204)
OR two minimum science majors (biology, chemistry, computer science, geology, mathematics, meteorology, physics, psychology);

OR complete at least 40 credit hours in the first major.
No more than 48 credit hours from a major department may be applied toward the 124 credit hours required for graduation.

The geology major is offered as a special program in the Department of Geography.

The departmental major or the individualized major may be chosen provided that the major is at least 32 credit hours but not more than 48 credit hours; that courses for an individualized major are chosen from the sciences listed on page 48, and that other restrictions on majors are followed.

BACHELOR OF SCIENCE IN EDUCATION DEGREE (124 CR.)

Completion of a special curriculum with a major in either elementary education or middle level education leads to the degree of Bachelor of Science in Education. This degree is intended for students who plan to become teachers in either elementary schools, middle schools, or junior high schools. The requirements for this degree are given in the Department of Education on pages 82-85.

BACHELOR OF SCIENCE IN FINE ARTS DEGREE (124 CR.)

A. General Education Requirements
For details see Bachelor of Arts degree.
1. First Year Core 10 Cr.
2. Academic Area Studies
   a. Theology: one foundational and one upper level course 6 Cr.
   b. ENGL 200 3 Cr.
   c. Global Cultures and Perspectives 3 Cr.
   d. U.S. Cultural Diversity 3 Cr.
   e. Courses in Social Analysis 6 Cr.
   f. Courses in Natural and Behavioral Sciences/Mathematics 12 Cr.
   g. BIOM 151, 152 and CHEM 111.
   h. Sports Management Majors fulfill the natural science requirement for the Bachelor of Science degree, see page 48.
   i. PE 101-105 1 Cr.
3. Academic Area Studies Option
   Select two of the following:
   a. Fine Arts or Fine Arts-Literature 3 Cr.
   b. Foreign Language, one course above 101 3-4 Cr.
   c. One course in Philosophy or History 3 Cr.

B. Major Field Requirements
The first major, if the student has a double major, must be physical education. See page 146 for specific major requirements.
Special Academic Regulations for the College of Arts and Sciences

REGULATIONS CONCERNING GENERAL EDUCATION REQUIREMENTS

1. A course may not be used to meet more than one General Education Requirement, with the exception of the required courses in diversity (Global Cultures and Perspectives or U.S. Cultural Diversity). Appropriately designated diversity courses may be applied simultaneously toward fulfillment of certain area requirements.

2. Only courses of at least three credits may be used in meeting General Education Requirements, excluding the requirement in Physical Education.

3. Courses taken to fulfill major requirements (departmental majors or interdisciplinary minors) may be presented in fulfillment of General Education Requirements where applicable.

RESTRICTIONS ON THE USE OF CREDIT HOURS FOR DEGREES IN THE COLLEGE OF ARTS AND SCIENCES

1. A student may apply no more than four credit hours in Physical Education 101-149 toward a degree in the College of Arts and Sciences.

2. At most, four credit hours from the Computer Science courses numbered 128 and 290 may be applied toward a degree.

3. Non-music majors are limited to 16 credit hours of applied music, of which no more than 4 credit hours may be in ensemble music. For further clarification see page 141.

4. No more than 48 credit hours in any one subject may be applied toward the total of 124 credit hours required for graduation, each subject being identified by the 2-4 letter code preceding each course number in the catalog (e.g., COMM, MUS, PE, THTR). This limitation does not apply to students pursuing:
   a. a major in English and a minor in Creative Writing or Professional Writing,
   b. the Bachelor of Music degree,
   c. the Bachelor of Music Education degree, or
   d. the Bachelor of Science in Fine Arts degree.

5. A student may apply no more than 15 hours collectively from the professional colleges of the University toward a degree in the College of Arts and Sciences, subject to the following exceptions:
   a. Students completing the Liberal Arts Business Minor may apply 18 credit hours in business administration courses only if Accounting 206 is selected to complete the requirement.
   b. Students completing the Business Administration Minor may apply 21 credit hours in business administration.
   c. Students completing the Actuarial Science Major may apply 19 credit hours in business administration, and may apply 20 credit hours in business administration only if IDS 110 is selected to complete the requirement.
   d. Students completing an Engineering Minor may apply 18 credit hours in engineering.

Note: A student who transfers from one of the professional colleges into the College of Arts and Sciences may apply credits within the restrictions listed above. For further clarification, consult the Dean of the College.

Professional and Pre-Professional Areas

The College of Arts and Sciences offers degrees especially designed for: teaching in elementary schools, teaching of music, performance of music, creation of art works, work in physical education and social work. The appropriate degrees are described earlier, pages 43-50. In addition, students can prepare for teaching in secondary schools under a variety of majors for Bachelor of Arts and Bachelor of Science degrees. The Baccalaureus Program, the prelegal program and the premedical arts programs are professional preparatory programs a student may complete while pursuing a liberal arts major.

Students interested in any of these programs should declare the program before entering the sophomore year.

Those pursuing an Associate in Science degree may elect the cytotechnology certification option. This program requires the student to complete a one year program in an accredited school of cytotechnology and a one year prescribed course of study at Valparaiso University. The credits from the cytotechnology program (usually 30) will transfer to Valparaiso University to meet about half of the requirements for the A.S. degree. See page 44 for the degree requirements for the Associate in Science degree. Students should contact a premedical arts advisor for specific science courses that must be completed.

TEACHER EDUCATION PROGRAMS

The Teacher Education Program is under the direction of the Department of Education. Eligibility for admission to the program is determined by the department.

The University currently prepares applicants for licensure in the following licensure categories listed under types of school and developmental settings.

License: Elementary Teaching
Elementary Grades 1-9 Generalist: Early/Middle Childhood - Intermediate
Additional content areas in:
Special Education - Mild Intervention (Learning Disabilities, Mildly Mentally Handicapped, and Emotional/Behavioral Disorders)
High School Teaching
License: Middle School Teaching
Middle School (Junior High Grades 6-8)
Generalist: Early Adolescence
Students specialize in two of the following content areas:
Language Arts
Social Studies
Mathematics

College of Arts and Sciences

Science
Additional content areas are available in:
Special Education - Mild Intervention (Learning Disabilities, Mildly Mentally Handicapped, and Emotional/Behavioral Disorders)

License: High School Teaching
High School Grades 9-12 Content Area
Licenses (Adolescence and Young Adult Language Arts/English Foreign Language - French, German, Latin, or Spanish Health Education Physical Education Mathematics Fine Arts Music (instrumental and vocal) Visual Arts Science (one or more) Life Science Chemistry Physics Earth/Space Science Physical Science Social Studies (three or more) Economics Geographical Perspectives Historical Perspectives Government and Citizenship Sociology Psychology Special Education: Mild Intervention (Learning Disabilities, Mildly Mentally Handicapped, and Emotional Disorders)

Additional certification areas are available in:
Any of the above content areas Coaching

PREPARATION FOR THE MEDICAL ARTS

Students can prepare for entrance into medical, dental, veterinary, medical technology, physical therapy, or paramedical schools by entering one of the premedical arts programs of the College. Students in these programs must have their schedules approved at the beginning of each semester by a major advisor and an assigned premedical arts academic advisor. Advising in the premedical arts is handled by premedical advisors, who are members of the Committee on Pre-Medical Arts. All recommendations to the professional
specifically, students who elect one of these programs must meet the following requirements:

1. they must spend the junior year in residence at valparaiso university.
2. they must meet all general education requirements for the bachelor of arts or bachelor of science degree with the exception that one course in theology is waived.
3. they must complete an academic major. for the bachelor of science degree this major must be in one of the science fields.
4. they must offer at least 93 semester credit hours of college work.
5. they must apply for graduation by the deadline date as noted at the front of this catalog and present to the office of the registrar an official transcript of an additional year’s satisfactory work at an approved professional school.

preparation for the study of law

according to the consensus of legal educators, a specified major is not a prerequisite to the study of law. significant qualities of undergraduate preparation derive from the intellectual discipline required by exacting teachers rather than the subject matter of what is taught. prelaw students should select an academic major and consult with their academic advisor and a prelaw advisor to select courses in the student’s areas of interest which will place demands on analytic skills and both verbal and written expression.

students in this program may express common interests through the pre-law society.

combined liberal arts-law program

students may complete the degree bachelor of arts or bachelor of science from valparaiso university by completing three years of study at this university and completing an additional year’s work at an approved school of medicine, dentistry, veterinary medicine, medical technology or other allied health disciplines. prior approval of the program must be secured from the committee on pre-medical arts.

students who elect this program must meet the following requirements before beginning the school of law:

1. they must satisfactorily complete all general education requirements for the bachelor’s degree and an academic major.
2. they must satisfactorily complete at least 94 undergraduate credit hours.
3. at least one half of the credit hours for the major must be taken at valparaiso university.
4. at least 75 credit hours, including the last 30 credit hours, must be taken at valparaiso university.
5. they must have a grade point average of 3.0 in all undergraduate work at valparaiso university.
6. they must be admitted to the valparaiso university school of law through the normal admissions process.
7. they must complete a minimum of 90 credits in the valparaiso university school of law with a grade point average of at least 2.0.
8. they must apply for the bachelor’s degree graduation by the deadline date as noted at the front of this catalog.

preparation for seminar

students may prepare themselves for seminar entrance by enrolling in the pre-seminary program of valparaiso university. this program meets all the standards of the association of theological schools for undergraduate education. students preparing for seminar entrance with their first major, take the complementary major in pre-seminary studies (page 159). upon graduation from this program, students are usually accepted into the seminaries not only of the lutheran church missouri synod and the evangelical lutheran church in america, but also of other protestant bodies, and in graduate divinity schools throughout the united states.

a student who is interested in preparing for seminar entrance is helped by an advisor to select appropriate undergraduate courses. these include studies in the arts and the humanities, in the biblical languages and in areas of the student’s own special interest.

further information on this program is available from the chair of the department of theology.

arts and sciences pre-engineering program

applicants for admission to the college of engineering may require additional work, usually in mathematics or sciences, before admission is granted. such students may be admitted to the college of arts and sciences for this preparation. students should consult the dean of the college of engineering for details.

arts and sciences pre-nursing program

in some cases students applying for admission to the college of nursing may require additional preparatory work, usually in the biological and social sciences, before admission is granted. a limited number of such students, as well as late applicants, are admitted to the college of arts and sciences. these students are helped by the college of nursing to develop a course of study which will prepare them for admission to the college of nursing. students who successfully complete this course of study, including all the liberal arts pre-nursing requirements given on page 221, with a standing of 2.0 or better may then apply to the dean of the college of nursing for admission to that college.

deaconess education and formation program

the university and the lutheran deaconess association (lda) cooperate in the education and formation of women for service in deaconess ministry. in response to a changing world, the lda offers a process that allows students to express their christian vocation through church, civic, or human service professions. plans may be individualized, combining deaconess students with many academic majors, to earn a graduate or undergraduate degree.

the education and formation process is under the counsel and guidance of the staff of the lutheran deaconess association. inquiries should be directed to the director of education and formation, center for diaconal ministry, 1304 laporte avenue, valparaiso, indiana 46383-9978. phone 210-464-6925. e-mail: deaconserv@valpo.edu. application forms and fee schedule are outlined on the website: www.valpo.edu/lda. students may apply during their sophomore year, but must be at least 20 years old or have junior standing. week-long orientation and annual seminars
Internship in a ministry or human services profession, one year, full-time paid position. May be done between the junior and senior year or after graduation.

4. Diaconal Community.
Participation in the diaconal community, including campus activities, area diaconal groups, and annual conferences.

Relationship with a diaconal mentor. Deaconess ministries have been combined with, but are not limited to, these academic majors: Theology; Nursing; Church Music; liturgy; worship; Education; Psychology; Social Work; pre-medical, medical fields, occupational therapy/physical therapy; languages and classical languages; International Service; Law; Youth, Family, and Education Ministry; Business; Master of Arts in Liberal Studies programs.

COMBINED LIBERAL ARTS-ENGINEERING PROGRAM
Students may earn in five years (ten semesters) both the Bachelor of Arts degree and one of the Bachelor of Science in Engineering degrees. They may earn the two degrees by completing one of the engineering curricula and the Bachelor of Arts degree as well as the major requirement of the College of Arts and Sciences. This requires them to earn 162 credit hours and to have a grade point average of at least 3.00 and a grade point average in the major of at least 3.50. May apply through the major department or program committee for admission to Honors Work. To apply, the student must submit a plan for a major independent project which will be undertaken under the supervision of a member of the major department or program. The application form, which requires the student to articulate the independent project briefly, clearly, and with a timetable and modest bibliography, is available in the dean's office. (For more information, please attend the Beyond Valpo program held annually during the spring semester.) This plan must be presented to the chair of the student’s department or program for approval and forwarded to the dean’s office no later than 12:00 P.M. on the third Monday of April of the student’s junior year. The dean will then forward the application to the Scholarship and Advising Committee for final approval. If the proposed independent study project is approved, the student shall be enrolled by the Dean’s Office in the first semester of the senior year in course numbered 497 to 596 (major department or program). If a student who has been admitted to Honors Work must present four copies of a completed draft of the project to the chair of the major department or program at least ten class days before the beginning of the final examination period of the student’s senior year. With prior approval, the student may substitute for the completed draft a status report demonstrating substantial progress (in certain areas, such as in the experimental sciences). If a student is not deemed worthy of Honors, the student may substitute for the completed draft a status report, the student should describe the work accomplished during the semester and the plans for continued work during the following semester. The project is then judged at midyear by a project committee consisting of the chair of the major department or program, the project advisor, one additional department advisor, and one outside reader who is a member of the Scholarship and Advising Committee. If, based on the status report or draft, the project committee affirms the likelihood that the student will be able to conclude an exceptional piece of scholarship appropriate to the student’s discipline by the end of the following semester, that student will be admitted to Candidacy for Honors. If the project has not progressed as had been expected (the student must earn an A or A- for the first semester), the student will be denied admission to Candidacy for Honors. The student should consult with the project advisor for departmental/program evaluation policy. If admitted to Candidacy for Honors, the student shall be registered by the Dean’s Office during the second semester of the senior year in course numbered 498 "Honors Candidacy in major department or program." A student must complete the independent study project begun in the previous semester, incorporating additions or revisions suggested by the project committee to its satisfaction. Four copies of the completion report must be delivered to the chair of the major department or program at least fifteen class days before the beginning of the final examination period of the student’s final semester. The original project committee shall then schedule an oral examination for the Honors candidate to assess the student's knowledge of matter covered in the independent study project and any other closely related matters deemed appropriate by the project committee. The Honors Candidate shall be notified beforehand of the related matters to be included in the examination. If, in the opinion of the project committee, the candidate is worthy of Honors, it shall recommend to the dean that the student be awarded three credit hours with a grade of A or A- for course numbered 498 and be graduated “With Honors in the major field.” If the candidate is not deemed worthy of Honors, the office of the dean, upon consultation with the project committee, may recommend that the student be granted three credit hours for Independent Study in the major department.
or program, with a grade determined by the project committee. Two copies of the final project report will be given to the Dean's Office for archival purposes.

**During the semester or semesters of engagement in Honors Work, a student is not allowed to carry more than 12 credit hours in addition to Honors Work.**

A student whose major requires completion of a senior project may register for Honors Work in lieu of the departmental senior project course, after securing permission from the department chair. The same procedures as outlined above must be followed.

**Cooperative Education**

Cooperative Education in the College of Arts and Sciences is a program in which students combine professional, paid work experience with academic programs. Students may be employed in full-time (called alternating) or part-time (called parallel) placements. Normally, a semester of full-time employment will earn a maximum of 3 credit hours; a full-time summer employment, a maximum of 2 credit hours; and a part-time (parallel) placement requiring a minimum of fifteen hours per week, 1 credit hour. Parallel placements of fewer than fifteen hours per week may be given 0.5 credit hour. Students will normally complete a minimum of two alternating or four parallel work assignments. The program is available through various departments as well as through the general offerings of the College. The College's general program is intended both for undeclared majors who are able to use cooperative education on an exploratory basis and for declared majors who may wish to participate outside their major department on an elective basis.

The following policies govern Cooperative Education within the College:

1. The student works under the advisement of a faculty member who monitors the work experience, evaluates the required written reports by students, and assigns the course grade.
2. A student is eligible upon completion of two semesters of enrollment in residence with a minimum cumulative grade point average of 2.90. Co-op is open to students upon completion of the freshman year.
3. Placements require prior approval of the Coordinator of Cooperative Education—retroactive credit will not be granted.
4. Course credits count as electives toward graduation or, in certain academic departments where specified, count toward the department's major or minor.
5. No more than a combined total of 12 credit hours earned through cooperative education, internship, field experience, or other work experiences may be applied toward the meeting of minimum graduation requirements. Exceptions may occur in certain departments due to professional certification requirements.

Additional restrictions may apply in departments where the cooperative education credits count toward major or minor requirements.

**General Courses Offered by the College of Arts and Sciences**

**First Year Core (Cr. 10, CORE 110 and CORE 115).** A writing-intensive interdisciplinary course that initiates first year students into the VU academic community by exploring significant themes in human experience, engaging students with resources from the areas of history, theology, philosophy, literature and the arts. It is a core experience extending for two semesters, 5 credits each semester, in seminar sections of about 20 students. It is taught by a trained core faculty from areas across the University, the faculty meeting regularly to promote extensive collaborative activity for both faculty and students.

**GS 100. VU Strategies.**

Cr. 0. A course to assist first-year students in developing skills necessary for college success, including study skills, learning styles, time management and test-taking strategies. Administrative Assistant Luci Hicks’ signature required.

**GS 150. Exploratory Studies and Vocational Discernment.**

Cr. 2. A course designed to help students understand the concept of vocation. Students will also learn to put to use certain practices of vocational discernment that might help them find their majors and shape their lives. Readings will be drawn from both secular and sacred texts, from the Judeo-Christian as well as other religious traditions. Includes a mandatory weekend retreat. Will meet for seven weeks, beginning with week four.

**GS 200. Study Circle on Race Relations.**

Cr. 1. This course will offer 8-15 students the opportunity to engage in a series of participatory, democratic discussions about race relations on campus and in society. The instructor(s) for the course will serve as facilitator(s), establishing ground rules for a safe, focused discussion in which participants can exchange ideas freely and consider a variety of views. By uncovering shared concerns and coming up with practical strategies to improve race relations participants may find they can work collaboratively to improve the campus and community. Readings will be drawn from Facing the Challenge of Racism and Race Relations, a guide produced by the Study Circles Resource Center.

**GS 390. Topics in English Life and Culture.**

Cr. 3. A study of selected aspects of English life and culture. Topics might include, but are not restricted to politics, education, religion, business, environment, and multi-cultural issues.

**GS 390. Topics in German Life and Culture.**

Cr. 3. A study of selected aspects of German life and culture. Topics might include, but are not restricted to politics, education, religion, business, environment, and multi-cultural issues.

**CPED 381. Cooperative Education I.**

Cr. 0.5-3. This course is a prearranged, approved professional work experience with a cooperating employer. A written report is required of each student. The prerequisites are one year in residence, a minimum cumulative grade point average of 2.50, and the approval of the Coordinator of Cooperative Education.

**CPED 382-383. Cooperative Education II-III.**

Cr. 0.5-3. The prerequisites for additional cooperative education experiences are the same as for Cooperative Education 381, plus positive work performance evaluations by the previous cooperating employer(s). This course may be repeated beyond 383 for additional credit, subject to the guidelines of the College, as stated on page 56.

**GS 395. Independent Study Project.**

Cr. 1-4. An independent study project is conducted on a topic selected by a group of individual. Grading is limited to the use of S or U. Prerequisites: Approval of a faculty sponsor and the Dean of the College of Arts and Sciences. This course is administered by the Dean of the College for students who desire to work on a specialized academic project. A proposal for an independent study project must be submitted at least three weeks before the beginning of the registration period for the semester in which the project is to occur. Further details and an application form may be obtained at the Office of the Dean of the College of Arts and Sciences.

**Urban Semester.** The following courses are offered in a residential program in Chicago in cooperation with the Associated Colleges of the Midwest:

**GS 338. The Core Course: Public Policy in an Urban Center.** Cr. 4.

**GS 348. The Seminar.** Cr. 4.

**GS 346. The Internship.** Cr. 4.

**GS 395. Independent study project.** Cr. 4.

All sophomores, juniors and seniors at the University are eligible to participate in this program. Students shall be admitted to this program on the recommendation of the Urban Studies Advisory Committee.

Valparaiso University students register at Valparaiso for the Chicago Urban Semester and pay to Valparaiso University the general fee charged of all full-time students. Expenses for travel, meals and lodging are paid directly by the students. Full credit toward graduation is given for all courses taken in the Urban Studies program. The program is offered in both the fall and the spring semesters.

See page 233 for course descriptions and the Urban Studies Minor requirements.
## Actuarial Science

**Administrative Committee:**
Professor Ozgur (Information and Decision Sciences); Associate Professors Hull (Mathematics and Computer Science), Pearson (Mathematics and Computer Science, Chair), Pirie (Finance), Shingleton (Economics).

Students who complete the Actuarial Science major will have fulfilled the major field requirements for the Bachelor of Science degree.

**Objectives.** Actuarial science can be described as the study of the current financial implications of future contingent events. Actuaries, employed by insurance companies, consulting firms or government agencies, must have excellent quantitative reasoning skills in addition to an understanding of modern business and finance. The Actuarial Science program provides a background in the areas of mathematics, finance, statistics, and economics. Students interested in pursuing the Actuarial Science major should confer with a member of the Administrative Committee.

**Requirements.** A minimum of 62 credit hours approved by the Administrative Committee is required. Specific required courses are listed below. Students completing the Actuarial Science program may apply 19-20 credit hours in business administration courses toward the Bachelor of Science degree. Introductory courses fulfill 4 of the 12 credits required for the Mathematics General Education Requirement and 3 or the credits required for the Social Analysis General Education Requirement.

The Business Administration Minor and the Applied Statistics Minor are not available to Actuarial Science majors.

### REQUIRED COURSES

#### Introductory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 206</td>
<td>Financial Accounting</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 206</td>
<td>Managerial Accounting</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 221</td>
<td>Principles of Economics-Micro</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 222</td>
<td>Principles of Economics-Macro</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>IDS 110</td>
<td>Business Spreadsheet Applications OR CS 157 Algorithms and Programming</td>
<td>1-4 Cr.</td>
</tr>
</tbody>
</table>

#### Probability and Statistics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 240</td>
<td>Statistical Analysis</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 340</td>
<td>Statistics for Decision Making OR ECON 325 Econometrics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 341</td>
<td>Probability</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 342</td>
<td>Mathematical Statistics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 344</td>
<td>Applied Probability and Statistical Decision Theory</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 493</td>
<td>Seminar in Applied Statistics</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

#### Finance and Modeling

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 304</td>
<td>Financial Management</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FIN 410</td>
<td>Theory of Corporate Finance</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FIN 330</td>
<td>Management of Financial Institutions OR FIN 420 Investment Management</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 321</td>
<td>Intermediate Micro-Economic Theory OR ECON 324 Managerial Economics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>IDS 320</td>
<td>Management Science</td>
<td>15 Cr.</td>
</tr>
</tbody>
</table>

#### Capstone Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACRS 325</td>
<td>Actuarial Modeling</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

#### Total Program Requirement

<table>
<thead>
<tr>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>62-65 Cr.</td>
</tr>
</tbody>
</table>

### American Studies

**Administrative Committee:**
Professors Albers (Theology), Baas (History), Buggeln (History), Feaster (English), Janke (Geography and Meteorology), Morgan (Christ College), Spence (English, Chair); Associate Professors Schaefer (History), Shingleton (Economics).

Students completing the Program in American Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

**Objectives.** The Program in American Studies offers the undergraduate student an opportunity to study the whole civilization of the United States—its fundamental ideas, institutions and symbolic expressions as these have developed over time. This common subject matter is examined through a variety of methods and approaches, reaching across traditional disciplines. The student must, therefore, become familiar with the approaches of the social sciences, the fine arts, and the humanities as these bear on the subject of American civilization. By drawing together these different perspectives, American Studies enables students to attain a broad vision of the civilization, while deepening their understanding of what is both unique and universal about the United States.

**Resources.** Valparaiso University has special resources for the student in American Studies. Among these are the library of American Civilization, containing more than 15,000 volumes of American materials on microfiche; American Women's Diaries (microfilm reels); Black Abolitionist Papers; Early American Imprint Collection (49,000 items); The War of the Rebellion: official records of the Union and Confederate Armies (130 volumes); Bulletin of the Bureau of American Ethnology (199 volumes); The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit missionaries in New France, 1610-1791 (73 volumes); the Brauer Museum of Art (www.valpo.edu/artmuseum); the Washington Semester Program; the Luther College Washington Consortium; The Chicago Arts Program; The Chicago Urban Semester (pages 12-13).

**Program Requirements.** A minimum of 48 credit hours in courses approved by the Administrative Committee. Courses must include the 24 credit hours designated in the Program Core and an additional 24 credit hours selected from the list of approved elective courses. The student and the Chair of the Committee, who is advisor for all students in the Program, may select courses that fulfill individual academic or career objectives. Courses not included in the list of approved electives may be substituted in some instances if they are approved by the Chair of the Committee. Students are encouraged to undertake independent study projects. Honors Work may be undertaken in American Studies with appropriate approval. Students may petition for AMST 497: Honors Work in American Studies, and AMST 498: Honors Candidacy in American Studies (see page 54).

**Area Minor in American Studies.** A student fulfilling major field requirements under a Major Option may present an area minor in American Studies for the required minor. Requirements for the minor are a minimum of 24 credit hours approved by the Committee on American Studies. Courses must include at least 12 credit hours selected from the Program Core. The remaining credit hours are selected from the list of approved elective courses. Interested persons should schedule a visit with the committee chair.

### Program Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 320</td>
<td>American Painting</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ART 321</td>
<td>American Art and Architecture</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 401</td>
<td>American Literature I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 402</td>
<td>American Literature II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 220</td>
<td>The American Experience to 1877</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 221</td>
<td>The American Experience in the Modern World</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 120</td>
<td>Government of the U.S.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>THEO 324</td>
<td>Christianity in America</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>AMST 495</td>
<td>Independent Study</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>
Elective Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 311</td>
<td>Topics in the Theory and History of Art</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CC 300</td>
<td>Seminar in the History of Anxiety</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CC 325</td>
<td>Seminar (with approval of committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CC 325</td>
<td>Seminar (with approval of committee chair and consent of the Dean of College)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 233</td>
<td>The Economics of Race and Gender</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECON 389</td>
<td>Economic History of the U.S.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 365</td>
<td>Studies in American Literature</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 390</td>
<td>Topics in Literature (with the approval of the committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 325</td>
<td>The American Revolution, 1763-1789</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 325</td>
<td>Slavery, Abolitionism and Sectionalism, 1815-1860</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 325</td>
<td>Civil War and Reconstruction</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 325</td>
<td>Depression and War: The United States, 1929-1945</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 325</td>
<td>The Age of Exploration: United States Since 1945</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 390</td>
<td>Topics in History</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 394</td>
<td>Beats and Hippies</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 492</td>
<td>Reading and Discussion Seminar 2:3</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 493</td>
<td>Research Seminar (with the approval of the committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHIL 390</td>
<td>Philosophical Topics (with the approval of the committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 220</td>
<td>State and Local Politics in the U.S.</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 320</td>
<td>Politics of Urban and Metropolitan Areas</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 325</td>
<td>Problems in American Politics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 325</td>
<td>The Presidency</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 327</td>
<td>Congress</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 340</td>
<td>Constitutional Law I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 341</td>
<td>Constitutional Law II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 359</td>
<td>Problems in Political Philosophy (with the approval of the committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>SOC 330</td>
<td>Vulnerable Populations: Color, Gender and Orientation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>SOC 325</td>
<td>Urban Sociology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>SOC 347</td>
<td>Race and Ethnic Relations</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>SOC 390</td>
<td>Issues in Sociology (with the approval of the committee chair)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>THEO 320</td>
<td>Topics in Christian History: History of Lutherans in America</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>THEO 365</td>
<td>Native American Religions</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

AMST 495. Independent Study.

Cr. 3. An independently supervised course of study taken under the direction of a member of the Administrative Committee on American Studies usually during the student's senior year. Students are expected to produce a major paper that reflects intensive reading and research in an area pertaining to American culture and to employ the interdisciplinary methodological characteristics of American Studies as a field. Before registering for this course students must submit a prospectus to the Administrative Committee for approval. Required for majors.

AMST 497. Honors Work in American Studies.

Cr. 3. See Honors Work, page 54.

AMST 498. Honors Candidacy in American Studies.

Cr. 3. See Honors Work, page 54.

Art

Associate Professors Corazzo, Sirko (Chair); Assistant Professors Oldenburg, Tomasek.

The Art Department offers instruction in basic design, graphic design, drawing, digital art including 3D modeling, painting, photography, sculpture, ceramics, art education and art history. Interdisciplinary majors are possible which combine these areas with such fields as journalism, drama, marketing, communications and others. Upperclass majors typically work independently with individual members of the faculty. Gallery and cultural resources on campus and in nearby Chicago are an integral part of the curriculum. Frequent use is made of the outstanding collection of American art in Valparaiso University's Brauer museum of Art, which offers an active exhibition program.

A major in art may lead to careers in the fine arts and related fine arts services such as museum technology and gallery sales; in areas of visual communication such as graphic design, photography and illustration; and in the field of art education. A graduating art major is also prepared for graduate study in art history and the fine arts.

Major. A minimum of 30 credit hours in art which must include ART 101, 102, 121, 132, 162, 221, 231, and 251. The Bachelor of Science in Fine Arts degree requires 54 credit hours of art; see page 49. After completion of the core courses for each degree, a concentration must be chosen in painting, sculpture, ceramics, photography, graphic design or art history. Recommendation for admission to the B.S.F.A. program requires a portfolio presentation to the faculty of the Art Department by the beginning of the junior year. Descriptions of specialized programs as well as suggested curricula are available from the Department Chairman. Field trips, art exhibitions, visiting artists and similar events are integral parts of the program of the Art Department.

Minor: A minimum of 15 credit hours in art constitutes a minor. The student may concentrate in studio art or art history. For studio art: ART 101 or 102, 121, 132, and 162 or 231 must be included. For art history: ART 101 and 102 must be included in addition to three other art history courses in the department.

Degrees. Completion of the degree requirements of the College of Arts and Sciences with a major in art leads to the Bachelor of Arts degree intended to provide a general art background, or to the Bachelor of Science in Fine Arts degree primarily intended for students desiring to continue their training at the professional or graduate school level. See page 49 for the requirements for the B.S. in F.A. degree.

Specialization in art education is possible in either the B.A. or the B.S. in F.A. program; consult the Education Department concerning state and University requirements.

Approval of Schedules. Students who take a major or a minor in art must have their schedules approved by the Chair of the Department at the beginning of each semester. Students who expect to teach art should consult, as early as possible, the appropriate advisor in the Education Department concerning state and University Requirements.

ART HISTORY


Cr. 3. A survey of art history from prehistoric times through the Gothic period. Field trip. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

ART 102. Renaissance to Modern Art History.

Cr. 3. A survey of art history from the Renaissance to the 19th century. Field trip. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

ART 311/311. Topics in the Theory and History of Art.

Cr. 1-4. An investigation of major periods or developments in the visual arts. Included may be historical topics such as medieval or non-Western art history, the history of art theory or such topics as aesthetics or color theory. Field trip. May be repeated for credit provided topics are different. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.
ART 122. Drawing: Advanced Studio.
Cr. 3. A seminar course tracing major themes in Italian, French, Spanish, Netherlandish, and British art in the 17th and 18th centuries. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Prerequisite: junior standing or approval of the Chair of the Department.

Cr. 3. A seminar course tracing major themes in 19th century European art. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Prerequisite: junior standing or approval of the Chair of the Department.

ART 319/519. Early Twentieth Century European Art.
Cr. 3. A seminar course tracing major movements in European art from the turn of the century until World War I. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Prerequisite: junior standing or approval of the Chair of the Department.

ART 320/520. American Painting.
Cr. 3. A survey of American painting history from colonial times through the present. Field trip. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

Cr. 3. A survey of American painting, sculpture and the building arts, beginning with the earliest settlements in Virginia and New England. Several areas of focus will be integrated with field trips to museums and an architectural tour of landmark buildings. Emphasis will be placed on colonial and modern architecture, nineteenth century realism and romanticism and the emergence of modernism and abstraction in the twentieth century. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

STUDIO

ART 121. Drawing.
0+6, Cr. 3. A basic course in the fundamentals of drawing and using various media. Field trip.

0+6, Cr. 3. A study of more advanced techniques and problems involving the drawing media, to include the human figure. Field trip. Prerequisite: ART 121.

ART 132. Introduction to Design.
0+6, Cr. 3. A course introducing the basic elements and principles of two-dimensional and three-dimensional design. Field trip.

ART 151. Ceramics.
0+6, Cr. 3. Basic ceramic processes including wheel throwing, hand building, tapestry and coiling. Field trip.

ART 152. Ceramics: Advanced Studies.
0+6, Cr. 3. Advanced problems in clay construction and glaze formation with opportunities for specialization. Field trip. Prerequisite: ART 151.

ART 162. Photography I.
0+6, Cr. 3. Introduction to the techniques, history, and aesthetics of color photography. Each student must have a working 35mm camera. Field trip.

ART 221. Painting.
0+6, Cr. 3. Problems in painting in oil and other media. Emphasis on color theory and composition. Field trip. Prerequisite: ART 121.

ART 222. Painting: Advanced Studies.
0+6, Cr. 3. Continuation of Art 121 with increased concentration on students' individual interests. Field trip. Prerequisite: ART 221.

ART 230. Desktop Publishing.
0+6, Cr. 3. (Also offered as COMM 230.) Introduction to computer information display techniques ranging from computer generated illustration, charts and graphs, to newsletter and related page layout procedures. No prior computer experience is required.

ART 231. Graphic Design I.
0+6, Cr. 3. Introduction to the principles of graphic design with emphasis placed on typographic solutions. Works are created on Macintosh computers.

0+6, Cr. 3. Advanced problems in visual communications with emphasis on design in the commercial environment. Focus is on the written word. Special emphasis on text and image, design theory, computer-aided designs and techniques for presentation. Field trip.

ART 251. Sculpture.
0+6, Cr. 3. Problems in forming sculptural statements in various materials and techniques such as concrete casting, metal welding, wood construction, etc. Field trip. Prerequisites: ART 121 and 132 or consent of the instructor.

0+6, Cr. 3. Advanced problems in sculpture processes. Field trip. Prerequisite: ART 251.

ART 260. 4x5 Photography.
0+6, Cr. 3. Introduction to large format photography. Study of camera and darkroom techniques. Camera lease required. Field trip. Prerequisite: ART 162.

ART 262. Photography II: Color.
0+6, Cr. 3. Introduction to the techniques, history, aesthetics, and criticism of color photography. Students work with color negatives, prints, and transparencies. Field trip. Prerequisite: ART 162 or consent of the instructor.

ART 266. Advanced 4x5 Photography.
0+6, Cr. 3. Advanced techniques and practices of large format photography. More advanced study of camera and darkroom techniques. Camera lease required. Field trip. Prerequisite: ART 162.

ART 285. 3D Design and Animation.
0+6, Cr. 3. Introduction to three dimensional modeling techniques, computer drawing and basic animation. Prerequisite: ART 231.

ART 290. Topics in Art.
Cr. 3. Specific topics based on interests of students and faculty. Topics may vary from one semester to another. May be repeated for credit if topics are different. Prerequisite: sophomore standing.

ART EDUCATION

Cr. 3. This course provides the prospective teacher with studio experiences in the selection, organization and use of two- and three-dimensional art and craft materials. Students will learn to format lesson plans in accordance with state and national standards following the Discipline Based Art Education model. This course may not be counted toward a minimum major or a minor in Art.

ART 498. Honors Work in Art.
Cr. 3. See Honors Work, page 54.

ART 499. Honors Candidacy in Art.
Cr. 3. See Honors Work, page 54.

such areas as photography, graphic design, or with an art museum. Prerequisite: consent of department chair. Grade is S/U only.

ART 390/590. Special Studies.
Cr. 1-4. (Graduate Cr. 1-3.) Specialized work in the practice of art; the teaching of art and the history of art, arranged by a professor and one or more advanced students. Work in crafts, liturgical design, etc. may be included. A SU grade option may be stipulated at the beginning of the course. May be repeated for credit. Field trip. Prerequisites: upperclass major and consent of the instructor. A formal written proposal is required before registration. The proposal becomes a permanent part of the student's file. Prerequisite for graduate students: undergraduate art major or consent of instructor.

ART 493. Senior Seminar.
Cr. 3. Independent work in a studio major's specialized program, combined with participation in group discussion and special events. This work will result in a senior exhibition and portfolio. Field trip. Prerequisite: senior standing in the Bachelor of Science in Fine Arts program.

ART 495. Independent Study in Art.
Cr. 1-4. Independent work for junior or senior level students under the supervision of an instructor. Prerequisite: consent of the instructor.

ART 497. Honors Work in Art.
Cr. 3. See Honors Work, page 54.

ART 498. Honors Candidacy in Art.
Cr. 3. See Honors Work, page 54.

ART 499. The Teaching of Visual Arts.
Cr. 3. (See ED 489.) A study of the methods of teaching art in the secondary schools. This course may not be counted toward a minimum major or minor in Art. A field component is required. Field trip. Prerequisite: admission to Teacher Education.

SPECIAL STUDIES

ART 386. Internship.
Cr. 1-3. Internships in which students work with professional art-related organizations in
Biology

Professor G. Davis; Associate Professors Eberhardt, G. Evans, Hicks, Scaglione (Chair); Watters; Assistant Professors Scaglione, Sewell, Swanson; Lecturer Gillispie.

Biology is the disciplined study of living organisms. It is also a vital part of liberal education, enabling students to develop an appreciation of their own biological nature as well as of the great variety of organisms and communities of organisms with which they come into contact and upon which they are dependent.

The study of biology may be at many levels: molecular, cellular, organismic, population, community, ecosystem. The department offers instruction at each of these levels designed to meet the requirements for graduate study, for professional schools, and for teaching careers in biology or for working in industrial or governmental positions.

The Biology Department is housed in the Neilas Science Center, a teaching-research facility with state-of-the-art equipment such as advanced research light microscopes and an electron microscope. Nearly all biology courses have a laboratory component and all field or laboratory classes are taught by professors with other experienced faculty. The department makes extensive field trips for its organismal biology laboratory courses to the Indiana Dunes National Lakeshore, which ranks third of all national parks in species diversity, and at other distinguished natural history institutions in the Chicago area. Biology majors are encouraged to conduct research under the supervision of faculty members. Majors also have opportunities to study abroad at the University's overseas centers or at affiliated institutions as well as at recognized programs sponsored by national laboratories and other distinguished institutions.

Premedical Arts Programs. A major in biology is an appropriate preparation for admission into professional schools and programs such as medicine, dentistry, hospital administration, medical technology, optometry, physical therapy, podiatry, public health, veterinary medicine and other allied health fields. Further information may be obtained from the Chair of the Department or members of the Committee on Premedical Arts.

Major. A minimum of 28 credit hours in biology is required for the Bachelor of Arts degree. Courses must include BIO 171, 172, 270, two of courses 290 to 370, two of courses 420 to 460 and 2 credit hours in 493 and/or 495.

A minimum of 25 credit hours in biology fulfills the minimum requirement for a Bachelor of Science degree, provided that a second major is taken in another science (chemistry, computer science, geology, mathematics, meteorology, physics or psychology). Courses must include BIO 171, 172, 270, one of courses 290 to 370, two of courses 420 to 460 and 2 credit hours in 493 and/or 495.

A minimum of 32 credit hours in biology fulfills the requirements of the Bachelor of Science degree with a single major plus one of the following: a non-science major, a Business Administration Minor, a Liberal Arts Business Minor, a complementary Education major, or an Applied Statistics Minor. Courses must include BIO 171, 172, 270, two of courses 290 to 370, two of courses 420 to 460, and two credit hours in 493 and/or 495, plus four additional credit hours chosen from BIO 290 to 498.

A minimum of 40, but not more than 48, credit hours in biology fulfills the requirements of the Bachelor of Science degree without a minor. Courses must include BIO 171, 172, 270, two of courses 290 to 370, two of courses 420 to 460, two credit hours in 493, two credit hours in 495, plus at least six additional credit hours chosen from BIO 290 to 499.

Note: Neither BIO 486 nor BIO 489 may be counted toward any of the above departmental majors.

BIO 125. Biotechnology. 3+2; Cr. 4. An introductory study of modern biology in which those aspects of biotechnology that affect the welfare of humanity are emphasized. This course is recommended for non-science majors who wish to take only one biology course for partial fulfillment of the General Education Requirements in Natural Science. Not open to students who have received credit for BIO 151 or 171.

Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

BIO 152. Human Biology II. 3+3; Cr. 4. A continuation of Human Biology I. A study of the anatomy and physiology of the following organ systems: cardiovascular, respiratory, digestive, excretory, endocrine, and reproductive. May be used for partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: BIO 151, MATH 110 or placement higher than MATH 110 on the math placement examination.

BIO 151. Human Biology I. 3+3; Cr. 4. An introductory study of the physicochemical nature of cells and tissues, cell division and human genetics, the musculoskeletal system, the nervous system and special senses and chemical control. May be used in partial fulfillment of the General Education Requirements in Natural Science. This course is required for nursing, physical education, and some allied health students. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination. Students may register concurrently for MATH 110 and BIO 151.

BIO 171. Unity of Life. 3+3; Cr. 4. A study of organic molecules, cells, tissues and organs for biology majors and general biology minors. Emphasis is placed on the principles which unify all living forms: structure, energetics, physiology, inheritance and development. May be used in partial fulfillment of the General Education Requirements in Natural Science. This course is required for biology majors and general biology minors including premedical and some other preprofessional students. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

BIO 172. Diversity of Life. 3+3; Cr. 4. A survey of the kingdoms of organisms, their relationships and origins, and their roles in the economy of nature. Emphasis is on the structures and their functions, life cycles, development, distribution, ecology, evolution, and the social and economic importance of representative members. Field trips are required. May be used in partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: BIO 171 or equivalent, or consent of the Chair of the Department; MATH 110 or placement higher than MATH 110 on the math placement examination.

BIO 205. Fundamental Nutrition. 3+3; Cr. 4. A survey of the principal nutrients. Emphasis is on practical application and includes a focus on sports nutrition. Not open to students who have received credit for BIO 269.

BIO 210. Microbiology. 3+3; Cr. 4. A study of bacteria, viruses and other microorganisms. Major emphasis is given to understanding infectious disease and immunology. Prerequisites: BIO 151 or 171 and CHEM 111 or 121.
Cr. 3. A study of the relationships between human nutrition, including nutrient functions, recommendations and food sources. Not open to students who have received credit for BIO 205. Prerequisite: CHEM 111 and BIO 151 or 152 or consent of the Chair of the Department.

BIO 270. Genetics.
3+3, Cr. 4. An introductory study of the basic laws of genetics, the physical and chemical basis of inheritance, genes as functional and structural units of heredity and development, and qualitative and quantitative aspects of genetic variation. Human genetics and social implications are discussed. May be used in partial fulfillment of the General Education Requirements in Natural Science. Prerequisite: BIO 172 or 152 or equivalent.

BIO 290/490. Biological Topics.
Cr. 2-4. A consideration of various topics in biology through lectures, laboratory work, field work and conferences. The topics are related to staff and student interests. May be taken more than once if topics are different. Prerequisite: certain topics may have specific course requirements. A sample of current and probable offerings are: Human Genetics, Macroevolution, and Principles of Physiology.

BIO 320. Comparative Vertebrate Anatomy.
2+3, Cr. 3. A comparative study of representative vertebrate animals, with emphasis on structures, functions and laboratory dissections. Prerequisite: BIO 152 or 172.

BIO 330. Mammalian Cell Culture.
2+3, Cr. 3. A study of the theory and practice of culturing mammalian cells. Emphasis is on the application of mammalian cell systems in studying experimental cytology, mutagenesis and somatic cell genetics. Prerequisite: BIO 270.

BIO 340. Field Biology: Fall.
2+4, Cr. 3. This course is designed to acquaint students with organisms they are likely to encounter in the late summer and fall months. The lectures emphasize the flowering plants and insects, the most abundant organisms at this time, but in the field attention is paid to other common or conspicuous organisms. Prerequisite: BIO 172.

BIO 350. Field Biology: Spring.
2+4, Cr. 3. This course is designed to acquaint students with organisms they are likely to encounter in the field in the late winter and spring months. The lectures emphasize the flowering plants and insects, but in the field attention is paid to other common or conspicuous organisms. Field trips are required. Prerequisite: BIO 172.

BIO 360. Modern Microscopy.
2+3, Cr. 3. An advanced study of practical techniques of light microscopy, scanning electron microscopy and image processing. Emphasis is placed upon producing micrographs that convincingly illustrate results of biology experiments. Collaboration with student investigators in other courses is strongly encouraged. Prerequisite: BIO 152 or 172.

BIO 420. Developmental Biology.
3+3, Cr. 4. An introduction to the descriptive and analytic study of animal development and growth, with emphasis on vertebrate animals. Prerequisite: BIO 270.

3+4, Cr. 4. A study of organisms in relationship to their physical and biotic environment. There is considerable field work in local terrestrial and aquatic habitats. Field trips are required. Prerequisite: BIO 172 and preferably a prior field course.

BIO 450. Molecular Biology.
3+3, Cr. 4. A study of the molecular basis of genetic interactions and processes in prokaryotic and eukaryotic organisms. Laboratories emphasize standard microbiological techniques as well as recent advances in gene cloning and molecular genetics. Prerequisites: BIO 270 and CHEM 221.

BIO 460. Cell Biology.
3+3, Cr. 4. A study of the fundamental physiological activities of animal and plant cells and tissues. The course includes lectures, assigned readings and laboratory work in cell structure, organelles, energy transformation, membrane transport, excitability, contraction, and signal transduction. Prerequisite: BIO 270 and CHEM 221.

BIO 486. Internship in Biological Science.
Cr. 0.5-2. Students gain experience in biology by working for private or public research/diagnostic labs, state or federal agencies, environmental consulting firms, non-profit environmental groups, or other appropriate organizations. Final written report required. This course may not be counted toward a major or a minor in this department. S/U grade optional. Prerequisite: major or minor in biology and consent of the Chair of the Department.

BIO 489. The Teaching of Natural Sciences.
Cr. 3. (See Education 489.) A study of the methods of teaching natural sciences in the secondary schools. Includes lectures, discussions, demonstrations and projects. This course may not be counted toward a major or minor in this department. A field component is required. Prerequisite: admission to Teacher Education.

BIO 493. Seminar in Biology.
Cr. 1. Student and staff presentation and discussion of selected topics in biology. Current topics are Animal Behavior, Gene Technology, Embryology, Immunology, and Cancer Biology. Intended for seniors. Prerequisites: 12 credit hours in Biology or consent of the Chair of the Department; certain topics may have specific course prerequisites. Normally three topics are offered each semester so that during a two-year period a broad spectrum of topics is available. A maximum of four seminars (on different topics) may be credited toward graduation. S/U grade optional.

BIO 494. Premedical Arts Colloquium.
Cr. 0-1. (Also offered as CHEM 494.) All Premedical Arts students are encouraged to register for this course every semester. May not be counted for a major or minor. Students who register for the colloquium for 1 credit must have the consent of the instructor. A maximum of 2 credit hours in this course may be counted toward graduation. S/U grade.

BIO 495. Research in Biology.
Cr. 1-2. Special research problems. Prerequisites: 12 credit hours of biology, prior approval of a supervising instructor and the Chair of the Department is required. A maximum of 4 credit hours in this course may be applied toward graduation. S/U grade optional.

BIO 497. Honors Work in Biology.
Cr. 3. See Honors Work, page 54.

BIO 498. Honors Candidacy in Biology.
Cr. 3. See Honors Work, page 54.

BIO 499. Biology Colloquium.
Cr. 0-1. Biology majors and minors are encouraged to register for this course. Colloquium presents insights into the living world beyond the material found in regular course offerings. S/U grade.
Chemistry

Professor Kosman (Chair); Associate Professors Engerer, Goyne; Assistant Professors Erhardt, Jantzi, Schoer.

Chemistry is the discipline that studies the fundamental nature of matter and the changes in energy and properties accompanying compositional changes in matter. As a scientific discipline, chemistry is firmly rooted in the liberal arts tradition, placing emphasis on the development of intellectual capability and judgment. Yet it is also a very practical discipline dealing with the fundamental technology of matter that affects our environment and our society. Because of the nature of the discipline, a wide diversity of careers is possible with a chemistry major. These range from industrial product development to academic research, from medical and paramedical careers to forensic (law enforcement) chemistry. Government, industry, schools and universities and many private institutions, such as museums, have a variety of openings for chemists. About two-thirds of the chemistry graduates continue their education in graduate, medical, or professional school. In almost every instance, those who go to graduate school receive complete financial support in the form of a fellowship or an assistantship.

The programs of the Department provide balance between theoretical and practical aspects of chemistry. Opportunities for carrying out directed or honors work research are available. A wide selection of instruments is maintained for student use in instructional laboratory work and research. The Department is approved by the American Chemical Society for the training of professional chemists, including the biochemistry option, and the Beta Sigma Chapter of the Phi Lambda Upsilon Chemistry Honorary Society is located here. A student may choose to work toward a Bachelor of Arts degree or a Bachelor of Science degree in chemistry or a Bachelor of Science degree in biochemistry.

Pre-Medical Arts Programs. A major in chemistry or biochemistry is an appropriate preparation for admission into professional schools and programs such as medicine, dentistry, hospital administration, medical technology, optometry, osteopathy, physical therapy, podiatry, public health, veterinary medicine and other allied health fields. Further information may be obtained from the Chair of the Department or members of the Committee on Pre-Medical Arts.

Chemical Engineering. The College of Engineering offers a minor in chemical engineering. Combining an engineering minor with a major in chemistry will prepare students who wish to pursue further studies in chemical engineering. Further information may be obtained from the Chair of the Chemistry Department or the Freshman Engineering Coordinator in the College of Engineering.

Major. There are four different chemistry majors which a student may choose to pursue:

1. Bachelor of Arts degree. A minimum of 27 credit hours in chemistry is required. Courses must include CHEM 121, 122, 221, 222, 230, and (311 or 321). A combination of this major with a minimum major in another science can lead to a Bachelor of Science degree (see page 48).

2. Bachelor of Science degree. A minimum of 40 credit hours in chemistry is required. Courses must include CHEM (121 or 131), (122 or 132), (190 or 495), 221, 222, 230, and (311 or 321).

3. Bachelor of Science degree in Professional Chemistry. The program leading to this degree is approved by the American Chemical Society for the training of professional chemists. A minimum of 40 credit hours in chemistry is required. This major must include CHEM (121 or 131), (122 or 132), 190, 221, 222, 230, 315, 321, 322, 323, 324, 391, 495, PHYS 141 and 142 (with labs) and MATH 234 (or equivalent) are required for certification. CHEM 495 may instead be taken as the Honors Work sequence, 497 and 498.

4. Bachelor of Science degree in Biochemistry. The program leading to this degree is approved as a degree option by the American Chemical Society for the training of professional chemists. A minimum of 44 credits in chemistry and 12 credits in biology is required. Courses must include CHEM (121 or 131), (122 or 132), 190, 221, 222, 230, 315, 316, 317, 321, 322, 421, 2 credit hours of 495, BIO 171, 270, and (450 or 460). PHYS 142 (with lab) and MATH 234 (or equivalent) are required for certification. The research conducted in CHEM 495 must be in the area of biochemistry. It may also be taken as BIO 495 or CHEM 497 and 498, Honors Work sequence.

Biochemistry Concentration. Within the 32-credit Bachelor of Science degree option, a student may choose to add a biochemistry concentration. This requires CHEM 315, 316, and 317, BIO 171, 270, and (450 or 460) along with the courses listed above in option 2. Students choosing this concentration will most likely get a biology minor, which would also require BIO 172.

Minor. A minimum of 16 credit hours in a chemistry constitutes a minor.

Chemistry Club. The Chemistry Club, an affiliate of the American Chemical Society, provides extracurricular opportunities for students interested in chemistry.

Cooperative Education. Qualified students may combine semesters in chemical research at a professional work site with other semesters of traditional academic studies on campus. Although this program will probably extend the participating student’s college education beyond the normal four years, the students will be financially reimbursed by the cooperating employer and also receive credit toward the chemistry major. No more than six credits earned in Cooperative Education may be applied toward minimum requirements of the major in Chemistry. Enrollment in this program is limited by the availability of positions offered by suitable cooperating companies. Eligible students are junior or senior chemistry majors who have completed CHEM 222 with a cumulative grade point average of 2.50 in their mathematics and science courses. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Credit by Examination. Credit for CHEM 111, 121, 122 may be earned through the College Level Examination Program subject examination in General Chemistry or through the Advanced Placement Examination in Chemistry.

Approval of Schedules. All students taking a major or a minor in chemistry must have their schedules approved by the Chair of the Department at the beginning of each semester.

CHEM 111. Introduction to Chemistry. 3+2. Cr. 4. A one semester overview of general, organic, and biochemistry. Intended for non-science majors who elect chemistry to meet one part of the natural science requirement. Students with a major or minor in elementary education, nursing, or physical education ordinarily take this course to meet their chemistry requirement. Not open to students with credit for CHEM 115, 121, or 131. Students may take CHEM 111 prior to taking CHEM 121, but may not use both courses toward a chemistry major or minor, or toward fulfillment of the General Education Requirements in Natural Science. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

CHEM 118. Essentials of Chemistry. 3+4. Cr. 4. A one semester introductory course in the principles of chemistry for engineering students. Not open to students with credit for CHEM 121 or CHEM 131. Prerequisite: Enrollment in the College of Engineering or consent of the Chair of the Chemistry Department.

CHEM 116. Applications of Chemistry in Engineering. 3+3. Cr. 4. A continuation of CHEM 116; offering additional principles of chemistry for engineering students, especially civil engineering students, with emphasis on analytical chemistry. Not open to students with credit for CHEM 122 or CHEM 132. Prerequisite: CHEM 115 and enrollment in the College of Engineering, or consent of Chair of the Chemistry Department.

CHEM 121. General Chemistry I. 3+3. Cr. 4. An introductory course in the principles of chemistry for science majors. The first of a two semester sequence. Required of majors and minors in chemistry and students in premedical, pre-dental, or medical technology programs. Students may take CHEM 131. Not open to students with credit for CHEM 115 or CHEM 131. Prerequisite: Placement of CHEM 121 or CHEM 131 on the chemistry placement examination, or MATH 114 or placement higher than MATH 114 on the math placement examination.
Chemistry

CHEM 122. General Chemistry II. 3+3, Cr. 4. A continuation of CHEM 121 with an emphasis on descriptive inorganic chemistry. Not open to students with credit for CHEM 116 or CHEM 132. Prerequisite: CHEM 115, 121, or 131.

CHEM 131. General Chemistry I - Honors. 3+3, Cr. 4. Same lecture as CHEM 121, with a more challenging, in-depth laboratory program. Intended for students who are willing to intensify their learning. Recommended for chemistry majors. Not open to students with credit for CHEM 115 or CHEM 121. Prerequisite: placement of CHEM 131 on the chemistry placement examination, or consent of instructor.

CHEM 132. General Chemistry II - Honors. 3+3, Cr. 4. A continuation of CHEM 131. Same lecture as CHEM 122, with a more challenging, in-depth laboratory program. Intended for students who are willing to intensify their learning. Recommended for chemistry majors. Not open to students with credit for CHEM 116 or CHEM 122. Prerequisite: CHEM 131 or consent of instructor.

CHEM 190. Introduction to Chemical Research. 7 weeks, Cr. 1. An introduction to chemical research methods and literature. A laboratory project is required. Prerequisite: CHEM 121 or 131. S/U grade.

CHEM 221. Organic Chemistry I. 3+3, Cr. 4. An introductory survey of the nomenclature, reactions, structures and properties of carbon compounds. Prerequisite: CHEM 116, 122, or 132.

CHEM 222. Organic Chemistry II. 3+3, Cr. 4. A continuation of CHEM 221. A further study of the reactions, structures and properties of carbon compounds, including reaction mechanisms and complex organic reactions. Prerequisite: CHEM 221.

CHEM 230. Quantitative Analysis. 3+4, Cr. 4. A study of the theory of chemical equilibria, electrochemistry and elementary chemical analysis. The laboratory work consists of an introduction to gravimetric, volumetric and instrumental methods of analysis. Prerequisite: CHEM 116, 122 or 132 or consent of Chair of the Department.

CHEM 290. Perspectives on Chemistry. Cr. 1-4. Topics related to chemistry. May not be counted toward a major or minor in chemistry.

CHEM 311. Elementary Physical Chemistry. 3+3, Cr. 4. A one-semester course in physical chemistry covering thermodynamics and kinetics, together with their applications to various chemical systems. Prerequisite: CHEM 221. Not open to students who have taken CHEM 321.

CHEM 315. Biochemistry I. Cr. 4. Structure and function of proteins, carbohydrates and lipids with particular stress on physical chemistry and enzyme kinetics. Overview of metabolism with an emphasis on integration and control. Prerequisite: CHEM 222.

CHEM 316. Biochemistry II. Cr. 3. A continuation of CHEM 315 that is focused on the biosynthesis of nucleic acids and proteins and the regulation of these processes. Special topics in biochemistry. Prerequisite: CHEM 315.

CHEM 317. Biochemistry Laboratory. 0+3, Cr. 1. An introduction to the experimental methods used to characterize biomolecules and biochemical reaction. Prerequisite: CHEM 315 (may be taken concurrently).

CHEM 321. Physical Chemistry I. 3+4, Cr. 5. A theoretical study of chemistry involving thermodynamics, kinetics and modern structural concepts. Prerequisites: CHEM 221, MATH 152 or equivalent, PHYS 142. Recommended: CHEM 230.

CHEM 322. Physical Chemistry II. 4+3, Cr. 5. A continuation of CHEM 321. Prerequisite: CHEM 321.

CHEM 332. Advanced Instrumental Analysis. 2+4, Cr. 3. In depth study of theory and practice of nuclear magnetic resonance, spectroscopy, chromatography, and electrochemistry. Other topics include electronics (operational amplifiers) and computer interfacing. Prerequisite: CHEM 311 or 321.

CHEM 350. Lasers and Optics in Chemistry. 2+4, Cr. 3. Overview of basic optics, including ray tracing and optical systems. Theory and operation of lasers, including picosecond and femtosecond systems. Applications of ultrashort pulses to transient chemical events. Prerequisite: CHEM 311 or 321 or consent of instructor.

CHEM 360. Chemical Literature and Chemical Writing. Cr. 1. Discussion and library work on the important sources of chemical information. Experience in the use of Chemical Abstracts, Beilstein, chemical journals and government publications in chemistry. Includes discussion and practice with computerized data bases. Library work leads to the writing of a paper as well as an abstract of a single article. For the student who plans to do graduate work in chemistry. S/U grade.

CHEM 381. Cooperative Education in Chemistry I. Cr. 0.5-2. Experience in chemical research with a cooperating employer. Written report required. Prerequisites: CHEM 222 and approval of the Chair of the Department. S/U grade.

CHEM 390. Topics in Chemistry. Cr. 1-4. A study of various topics in chemistry. Prerequisite: dependent upon the topic.

CHEM 421. Advanced Inorganic Chemistry. Cr. 3. A study of advanced topics in inorganic chemistry with emphasis on structure and bonding, transition metal chemistry, and organometallic chemistry. Prerequisite: CHEM 222 and (311 or 321) or consent of the Chair of the Department.

CHEM 422. Inorganic Chemistry Laboratory. 0+4, Cr. 1. Experiments involving structures and reactions of inorganic compounds. Prerequisite: CHEM 421 (may be taken concurrently).

CHEM 440. Materials Chemistry. Cr. 3. An introduction to materials that fall into four broad classifications: electronic materials, polymers, ceramics, and metals, with an emphasis on synthetic and fabrication techniques. Prerequisite: CHEM 222.

CHEM 450. Advanced Organic Chemistry. Cr. 3. A study of physical organic chemistry and strategy in modern organic synthesis. Topics include linear free energy relationships, the Woodward-Hoffman rules and semiempirical quantum mechanical calculation techniques for organic molecules. Prerequisites: CHEM 222 and (311 or 321).

CHEM 460. Quantum Mechanics. Cr. 3. The fundamental concepts of quantum mechanics are examined. Topics include state functions and their interpretations, the Schrodinger equation, approximation methods, multielectron atoms and molecules. Prerequisite: CHEM 322 or consent of the instructor.

CHEM 482-483. Cooperative Education in Chemistry II. Cr. 0.5-2. Continuation of CHEM 381. Prerequisites: CHEM 381, satisfactory employer evaluation, and approval of the Chair of the Department. May be repeated beyond 483 for additional credit.

CHEM 494. Premedical Arts Colloquium. Cr. 0.1-. (Also offered as BIO 494.) All Premedical Arts students are expected to register for this course every semester. May not be counted for a major or minor. Students who register for the colloquium for 1 credit must have the consent of the instructor. A maximum of 2 credit hours in this course may be counted toward graduation. S/U grade.

CHEM 498. Special Problems in Chemistry. Cr. 0.5-2. A course in which each student attacks a chemical problem by study of the literature and by work in the laboratory. A written report is required. Must also report orally on research. Prerequisite: CHEM 493. May be repeated for additional credit. S/U grade. Prerequisite: consent of Chair of the Department.


Chinese and Japanese Studies

Administrative Committee:
Professor Bierdzko (Law); Associate Professors Jin (College of Business Administration), Lin (Political Science, Chair), Nelson (Psychology); Assistant Professors Kavanagh (Foreign Languages and Literatures), McGaugan (College of Arts and Sciences), Raman (Economics), Whitefield (History), Zhou (Christ College); Lecturer Meng (Foreign Languages and Literatures).

Students completing the program in Chinese and Japanese Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the interdisciplinary program option. Students majoring in another interdisciplinary program option. Students majoring in another major are encouraged to fulfill major field requirements in Chinese and Japanese Studies. A minor is particularly recommended for students considering a career in education, business, government, or the arts related to the East Asian cultural sphere. Students are strongly encouraged to participate in overseas programs in East Asia, particularly at the University's exchange program at Zhejiang University and at Kansai Gaidai and Osaka International University in Japan. Courses taken in exchange programs may be used to fulfill major and minor requirements.

Program Requirements. A minimum of 53 credit hours, selected from the following list of courses approved by the Administrative Committee constitutes a major in Chinese and Japanese Studies. A number of these courses may also be counted toward fulfillment of the General Education Requirements for the Bachelor of Arts degree. FLJ 101 and 102 may fulfill the Foreign Language Requirement; any of the theology courses may fulfill the Theology Level III Requirement; any of the history courses or PHIL 220 or 290 may fulfill the Historical and Philosophy Studies Requirement; ART 311 may fulfill the Fine Arts/Fine Arts-Literature Requirement; and any appropriate course may fulfill the Non-Western or Third World Studies requirement. Other appropriate courses, including credits in supervised reading and research, may be substituted with the permission of the Chair of the Committee. Courses must include HIST 240 or GLST 150, HIST 341, 342, FLJ 101 and 102 or FLJ 101 and 102 or EAST 109 and 110, FLJ 250 or 251 or EAST 390, POLS 335 or 490 (East Asia), THEO 363, EAST 493 plus 24 credits in elective courses.

Complementary Major. A student fulfilling major field requirements under a Major Option in another discipline may pursue Chinese and Japanese Studies as a second major. The requirement for the second major is a minimum of 35 credit hours selected from the following list of courses. Other appropriate courses, including credits in supervised reading and research, may be substituted with the permission of the Chair of the Committee. Courses must include HIST 240 or GLST 150, HIST 341 or HIST 342, FLJ 101 and 102 or FLJ 101 and 102 or EAST 109 and 110, FLJ 250 or 251 or EAST 390, POLS 335 or 490 (East Asia), THEO 363, EAST 493, plus 12 credits in elective courses listed below.

Minor. A student fulfilling major field requirements in another field may pursue a minor in Chinese and Japanese Studies. The requirement for the minor is a minimum of 18 credit hours selected from the following list. Courses must include HIST 240 or GLST 150, HIST 341 or HIST 342, FLJ 250 or 251 or EAST 390, and THEO 363. It is strongly recommended that the student also complete FLJ 101 and 102 or FLJ 101 and 102 or EAST 109 and 110. Only one course in Chinese or Japanese language may be counted toward the Chinese and Japanese Studies minor.

Approval of Schedules. All students taking a major in Chinese and Japanese Studies must have their schedules approved by the Chair of the Administrative Committee at the beginning of each semester. EAST 109, 110, 209, and 210 are offered only in China, where students attend language classes 15-18 hours per week. These credits may apply toward the general education foreign language requirement.

Chinese and Japanese Studies

East Asian Studies Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 311</td>
<td>Topics in the Theory and History of Art</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FLC 101</td>
<td>Beginning Chinese I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLC 102</td>
<td>Beginning Chinese II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLC 203</td>
<td>Intermediate Chinese I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLC 204</td>
<td>Intermediate Chinese II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>COMM 390</td>
<td>Topics and Projects: East Asian Topics</td>
<td>1-3 Cr.</td>
</tr>
<tr>
<td>ECON 390</td>
<td>Topics in Economics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GEO 301</td>
<td>Regional Geography: Asia</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 240</td>
<td>Introduction to East Asian Culture</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 341</td>
<td>Revolution and Its Roots: The Making of Modern China</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 342</td>
<td>Tragedy and Triumph: The Making of Modern Japan</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 390</td>
<td>Topics in History: East Asian Topics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HIST 492</td>
<td>Reading and Discussion Seminars: East Asian Topics</td>
<td>2-3 Cr.</td>
</tr>
<tr>
<td>FLJ 101</td>
<td>Beginning Japanese I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLJ 102</td>
<td>Beginning Japanese II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLJ 204</td>
<td>Intermediate Japanese I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLJ 205</td>
<td>Intermediate Japanese II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>FLJ 250</td>
<td>Topics in Japanese Literature and Fine Arts</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FLJ 251</td>
<td>Introduction to Japanese Literature and Fine Arts in Japanese</td>
<td>1-4 Cr.</td>
</tr>
<tr>
<td>FLC 102</td>
<td>Non-Western Philosophy</td>
<td>3 Cr.</td>
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<tr>
<td>PHIL 290</td>
<td>Philosophic Topics: East Asian Topics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 335</td>
<td>Politics of Developing States</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>POLS 490</td>
<td>Seminar in Political Science: East Asian Politics</td>
<td>3 Cr.</td>
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<tr>
<td>THEO 360</td>
<td>Topics in the History of Religions: East Asian Topics</td>
<td>2-3 Cr.</td>
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<tr>
<td>THEO 363</td>
<td>Religions of China and Japan</td>
<td>3 Cr.</td>
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<tr>
<td>THEO 364</td>
<td>The Buddhist Tradition</td>
<td>3 Cr.</td>
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<tr>
<td>THEO 365</td>
<td>Religion in Japanese Culture</td>
<td>3 Cr.</td>
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<tr>
<td>THRT 334</td>
<td>Topics in the Non-Western World: Asia</td>
<td>3 Cr.</td>
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<tr>
<td>EAST 109</td>
<td>Intensive Elementary Chinese</td>
<td>5 Cr.</td>
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<tr>
<td>EAST 110</td>
<td>Intensive Elementary Chinese</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>EAST 115</td>
<td>Cultures of China and/or Japan</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>EAST 208</td>
<td>Intensive Intermediate Chinese</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>EAST 210</td>
<td>Intensive Intermediate Chinese</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>EAST 390</td>
<td>Topics in East Asian Culture</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>EAST 399</td>
<td>Chinese Culture and Civilization</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>EAST 493</td>
<td>East Asian Senior Seminar</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>EAST 495</td>
<td>Supervised Reading and Research 1-3 Cr.</td>
<td></td>
</tr>
<tr>
<td>EAST 497</td>
<td>Honors Work in Chinese and Japanese Studies</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>EAST 498</td>
<td>Honors Fieldwork in Chinese and Japanese Studies</td>
<td>3 Cr.</td>
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</tbody>
</table>
Communication

Associate Professors Kocher (Chair), Neff; Instructors Douglas, Steinwart; Lecturers Bailey, Powell.

The Department of Communication focuses on teaching the process of communication as it applies to the areas of study it represents: communication law, new media–journalism, public and corporate communication, public relations, television–radio and speech–debate. In all of these fields the Department encourages students to become ethical, critical, and effective sources and receivers of communication; it endeavors to motivate them to serve their community. The department stresses solid preparation in the liberal arts. It seeks a balance between liberal arts and skills courses within the department, believing that this balance is essential to developing good communicators, not just technicians trained for particular jobs. The department's programs also strive to demonstrate the linkages between communication studies and the larger issues of the global community.

Major. A major consists of 30 credit hours in one of the following major areas as specified. Student transcripts will reflect that major, not Communication. The 386 and 490 courses required for each of the majors must be from that major area. Students may not have a double major within the department.

Communication Law: Complete COMM 100, 121, 269, 301, 302, 386, 490, and 9 additional COMM credits in any of the areas, including General Communication.

New Media–Journalism: Complete COMM 100, 110, 121, 230, 261, 262, 320, 330, 386, and 490.

Public and Corporate Communication: Complete COMM 210, 310, 386, 410, 6 credits of 490, and 12 additional COMM credits in any of the areas, including General Communication. In addition, either the Liberal Arts Business Minor (see page 230) or the Business Administration Minor (see page 226) must be completed.

Public Relations: Complete COMM 100, 265, 386, 374, 375, 376, 386, 490, and 6 additional COMM credits in any of the areas, including General Communication.


Minor. A Communication minor consists of 15 credit hours in one of the department major areas (Communication Law, New Media–Journalism, Public and Corporate Communication, Public Relations, or Television–Radio).

Public Speaking and Debate Minor. Students electing a minor in Public Speaking and Debate must complete a total of 15 credit hours selected as follows: COMM 145, 243, 247, 344, and 351. For students choosing this minor, COMM 145 and 243 are prerequisites for the other listed courses.

Teaching Programs. Students who plan to teach journalism or speech communication and theatre in secondary schools with a departmental major or minor should consult the Chair of the Department and the Education Department for specific requirements.

Cooperative Education. Qualifying students may participate in prearranged, approved paid or unpaid work experiences. During their employment, students are financially reimbursed by the cooperating employer. Credits earned in this program apply toward the major and may substitute for internship requirements. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Degree. Students completing one of the five department majors together with the degree requirements of the College of Arts and Sciences fulfill requirements for the Bachelor of Arts degree.

Approvals of Schedules. All students pursuing a major or minor in communication must have their schedules approved by their departmental advisor at the beginning of each semester.

SPECIAL OPPORTUNITIES

Television/Radio Studio. The Department teaches all television and radio classes in its two teleproduction studios, digital sound suite, and digital video editing lab. The studios are fully equipped for all levels of television and radio producing and provide a quality laboratory experience. Students are also placed as interns in area television, radio and cable stations, and at video production companies. Digital nonlinear video and audio editing facilities interface with the studios and are available for student video and audio work.

Student Organizations. The department sponsors a campus chapter of the National Communication Association's Lambda Pi Eta honor society and has active student chapters of the Association for Women in Communications and the Public Relations Student Society of America (PRSSA). The department is also a sponsor of the Student Debate Club.

GENERAL COMMUNICATION COURSES

COMM 100. Survey of Communication Fields.

COMM 140. Public Speaking.

COMM 145. Interpersonal Communication.


COMM 247. Persuasion.

COMM 344. Argumentation.


COMM 351. Human Influence in Communication.

COMM 381. Cooperative Education in Communication.

COMM 382-383. Cooperative Education in Communication II–III.

COMM 385. Continuing Education in Communication.

COMM 386. Internship in Communication.

COMM 497. Internship in Communication.

COMM 498. Honors Candidacy in Communication.
NEW MEDIA-JOURNALISM COURSES

COMM 110. Introduction to Internet Communication.
Cr. 3. An introductory course studying the history of the Internet as a Communication medium. Taught online, but some on-campus sessions are required.

COMM 230. Desktop Publishing.
0-4 Cr. 3. (Also offered as ART 230) An introduction to computer information display techniques ranging from computer-generated illustration, charts and graphs to newsletter and related page layout procedures. No prior computer experience is required.

COMM 261. Media Writing Styles.
Cr. 3. Survey of media writing styles including Web, print, and broadcast in a deadline environment. Prerequisites: COMM 100, CORE 110 and 115.

COMM 262. Content Research and Reporting.
Cr. 3. An overview of reporting practices for media, including breaking news, research, and investigative reporting. Prerequisite: COMM 261.

COMM 286. WVU/Torch Practicum.
Cr. 1. Credit for substantive work in an approved position on the staff of the campus radio station, WVU, or the campus newspaper, The Torch. Work may include news writing and editing, programming, traffic, production, promotion, design, and other approved assignments. Offered every semester. Prerequisite: consent of Practicum Supervisor. S/U grade only. May be repeated for a total of 3 credit hours.

COMM 320. Internet News Delivery.
Cr. 3. An examination of best practices for delivering news via the World Wide Web.

Cr. 3. Develops proficiency in use of advanced software for desktop publishing and web design. Prerequisite: COMM 230.

COMM 386. Internship in New Media-Journalism.
Cr. 3. Internships in which students may intensively study a particular area of communication. Prerequisite: consent of the department Internship Coordinator. Open to declared departmental majors only. Students must adhere to internship requirements described on the department's Web site. S/U grade only.

COMM 490. Topics in New Media-Journalism.
Cr. 3. In-depth study of a particular topic (e.g., Feature Writing, Investigative Reporting, Broadcast News). Prerequisite: junior standing.

PUBLIC AND CORPORATE COMMUNICATION COURSES

COMM 210. Organizational Communication.
Cr. 3. Theory and practice of communication in work settings and groups.

Cr. 3. This course examines communication in global settings through examination of contrasting settings, practices, and objectives in various countries. Develops research skills in qualitative communication analysis, including content analysis.

COMM 410/415. Integrated Communication.
Cr. 3. An examination of communication strategies in public and private settings which combine associated areas such as public relations, marketing and advertising. Prerequisite: junior or senior standing.

COMM 436. Internship in Public and Corporate Communication.
Cr. 3. Internships in which students may intensively study a particular area of communication. Prerequisite: consent of the department Internship Coordinator. Open to declared departmental majors only. Students must adhere to internship requirements described on the department's Web site. S/U grade only.

COMM 490. Topics in Public and Corporate Communication.
Cr. 3. An in-depth study of a particular topic (e.g., corporate communication case studies, not-for-profit communication). Prerequisite: junior standing.

PUBLIC RELATIONS COURSES

COMM 266. Principles of Public Relations.
Cr. 3. Overview of the history, development, principles and practices of public relations, investigation of public relations ethics, relationships and roles in communication and society; case studies and application of public relations research and practices. Prerequisite: COMM 100.

COMM 368. Public Relations in Practice.
Cr. 3. Course emphasizes critical thinking, oral and writing skills, the presentation and organization of artifacts and data, and research-based presentation with experience in client management. Offered as an on-line course. Prerequisite: COMM 265.

COMM 374. Advanced Public Relations.
Cr. 3. Advanced study with emphasis on the relationship between theory and practice, strategic planning, problem solving, and creativity within a case study format. Prerequisite: COMM 265 or consent of the Chair of the Department.

COMM 375. Community Relations.
Cr. 3. This course examines the organizational role of communication within a global context. Specifically addressed is the professional role of public relations in the development of community relations emphasizing particularly the relationships between theory and practice. Community relations are examined within a multicultural context. Prerequisite: junior standing.

COMM 376. Crisis Communication.
Cr. 3. Students are exposed to crisis case studies, have contact with public relations professionals managing crisis situations, and are connected with the necessary theory to evaluate the practice of crisis communication. Prerequisite: junior standing.

COMM 386. Internship in Public Relations.
Cr. 3. Internships in which students may intensively study a particular area of communication. Prerequisite: consent of the department Internship Coordinator. Open to declared departmental majors only. Students must adhere to internship requirements described on the department's Web site. S/U grade only.

COMM 490. Topics in Public Relations.
Cr. 3. In-depth study of a particular topic (e.g., public relations audits, public relations research). Prerequisite: junior standing.
Economics

Associate Professor Shingleton (Chair); Assistant Professors Raman, Saros, Wunder.

Economics provides a logical, ordered way of looking at problems, issues and policies regarding the production, distribution and consumption of goods and services. It draws upon other social sciences and mathematics to confront a wide range of topics from environmental abuse to economic growth to business regulation and other governmental interactions with the commercial world. As economics in general deals with choice and decision making, it is of great value on both a personal and a professional level.

Economics majors have a wide range of career choices, including government or business economist, banking economist, investment analyst, trade association economist and others.

Students who distinguish themselves by high scholarship may be elected to Omicron Delta Epsilon, a national economics honorary organization.

Major. Requirements for the major in economics may be fulfilled by completion of one of the following programs. Two of the four economics electives must be at the 300 level or higher.

General Economics Major. A minimum of 27 credit hours in economics constitutes this major. Courses must include ECON 221, 222, 321, 322, and 325. In addition, either IDS 205 or MATH 240 is required.

Economics and Computer Analysis Major. A minimum of 27 credit hours in economics is required. Courses must include ECON 221, 222, 321, 322, and 325. Computer science courses which must be completed are CS 157 and 326. Also required is a minor in mathematics including MATH 124, 131, or 151, (122, 132, or 152), 240 and 320 (or an approved alternative).

General Economics Minor. A minimum of 18 credit hours in economics constitutes a minor. Courses must include ECON 221, (222 or 223), one of (321,322, or 325) and one additional course selected from 300 or above.

ECON 136 and ECON 486 will not count towards fulfilling the minimum major or minor requirements.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Economics leads to the Bachelor of Arts degree.

Credit by Examination. Credit for ECON 221 and 222 may be earned through the College Level Examination Program subject examination in Introductory Economics.

Approval of Schedules. All students taking a major or minor in economics must have their schedules approved at the beginning of each semester.


Cr. 3. This course is an introduction to the economics of public and private provision of health, education and social services in urban and developing economies. May be used in partial fulfillment of the Social Analysis component and for the U.S. Diversity component of the General Education Requirements. ECON 136 will not count towards fulfilling the minimum major or minor requirements.


Cr. 3. An introductory study of the relationship between environmental quality and economic behavior, with an emphasis on the principles of demand, costs, and economic efficiency. Current developments in the United States and world environmental policies will be analyzed. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.


Cr. 3. An introductory study of the central functions and problems of an economic system with emphasis on the determinants of consumer demand, producer supply and their interactions in the marketplace. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.


Cr. 3. An introduction to macroeconomic analysis with emphasis on national income, consumer spending, investment, government...

COMM 385. Television Field Production.

Cr. 3. A workshop in which students are offered the opportunity to produce and direct television field productions while developing specialized production skills (e.g., camera, sound design, lighting, and technical direction). The course covers the basic steps of pre-production, production, and post-production and introduces students to the basic principles of videography. Projects will be recorded and edited on digital equipment. Projects vary in format: short and feature-length videos, public service announcements, special features, and music videos. Prerequisite: COMM 251 or consent of department instructor.


Cr. 3. Internships in which students may intensively study a particular area of communication. Prerequisite: consent of the department Internship Coordinator. Open to declared departmental majors only. Students must adhere to internship requirements described on the department's Web site. S/U grade only.

COMM 450. Documentary Production.

Cr. 3. A workshop for those students interested in documentary style video production. Emphasis is placed on the production of video documentaries. Projects include productions shot and edited on broadcast digital equipment. The technical skills of producing, directing, writing, editing, camera, lighting, and sound, pertaining to documentary productions, are examined. Projects vary from campus-based productions to off-campus projects approved by the instructor. Prerequisite: COMM 198 and 251, or consent of instructor.


Cr. 3. In-depth study of a particular topic (e.g., media stereotypes, sports broadcasting). Prerequisite: junior standing.

COMM 353. Broadcast, Internet and Cable Programming.

Cr. 3. Examination of the principles and practices of programming for television, the Internet, cable, and radio. Analysis of the theories and practices of programming, including relationships to audience, promotion, advertising, and public relations.

COMM 380. Television Producing and Directing.

Cr. 3. The exploration of strategies and methods for all areas of field production including audio recording, camera operations, lighting, and production planning, with emphasis on proficiency with cameras and digital nonlinear editing systems. Projects include preparation of materials for resume, student productions, and possible on/off-campus use. Prerequisite: COMM 251 or consent of Chair of the Department.

TELEVISION–RADIO COURSES

COMM 198 Non-Linear Video Editing.

Cr. 3. This course will introduce basic principles of digital non-linear editing. The course surveys digital video formats and applications. Students produce projects using computer editing and special effects. Concepts include digitizing video, editing, and compression.

COMM 250. Radio and Audio Production.

Cr. 3. Hands-on practical course in radio production techniques. Examines the practice of audio production and highlights the applications to production and on-air techniques. The emphasis is on experiences through production exercises and projects. Prerequisite: COMM 100.

COMM 251. Introduction to Broadcast Production.

Cr. 3. A practical introduction and application of television studio production and directing that determine aesthetic quality. Techniques and concepts of video field production and video editing are introduced. Students produce studio-based projects which emphasize scripting, camera operations, and on-camera presentation. Prerequisite: COMM 100 and 198.

COMM 352. Broadcast, Internet and Cable Programming.

Cr. 3. Examination of the principles and practices of programming for television, the Internet, cable, and radio. Analysis of the theories and practices of programming, including relationships to audience, promotion, advertising, and public relations.

COMM 380. Television Producing and Directing.

Cr. 3. The exploration of strategies and methods for all areas of field production including audio recording, camera operations, lighting, and production planning, with emphasis on proficiency with cameras and digital nonlinear editing systems. Projects include preparation of materials for resume, student productions, and possible on/off-campus use. Prerequisite: COMM 251 or consent of Chair of the Department.

COMM 385. Television Field Production.

Cr. 3. A workshop in which students are offered the opportunity to produce and direct television field productions while developing specialized production skills (e.g., camera, sound design, lighting, and technical direction). The course covers the basic steps of pre-production, production, and post-production and introduces students to the basic principles of videography. Projects will be recorded and edited on digital equipment. Projects vary in format: short and feature-length videos, public service announcements, special features, and music videos. Prerequisite: COMM 251 or consent of department instructor.


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Cr. 3. In-depth study of a particular topic (e.g., media stereotypes, sports broadcasting). Prerequisite: junior standing.

The Economics of Health, Education, and Welfare.

Cr. 3. This course is an introduction to the economics of public and private provision of health, education and social services in urban and developing economies. May be used in partial fulfillment of the Social Analysis component and for the U.S. Diversity component of the General Education Requirements. ECON 136 will not count towards fulfilling the minimum major or minor requirements.

Environmental Economics and Policy.

Cr. 3. An introductory study of the relationship between environmental quality and economic behavior, with an emphasis on the principles of demand, costs, and economic efficiency. Current developments in the United States and world environmental policies will be analyzed. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.

Principles of Economics-Micro.

Cr. 3. An introductory study of the central functions and problems of an economic system with emphasis on the determinants of consumer demand, producer supply and their interactions in the marketplace. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.

Principles of Economics-Macro.

Cr. 3. An introduction to macroeconomic analysis with emphasis on national income, consumer spending, investment, government...

COMM 380. Television Producing and Directing.

Cr. 3. The exploration of strategies and methods for all areas of field production including audio recording, camera operations, lighting, and production planning, with emphasis on proficiency with cameras and digital nonlinear editing systems. Projects include preparation of materials for resume, student productions, and possible on/off-campus use. Prerequisite: COMM 251 or consent of Chair of the Department.

COMM 385. Television Field Production.

Cr. 3. A workshop in which students are offered the opportunity to produce and direct television field productions while developing specialized production skills (e.g., camera, sound design, lighting, and technical direction). The course covers the basic steps of pre-production, production, and post-production and introduces students to the basic principles of videography. Projects will be recorded and edited on digital equipment. Projects vary in format: short and feature-length videos, public service announcements, special features, and music videos. Prerequisite: COMM 251 or consent of department instructor.


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Cr. 3. In-depth study of a particular topic (e.g., media stereotypes, sports broadcasting). Prerequisite: junior standing.
Cr. 3. An introduction to international aspects of economics with emphasis on international trade, international finance, comparative economic systems, and problems facing developing nations. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.

ECON 325. Econometrics.
Cr. 3. The application of mathematical and statistical techniques to the analysis of economic issues. Development of simple and multiple regression as tools of analysis. Use of computer facilities and statistical programs to apply the tools to current economic data. Prerequisites: ECON 221, (ECON 222 or 223), MATH 240 or IDS 205 or equivalent.

Cr. 3. A study of the basis for the gains from international trade including the effects of growth and development on a nation's welfare. Attention is also given to the effects of tariffs and other restrictions to trade. Balance of payments accounting, foreign exchange markets and international monetary institutions are covered during the last part of the course. Prerequisites: ECON 221 and (ECON 222 or 223).

ECON 330/530. Industrial Organization.
Cr. 3. The analysis of the economic factors underlying the structure, conduct and performance of American Industry. Prerequisite: ECON 221.

ECON 331. Government Regulation of Business.
Cr. 3. A survey of government regulations of private business, monopoly and unfair competition with emphasis on health and safety regulations, consumer and environmental protection. Utilizing basic economic analysis, attention will be given to how regulation affects individuals and firms, the costs and benefits to society of regulation and the alternatives to the present approaches to regulation. Prerequisites: ECON 221 and 222.

ECON 333. Economics of Labor.
Cr. 3. The approach of workers and employers to the problems of labor; the development of trade unions and collective government regulation of labor relationships, and an economic analysis of wage-employment problems. Prerequisite: ECON 221.

Cr. 3. An examination of the regional and spatial characteristics of cities with emphasis on policies to correct urban problems. Transportation, housing, poverty and discrimination plus other substantive urban problems are analyzed and discussed. Prerequisite: ECON 221.

Cr. 3. An analysis of economic variables, both theoretical and institutional, which characterize developing nations. Emphasis is placed on cyclical poverty, allocation of resources and policy planning. Prerequisite: ECON 221 or 222 or 223. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

ECON 337/537. Public Finance.
Cr. 3. An analysis of the role of the government sector in a market economy. Causes of market failure, the efficient provision of public goods and the effects of taxation are considered as they relate to economic activity. Prerequisite: ECON 221 or 222 or 223.

ECON 339/539. Money and Banking.
Cr. 3. A study of the institutions, principles and problems of money and banking in the United States. Special attention is given to the basic elements of monetary theory and policies. Prerequisite: ECON 222 or 223.

Cr. 3. The history of the economic development of the United States from the colonial period to the present.

ECON 365. Modern European Economic History.
Cr. 3. A history of the economic development of Western Europe from 1750 to the present. Emphasis is on the role of the industrial revolution and its impact on the modern person.

ECON 370. The History of Economic Thought.
Cr. 3. Economic thought in its historical development from the Mercantilists to the present day. Prerequisite: ECON 221 or 222 or 223.
Education

Professor Brandhorst; Associate Professors Acton, Cole, Dudzinski, Reiser, Riffel, Westrick (Chair); Assistant Professors DeMik, Ellis, Grabarek, P. Touwag; Instructor Johnston; Lecturer Gillispie; Adjunct Assistant Professor Honig.

The Education Department offers programs of study leading to licensure for elementary, middle school and high school teaching. Teacher candidates may also add a content area in special education (mild needs).

Public Disclosure Information Required by Federal Law. As required by federal law Title II, Higher Education Act, Section 207 (III) (1) passed in October 1998, institutions of higher education with teacher preparation programs are required annually to disclose pass rate information of program completers from the previous year. Valparaiso University's teacher education program completers for the 2003-2004 academic year have pass rates as follows:

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>No. Passed</th>
<th>VU Rate</th>
<th>IN Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td>79</td>
<td>85</td>
<td>99</td>
</tr>
<tr>
<td>Professional Knowledge</td>
<td>38</td>
<td>37</td>
<td>97</td>
</tr>
<tr>
<td>English Language/ Literature</td>
<td>12</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>Reading</td>
<td>38</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

Copies of the full disclosure report submitted to the State of Indiana in March of 2004 are available upon request in either the Office of University Relations or the Education Department Office.

Accreditation. Valparaiso University is accredited by the Indiana Professional Standards Board (IPSB) as a teacher education institution to meet Indiana licensure requirements, and the National Council for Accreditation of Teacher Education (NCATE) at both undergraduate and graduate levels to prepare elementary, middle school, and high school teachers. Valparaiso University also is a member of the American Association of Colleges for Teacher Education (AACTE) and the Indiana Association of Colleges for Teacher Education (IACTE).

Licensure. Students must meet Indiana state teacher licensure and education program requirements, and all students who expect to obtain a teaching license and have not been admitted to the Teacher Education Program should consult the Department of Education Office by completion of their freshman year to assure that licensure requirements will be met. The mere completion of the prescribed courses outlined by the Education Department does not guarantee that the student will be recommended for licensure or a teaching position.

For a listing of all programs offered see page 51.

Elementary and Middle School. Students who seek licensure as an elementary or middle level teacher complete the requirements of the Bachelor of Science in Education degree with a major either in Elementary Education or Middle Level Education.

High School. Students seeking high school licensure declare a complementary major in Secondary Education and an academic major in another department. They will also have a teaching major which is the area of concentration leading to licensure and may include courses that do not apply to the academic major. The requirements of an academic major and a teaching major may be different.

A teacher education advisor is assigned to every secondary education student. See "Academic Advising" section on page 40. Only students preparing to meet Adolescence/Young Adult (Secondary) Education licensure requirements declare complementary majors in education. Students seeking such a license must register as a secondary education complementary major in the Registrar's Office before admission to Teacher Education. For specific requirements of a teaching minor, consult your education advisor.

Elementary Education: Early/Middle Childhood

Completion of the degree requirements with a major in Early/Middle Childhood (elementary) education leads to the Bachelor of Science in Education degree. Undergraduate students who wish to teach in an elementary school should complete the requirements for this degree.

Course work must include the following:

1. First Year Core .......... 10 Cr.
   CORE 110 .......... 5 Cr.
   CORE 115 .......... 5 Cr.

2. Academic Area Studies
   a. Theology .............. 6 Cr.
      1) One foundational level Theology Course ........ 3 Cr.
      2) One Upper Level
         Theology Course ........ 3 Cr.
   b. Literature and Fine Arts 9 Cr.
      1) ENGL 200 .......... 3 Cr.
      2) ED 200 .......... 3 Cr.
      3) Art appreciation, history, or methods .......... 3 Cr.
   c. Diversity: Global Cultures and Perspectives .......... 3 Cr.
      See point A.2.d on page 45 for listing of courses.
   d. U.S. Cultural Diversity 3 Cr.
      ED 270 Home, School and Community Relationships .......... 3 Cr.
   e. History .............. 6 Cr.
      HIST 210 The World in the Twentieth Century .......... 3 Cr.
      HIST 220 or 221 U.S. History .......... 3 Cr.
   f. Social Analysis .......... 3 Cr.
      One course from Economics, Geography, Political Science, or Sociology (See A.2.g on page 45 for list)
   g. Mathematics .......... 9 Cr.
      MATH 211 Laboratory in Elementary Mathematics .......... 4 Cr.
      MATH 213 Mathematics for Elementary Teachers .......... 4 Cr.
      MATH 214 Mathematics for Elementary Teachers .......... 4 Cr.
      Minimum grade of 'C' in all Math courses.
   h. Natural Science .......... 8 Cr.
      1) BIO 125, 151, or 171 .......... 4 Cr.
A foreign language may be started in the freshman year by students who wish to concentrate in this area. Consult the advisor for adjustments in schedule.

**Sophomore** students should complete ED 203, 204, and COMM 145 or COMM 243 during this year. Application for admission to the Teacher Education Program should be made in the sophomore year at Checkpoint 1. Students are encouraged to take ED 305 in the sophomore year.

**Junior** students who are admitted to the Teacher Education Program may take the Junior level courses ED 321, 322, 323, 324, 327, 328, 361, 370, and SPED 440. Application for admission to Professional Semester (Checkpoint 2) for the next academic year must be filed by the prior semester.

### Middle Level Education:
#### Middle School/ Junior High School

Completion of the degree requirements with a major in Middle Level Education leads to the Bachelor of Science in Education degree. Undergraduate students who wish to teach in middle school/junior high school should complete the requirements for this major.

Course work must include the following:

**1. First Year Core**
- CORE 110 .. .... 10 Cr.
- CORE 115 .... 5 Cr.
- CORE 115 .... 5 Cr.

**2. Academic Area Studies**

a. **Theology** 
- One Foundational Level Theology Course .... 3 Cr.
- One Upper Level Theology Course .... 3 Cr.

b. **Literature and Fine Arts**
- ENGL 200 ........ 3 Cr.
- ED 200 ........ 3 Cr.
- Fine Arts .... 3 Cr.
- Elect from ART 101, 102, 311, 317, 318, 319, 320, 321, or 343.

**3. Diversity:** Global Cultures and Perspectives .... 3 Cr.

See point A.2.d on page 45 for listing of courses.

d. **U.S. Cultural Diversity** 3 Cr.
- ED 370 Home, School and Community Relationships .... 3 Cr.

e. **History** 
- HIST 220 or 221 U.S. History .... 3 Cr.

f. **Social Analysis** 
- One course from Economics, Geography, Political Science, or Psychology (See A.2.g on page 45 for list)

g. **Mathematics** 4 Cr.
- MATH 211 Laboratory in Elementary Mathematics .... 0 Cr.
- MATH 213 Mathematics for Elementary Teachers I .. 4 Cr.
- Minimum grade of "C" in mathematics courses.

h. **Natural Science** 8 Cr.
- 1) BIO 125, 151, or 171 .... 4 Cr.
- 2) One course from chemistry, astronomy, meteorology, geography, or physics (course must include a lab) .... 4 Cr.

i. **PE 101-105** 1 Cr.

**3. Other course requirements:**

a. **Oral Communication** 3 Cr.
   - (one of the following):
     - COMM 145 Interpersonal Communication
     - COMM 243 Public Communication

b. **Advanced Composition** 3 Cr.
   - (one of the following):
     - ENGL 300 Introduction to Professional Writing
     - ENGL 321 Intermediate Composition
     - ENGL 380 Topics in Writing
     - ENGL 423 Short Story Writing
     - ENGL 431 Advanced Composition

4. **Education** 40 Cr.
   - Must include ED 203, 204, 305, 370, SPED 440, ED 460, 475, and 478.

5. **Content Area Concentrations:**
   - 36 credit hours. Candidates choose two from the following four areas, each of which is a minimum of 18 credit hours:
     - Language Arts
     - Social Studies
     - Science
     - Mathematics
   - Candidates can receive a listing of courses required under the 18 credit hour content area selected from their Education Department advisor.

### Additional Teaching Content Areas.

Students who are interested in specific information about the requirements for additional content areas should contact their Education Department advisor. Students completing the requirements may also obtain additional teaching content area in Exceptional Needs/Mild Intervention (Learning Disabilities, Mildly Mentally Handicapped, and Emotional/Behavioral Disorders).

**Freshman** students are advised by a department advisor assigned by the Chair. **Sophomore** students should complete ED 203, 204, and COMM 145 (or COMM 243) during this year. Application for admission to the Teacher Education Program should be made during the sophomore year at Checkpoint 1.

**Junior** students who are admitted to the Teacher Education Program may take the junior level courses ED 370, SPED 440, ED 460, 475 and 478. Application for admission to the Professional Semester (Checkpoint 2) for the next academic year must be filed by the prior semester.

**Senior** students must set aside one full semester for student teaching and the ED 465 Senior Seminar.

### Secondary Education:
#### Adolescence/Young Adult

Students seeking to teach in a high school must major in one of the content areas listed on page 51 and approved for licensure.

**Advising.** Before admission to the Teacher Education Program, high school teacher candidates must register as a secondary education complementary major with the Registrar's Office, and consult the Education Department advisor about programs leading to recommendations for teacher licensure. Students should regularly consult both their education advisor and major advisors prior to registration each semester.

**Requirements.** Undergraduate students preparing to obtain a high school license should complete the requirements for appropriate degrees in their academic majors as well as those for the teaching major.

**General Education Requirements.** Students must meet the requirements below in addition to the University general education requirements for the degree in their major.

1. Oral communication (COMM 145 or 243), 3 credits.
2. PSY 110, 3 credits (for PSY 110 and 111, 4 credits, if this course is to be used to meet the University's 12-credit natural science requirement).
3. Students who transfer to Valparaiso University and do not take CORE 110 and CORE 115 must have 6 credits of composition or other writing courses, and a course in history (3 credits).

**Professional Education Requirements.**

**Freshman/Sophomore level courses:**
- ED 203, 2 Cr.
- ED 204, 3 Cr. (PSY 110 is a prerequisite)
- ED 305, 2 Cr.

**Formal application and admission to the Teacher Education Program as soon as possible in the sophomore year (see below).**

**Junior level courses:**
- ED 370 .... 3 Cr.
- SPED 440 .... 3 Cr.
- ED 457 .... 3 Cr.
- ED 460 .... 3 Cr.
- ED 489 .... 3 Cr.

- ED 489, Special Content Methods courses are only offered once a year and must be completed prior to the professional semester. Students should check with their academic advisor about when this course is offered.

**Junior students who are admitted to the Teacher Education Program may take the courses:**
- ED 370, SPED 440, ED 457, 460, and 489. Application for the Professional Semester (Checkpoint 2) for the next academic year must be filed the previous semester.

**Senior level courses:**
- Professional Semester: .... 15 Cr.
- ED 459 .... 12 Cr.
- ED 489 .... 3 Cr.

**Content Area Concentration.** A content area concentration is required of all high school teacher candidates. Note that a content area concentration is not the same as an academic major in that it may have additional requirements.
Minor in Special Education. To earn a minor in Special Education, students must earn a minimum of 17 credit hours in SPED for the elementary developmental level and 21 credit hours in SPED and ED for the middle and secondary levels. For both levels the courses must include: SPED 347, 348, 444, 450, and 451. Elementary students must also take SPED 440. Students preparing for Middle School Special Education must also take SPED 489, 447, and ED 466. Secondary students must also take SPED 489, 448, and ED 466. Supervised teaching (SPED 449) will include one half semester in a special education classroom and the other half in a special education situation. SPED 440 will not count toward this minor because it is required of all elementary and secondary pre-service teachers. Since this minor leads to licensure and several required standards are imbedded in additional education courses, this minor is open to education majors only.

THE TEACHER EDUCATION PROGRAM

Admission (Checkpoint 1). To be admitted to the Teacher Education Program, a student must submit an application to the Education Department after completion of ED 203, ED 204, and COMM 145 (or 243) and when all other admissions criteria have been fulfilled. Admission to the program is the first of three checkpoints in the performance assessment process. Students may obtain the application packet in ED 203 or from the Professional Development and Placement Office.

Students must complete the application process and be aware that this process may take one semester. Action on each application is based on the following criteria:

1. Grade point average. An applicant must have a grade point average of 2.50 or higher in all course work taken at Valparaiso University, a minimum of 12 credit hours, and at least 2.00 in each required course taken in the Education Department.

2. Communication grade point average. An applicant must have obtained a grade point average of 2.5 or better in CORE 110, 115, and COMM 145 (or 243). No course may be substituted to meet this requirement if the course grade is below a "C" (2.0). Students are expected to maintain acceptable standards in communication skills; proficiency is monitored by professors in all education courses. If deficiencies in written or oral communication are noted, the applicant may be required to take remedial steps under the direction of the Education Department.

3. Basic skills test. Applicants to the Teacher Education program must furnish passing scores on the Pre-Professional Skills Test (PPST). These basic skills tests in reading, writing and mathematics are administered at national testing sites, including Valparaiso University, eight times during the academic year. Students are responsible for registering and paying the fees for the test and for designating that scores be sent to the Valparaiso University Education Department. Scores typically take a minimum of six weeks to arrive at Valparaiso University.

Information about test registration and administration will be furnished to students at a Teacher Education information meeting or during courses taken in the sophomore year or from the Professional Development and Placement Office.

4. Health. An applicant shall be free of serious mental or physical health problems that impair teaching effectiveness.

5. Character/Dispositions. An applicant must demonstrate in all classes the social and emotional maturity, moral character, responsibility, and professional dispositions necessary for success in the teaching profession. Students' dispositions are assessed formally at three checkpoints and informally assessed throughout the program by instructors and field experience supervisors.

Positive recommendations need to be obtained from the student's ED 203 instructor and major advisor for Checkpoint 1. A third recommendation must also be received from a field experience cooperating teacher.

7. Declared Major or Complementary Major.

All students who seek admission to the teacher education program must declare one of the following majors in the Office of the Registrar prior to admission to the Teacher Education Program: Elementary Education, Middle Level Education (both within the Bachelor of Science in Education degree), or a Liberal Arts major in Secondary Education.

8. Attend Portfolio Seminar. Seminars are offered each semester to inform students of the portfolio assessment process.

9. Submit INTASC Artifacts. Submit artifacts correlated to INTASC Standards 2, 5, and 9 to the Admission and Retention Committee for review. Note: The department has an alternate admissions process. See your advisor for information.

To appeal a decision of the Admissions and Retention Committee, the student should first direct his/her petition to that Committee in writing; if the decision is still unfavorable, the appeal should be submitted in writing and directed to the Education Department Chair.

Admission to the Professional Semester (Checkpoint 2). Application for admission to the Professional Semester must be completed and filed with the Professional Development and Placement Office before February 15 of the Spring Semester before the academic year in which the professional semester is to be done. For admission into the Professional Semester, the student must meet the following criteria:

1. Official admission to the Teacher Education Program.

2. A minimum cumulative grade point average of 2.50. A grade point average of 2.40 or better must be obtained in all secondary teaching fields.

3. Continued demonstration of effective oral and written communication.

4. Senior standing. The applicant must be within two semesters and one summer of graduation.

5. Evidence of the social and emotional maturity, moral character, responsibility and professional dispositions necessary for success in the teaching profession.

6. Submission of a satisfactory portfolio that includes artifacts from INTASC Standards 1, 3, 4, 6, 7, 8, and 10 as well as a personal statement about the candidate's understanding of the conceptual framework.

7. Elementary School student teaching candidates must have earned a standing of 2.40 or higher in all course work in education. Students must complete the following courses before the Professional Semester: ED 203, 204, 305, 312, 322, 323, 324, 327, 328, 370 and SPED 440.

8. Middle School/Junior High teacher candidates must have completed ED 203, 204, 305, 370, SPED 440, ED 460, 478, 485, and have earned a minimum grade point average of 2.40 in all ED courses completed.

9. Adolescence/Young Adult (High School) student teaching candidates must have completed ED 203, 204, 305, 370, 457, 460, 488, SPED 440, have earned a standing of 2.40 or higher in all education courses completed and have received a written recommendation from the major advisor to take the Professional Semester. If a teaching minor is to be obtained, students must obtain a written recommendation from the Chair of the department in which the minor is taken. Students are strongly urged to take or audit the Special Methods 489 course in the teaching minor area.

10. To be eligible for recommendation for licensure, students must maintain the above requirements through the completion of the degree and the teacher education program.

Professional Semester (Checkpoint 3). This semester is required of all candidates who wish to be recommended for an initial teaching license. This semester includes coursework and student teaching required to meet standards for licensure. During this semester the student should enroll only in courses approved for the Professional Semester. At the end of the Professional Semester students submit a performance portfolio, based on all 10 of the INTASC Standards for Checkpoint 3. Artifacts will be primarily based upon student teaching experience and the department's conceptual framework.

Placement of Teacher Candidates for Field Experiences/Student Teaching. The Teacher Education Program
ED 103. Introduction to Teaching and Field Experience.
Cr. 3. For qualified high school juniors and seniors in approved cadet teaching programs in Northwest Indiana school corporations who wish to explore teaching as a vocation. An introduction to the teaching profession, what it takes to become a teacher, the role of teachers, standards that govern education, and an introduction to the sumptive portfolio assessment in the department's teacher education programs. A 40 clock hour field experience in an elementary, middle, or high school is required.

ED 200. The Fine Arts Experience.
Cr. 3. This course is designed to address the teaching specialties identified by the Indiana Professional Standards Board for early/middle childhood education generalists. Students are exposed to art, music, and theatre so that they gain an appreciation of the contributions these art forms make to culture. The course may also be used by education students to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Prerequisite: education major.

ED 204. Educational Psychology.
Cr. 2. A study of psychological research and theory related to child and adolescent development and the learning process. Prerequisite: PSY 110.

ED 305/505. Computers in Education.
Cr. 2. An introductory course designed to prepare teachers to use the computer as an educational tool. Students will learn how to integrate educational technology into the classroom curriculum as they become proficient in using various media to support student learning. Will include multimedia authoring tools, presentation software, web-based instruction, and curriculum applications.

Cr. 3. This course will focus on the relationships within K-12 schools in a diversity of school settings with emphasis on cultural and socioeconomic issues. Forty (40) hours of off-campus activities will include field experiences focusing on educators' interpersonal relationships with school communities. All students admitted to the teacher education program must take this course. May be used by education majors to fulfill the U.S. Cultural Diversity component of the General Education Requirements. Prerequisite: ED 203. Corequisite or prerequisite: ED 204.

Note: No student is admitted to any course other than ED 203, ED 204, ED 305, or ED 370 unless admitted to the Teacher Education Program or permitted to do so by the Admissions and Retention Committee of the Education Department or the Chair of the Education Department.

ED 321. Principles of Elementary Education.
Cr. 2. This course is designed to (1) study the organization of instruction, classroom assessment, management and diversity, (2) consider the elementary classroom from varied perspectives and (3) reexamine the purposes of education, schooling, instruction and the role of the professional teacher. Includes a field component. Prerequisite: Admission to Teacher Education.

ED 322. Methods of Teaching Language Arts in the Elementary School.
Cr. 2. A detailed study of the English Language Arts. Students demonstrate knowledge, understanding, and competence in the teaching of listening, speaking, reading, writing, viewing, and visually representing educational technology and information gathering resources will also be addressed. Includes and field component. Prerequisite: Admission to Teacher Education.

ED 323. Methods of Science Education.
Cr. 2. This course will (1) explore the basic orientations that will have survival value in our world, (2) study the philosophy of science education with an understanding of three methods used for science instruction: Discovery Model, Inquiry Model, and Experimental Model. Includes a field component. Prerequisite: Admission to Teacher Education.

Cr. 2. A study of techniques and instructional materials for teaching mathematics in the elementary school. Topics include sequencing, diagnostic and remediation strategies, and appropriate use of concrete materials in planning, organizing, implementing and evaluating instructional practices. Includes a field component. Prerequisite: Admission to Teacher Education.

Cr. 2. This course is designed to (1) study the historical development and present trends in the social studies; (2) explore the role of social studies in school curriculum, (3) examine current methods and materials unique to social studies, and (4) plan and implement a social studies unit. Includes a field component. Prerequisite: Admission to Teacher Education.

ED 328. Developmental Reading and Methods.
Cr. 3. This course is a detailed study of basic developmental reading programs and methods with an emphasis on comprehension and vocabulary. Literacy, interpretive, critical and evaluative levels of comprehension are addressed. A variety of instructional approaches for study skills and vocabulary development are included. Includes a field component. Prerequisite: Admission to Teacher Education.

ED 361/661. Language Processing and Phonetics.
Cr. 3. This course focuses upon the relationship between cognitive and language processing in reading. Foundations for building word identification and phonics are studied. The basic elements of reading are considered, including orthographic and contextual impacts. Prerequisite: ED 328 or equivalent 3 credit reading course and Admission to Teacher Education.

Cr. 12. In this course each student is assigned to an elementary school under the direction of a cooperating teacher. University field instructor. The field experience includes a minimum of twelve weeks during the semester of full-time classroom observations, classroom teaching and related activities. Prerequisites: senior standing and concurrent enrollment in the Professional Semester. See Admission to the Professional Semester above for conditions of eligibility. Students enrolled in this course may not carry a load of more than 15 credit hours. S/U grade. Corequisite: ED 485.

Cr. 3. A study of the understandings, knowledge, and skills necessary for effective secondary school teaching. Topics addressed are curriculum development, instructional planning, classroom management, the student-teacher interaction, methods and strategies of instruction. Students reflect on their own teaching and learning experiences and observations of current practices as they begin to formulate their own teaching philosophies. This course should be taken before ED 489 and must be taken before student teaching. A field component is required. Prerequisite: Admission to Teacher Education.

Cr. 12. Each student is assigned to a secondary school for laboratory experiences in teaching, which includes at least twelve (12) weeks of full-time classroom observation, teaching and related activities. Prerequisite: Admission to the Professional Semester. (See Admission to the Professional Semester above for conditions of eligibility.) Students enrolled in this course may not carry a load of more than 15 credit hours unless obtaining permission from the Chair of the Education Department. S/U grade. First offered Fall 2004. Corequisite: ED 485.
ED 460/560. Reading in the Content Areas.
Cr. 3. This course includes readings, experiences, writing opportunities, and discussions which lead to an understanding of literacy, the reading process, and the critical role language plays in the learning process. Students gain knowledge of specific assessment tools and processes, methods for planning instruction, and a range of reading, writing, and study strategies appropriate for helping pupils read to learn. Prerequisite: Admission to Teacher Education.

ED 466/566. Literacy: Diagnostic Assessment and Instruction.
Cr. 4. This course emphasizes appropriate reading curriculum and formal and informal assessments. Included in the course are organization and planning instruction to meet the needs of all students. A field component is included. Prerequisite: ED 326 and Admission to Teacher Education.

ED 473. Teaching and Learning for Early Adolescence Generalist Candidates.
Cr. 3. A study of the human developmental characteristics of early adolescents, organization of schooling, and developmentally responsive curriculum in middle level education settings. This course is taken concurrently with ED 478 during a block semester structure. Classes will be conducted at both the University campus and on-site in a partner school setting. Prerequisite: Admission to the Teacher Education Program. Corequisite: ED 478.

ED 475. Teaching and Learning for Early Adolescence Generalist Candidates.
Cr. 3. A study of the human developmental characteristics of early adolescents, organization of schooling, and developmentally responsive curriculum in middle level education settings. This course is taken concurrently with ED 478 during a block semester structure. Classes will be conducted at both the University campus and on-site in a partner school setting. Prerequisite: Admission to Teacher Education. Corequisite: ED 478.

ED 478. Integrated Curriculum with Special Methods for Middle Level Education.
Cr. 6. This course will address pedagogy and curricula unique to middle level education. Special emphasis will be on developmental needs of emerging adolescents and curricular designs within middle schools. Course content will be guided by developmental and curricular standards developed by the National Middle School Association and modeled by the Indiana Professional Standards Board. This course is taken concurrently with ED 473 within a block semester structure. Theory and cognitive knowledge will be put into practice in the required field experience component. Prerequisite: Admission to Teacher Education. Corequisite: ED 475.

ED 479. Supervised Teaching in Middle School Grades.
Cr. 12. Each student will be assigned to a middle school under the direction of a Middle School teacher and University Field Instructor. The student teaching experience includes a minimum of 12 weeks of full-time classroom teaching, observations and related activities. Prerequisite: senior standing and concurrent enrollment in the Professional Semester. See Admission to the Professional Semester above for conditions of eligibility. S/U grade. First offered Fall 2004. Prerequisite: senior standing. Corequisite: ED 485.

Cr. 3. Taken intensively during the three weeks prior to Student Teaching. Major topics addressed include educational philosophy and the teacher, school governance and school law, and classroom management and assessment. Prerequisite: Admission to the Professional Semester (must be taken during the student's professional semester). First offered Fall 2004. Corequisites: ED 439, ED 469, ED 476, or SPED 449.

ED 489. Special Methods in the Academic Courses in Secondary Education.
Cr. 3. This course is administered by the Education Department. The course is offered by the various departments of the College of Arts and Sciences under the following ART 489 The Teaching of Visual Arts BIO 489 The Teaching of Natural Sciences CHEM 489 The Teaching of Natural Sciences ENGL 489 The Teaching of English FLF 489 The Teaching of Foreign Languages - French FLG 489 The Teaching of Foreign Languages - German FLL 489 The Teaching of Foreign Languages - Latin FLS 489 The Teaching of Foreign Languages - Spanish HIST 489 The Teaching of Social Studies MATH 489 The Teaching of Mathematics MUS 489 School Music II PE 489 The Teaching of Physical Education PHYS 489 The Teaching of Natural Sciences SPED 489 Teaching the Individual with Mild Disabilities (Grades 6-12) A minimum of 20 clock hours of field experience will accompany this class. Prerequisites: Admission to Teacher Education, ED 457, or consent of the Education Department Chair. Must be taken prior to the professional semester.

ED 490/590. Current Problems in Education.
Cr. 1-3. An intensive study of an area of education. Subtopics, amount of credit and content depend on instructor's choice and student interest. Prerequisite: Admission to Teacher Education.

ED 495. Independent Study in Education.
Cr. 1-3. Independent study to be done in a specific area of education as agreed upon by the student and faculty advisor. Proposals must be approved by the Chair of the Department. Prerequisite: Admission to Teacher Education.

ED 497. Honors Work in Education.
Cr. 3. See Honors Work, page 54. Prerequisite: ED 497.

Cr. 3. This course is designed to provide information on academic, cognitive, social, behavioral, and emotional characteristics of individuals with mild disabilities (emotional/behavioral disorders, learning disabilities, and mental retardation). Topics include federal and state laws governing special education since 1970, processes involved in identifying students as having one of the disabilities considered "mild": specific characteristics of students who have mild disabilities in cognitive, academic, behavioral or social/emotional areas; characteristics of various education service delivery systems; and interventions for students with mild disabilities in grades 1-12. Corequisite: SPED 348.

SPED 348. Observation of Individuals with Mild Disabilities.
Cr. 1. Teacher candidates will complete a series of structured observations in special education settings serving students with mild disabilities at a particular developmental level. Teacher candidates will complete various assignments, including direct observation of students with mild disabilities, interviews with various general and special education personnel, directed reflections on special education service delivery models, and surveys of the usage of various forms of technical/individualized special education personnel and students. Teacher candidates will complete the remainder of this 40 clock hour experience tutoring students with mild disabilities in the guidance of a cooperating teacher. Corequisite: SPED 347 or consent of the Chair of the Department.

SPED 440/540. Learning Exceptionalities.
Cr. 3. A course that introduces special education laws passed since 1970 that govern the provision of current special education services for students with various disabilities, the characteristics of students with disabilities, instructional and classroom practices associated with educating these students in multicultural and least restrictive environments, and basic techniques for education professionals to work together with parents and students. Prerequisite: admission to the Teacher Education Program. Required of all students.

SPED 444. Assessment in Special Education.
Cr. 3. Course is designed to develop an administration and interpretation skills in teacher candidates for types of tests used in the identification of various disabilities and tests used to plan instruction programs. Psychometric properties of tests are also addressed. Tests/types of assessments addressed in this course include intelligence tests, achievement tests, adaptive behavior and other behavior rating scales, psychological process tests, learning capacity and aptitude instruments, observational assessment, and curriculum-based assessment. Prerequisite or corequisite: SPED 347 or consent of Chair of the Department. Required of all students, regardless of what year first enrolled at Valparaiso University.

SPED 445. Teaching the Student with Mild Disabilities.
Cr. 3. This course provides teacher candidates with knowledge of various compensatory, corrective, and remedial instructional strategies in curriculum areas included in grades 6-12 including reading/language arts, mathematics, content areas, and social and behavioral skills. Course experiences emphasize effective, research-based teaching methods, diagnostic-prescriptive teaching techniques, and individual education planning for students with mild disabilities (emotional/behavioral disorders, learning disabilities, mental retardation) at this developmental level. Prerequisite: SPED 437 or SPED 444 is either a prerequisite or corequisite. Corequisite: SPED 446A.

SPED 446 (formerly SPED 446A). Teaching Practicum with Individuals with Mild Disabilities (Grades 1-8).
Cr. 1. This 40 clock hour practicum will give special education teacher candidates the opportunity to practice skills and performances required of special educators related to the instruction of early/middle childhood students with mild disabilities in assessment to plan instruction, developing academic goals/objectives/behaviors, and delivering effective instruction to early/middle childhood students with mild disabilities. Corequisite: SPED 445.
English

Professors Byrne, Feaster, Juneja, Spohnberg, Uehling (Chair), Wangerin; Associate Professors Burrow-Flak, Haber, O'Connell, Ruff, Sandock; Assistant Professors Buinicki, A. Ganze, Park, Schuette-Hoffman.

The English Department offers a variety of courses for both English majors and other students. These courses help students to use the English language maturely and sensitively and to develop their capacities to enjoy and understand imaginative literature. Many non-English majors enroll in upper division courses and students can expect any class to display a spectrum of interests and backgrounds. Relatively small class size allows students to cultivate a close relationship with professors and to ripen their analytical and expressive skills through writing and discussion. In addition to preparing a student for graduate work or for teaching in secondary schools, an English major provides an excellent qualification for numerous careers and professions. Many schools of medicine, law and theology view an English major as highly desirable for acceptance into their programs. Businesses, not-for-profit agencies, and government employ English majors for policy research, public relations, marketing, advertising, as well as editing and writing. The abilities to read and understand complex material, to write and speak precisely, to think clearly, thoroughly and subtly remain in high demand. All students with an interest in literature are invited to join the English Society. Students of exceptional merit earn membership in Sigma Tau Delta, a national honor society, and may qualify for departmental scholarships. English elementary and secondary education majors may join the Valparaiso University affiliate of the National Council of Teachers of English.

Major in English. A major in English requires a minimum of 30 credit hours in English courses beyond ENGL 200 and numbered 300 or above. Courses must include ENGL 400, 408 and 493; one course selected from 409, 410, 420; one from 430, 450, 456; one from 460, 470, 475; and either 401 or 402.

Major in Creative Writing. A major in Creative Writing requires a minimum of 30 credit hours in writing or language-related courses. Courses must include ENGL 301, 400, and 492; three courses selected from 423, 424, 431, THTR 252, and one course selected from ENGL 460, 470, 475. Additional courses may be selected from any English courses numbered 300 or above or COMM 230 or COMM 330.

Major in Professional Writing. A major in Professional Writing requires a minimum of 30 credit hours in writing or language-related courses. Courses must include ENGL 300, 400, and 491 and COMM 230; one course selected from ENGL 321 and 431; one course selected from COMM 110, COMM 330, THTR 262; and two courses selected from ENGL 310, 441, 442, 443, PHIL 150. Additional courses may be selected from ENGL 380, 386, 385 (with chair's approval), 390 (with chair's approval), 495, or any of the courses listed above within this major. Students who take both ENGL 321 and 431 must take 321 first. With the chair's approval, students may apply cooperative education toward fulfillment of this major.

Minor in English. A minor in English requires a minimum of 18 credit hours in English courses beyond ENGL 200 and numbered 300 or above. Courses must include ENGL 400 or 408 or 493; one course selected from 409, 410, 420; one from 430, 450, or 456; one selected from 460, 470, 475; and either 401 or 402.

Minor in Creative Writing. A minor in Creative Writing requires a minimum of 18 credit hours in writing or language-related courses. Courses must include ENGL 301, 400, and 492; one course selected from ENGL 423, 424, 431, and THTR 252. Additional courses may be selected from any English courses numbered 300 or above or COMM 230 or COMM 330.

Minor in Professional Writing. A minor in Professional Writing requires a minimum of 18 credit hours in writing or
language-related courses. Courses must include ENGL 300, 400, and 491; one course selected from ENGL 321 and 431; and one course selected from ENGL 310, 441, 442, 443, PHIL 150. Additional courses may be selected from ENGL 380, 386, 385 (with chair’s approval), 390 (with chair’s approval), 495, or any of the courses listed above within this minor. Students who take both ENGL 321 and 431 must take 321 first. With the chair’s approval, students may apply cooperative education toward fulfillment of the minor.

Diversity in Literature. The English Department affirms the significance of writing by people of color and other ethnic or minority groups and regularly includes it in literature and writing courses. In addition, the Department offers specific topics courses especially focused on this writing and designed to fulfill the U.S. Cultural Diversity Requirement. Representative topics include American Ethnic Literature and African-American Writing.

Credit by Examination. Credit for ENGL 100 may be earned through the College Level Examination Program general examination in English or the subject area examination in composition, or through the Advanced Placement Examination offered by the College Entrance Examination Board. Credit for ENGL 200 may be earned through the College Level Examination Program subject examination in Analysis and Interpretation of Literature or through the Advanced Placement examination offered by the College Entrance Examination Board.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in English leads to the Bachelor of Arts degree.

Approval of Schedules. All students declaring a major or a minor in English should make an appointment with the Chair of the Department. Students should bring their cumulative grade reports (from the Registrar’s Office) and their current advisor’s files. The chair will explain the offerings and programs of the Department and give each student a bulletin which explains courses and faculty in more detail than is possible in this catalog.

All students taking a major or minor in English must have their schedules approved by their English advisors before registration. This consultation assures students of places in courses they need and contributes to orderly progress toward the degree.

Advising. The Chair of the Department will introduce all students to the professors who will be their advisors as long as they remain majors in the Department. It is the student’s responsibility to confer regularly with the advisor about course selection, career planning and related matters. It is the advisor’s responsibility to help the student make a frank and realistic assessment of academic options and their consequences.

Cooperative Education. In order to clarify the academic obligations of students who wish to earn credit for work experiences through which they may also earn a degree, more than six credits may be applied toward the minimum major requirements. All projects must receive prior approval from the Department Chair and must be monitored by a member of the English Department faculty. A report from the sponsoring agency is required, as well as a written report by the student. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Prerequisites for other writing courses are studied intensively. Prerequisites for other writing courses are ENGL 200 or equivalents which are prerequisites for the major. Such courses may be taken twice for credit. 

ENGL 321. Film Aesthetics. Cr. 3. This course considers the possibilities and limitations of aesthetic valuation of film. Films are studied intensively from the viewpoint of narratological technique, image, camera movement, sound, social ideology and historical significance. Aesthetic impact is weighed against ethical issues. This course may be used to fulfill the Arts/Fine Arts/Lit. component of the General Education Requirements.

Note: CORE 110 and 115 and ENGL 200 or equivalents are prerequisites for all literature and language courses numbered 300 or above; CORE 110 and 115 are the prerequisites for other writing courses (ENGL 300, 301, 310, 321, 380, 423, 424, 431, 491, 492).

ENGL 300. Introduction to Professional Writing. Cr. 3. This course offers a detailed study of writing and speaking practices for effective communication in business, industry, and not-for-profit organizations. It combines analysis and practice in composing and executing various messages in formats including letters, memoraanda, reports, proposals, and oral presentations. It also emphasizes analysis, organizational strategies and mechanical aspects of communication. It introduces students to the principles of composition, format and appearance. Current issues include communication ethics, intercultural communication, electronic communication technologies in the workplace.

ENGL 301. Introduction to Creative Writing. Cr. 3. This course examines the process and practice of creative writing. Topics include stages of creative writing from invention and imagination to description and dramatization. Attention focuses on the elements of fiction, poetry, drama, and nonfiction and their forms, their differences and the reasons for distinguishing among them; and the ways in which they have contributed to one another as boundaries between them have blurred. Students will practice writing in the various genres. Assignments also address issues such as the relations of authors’ autobiographies to their art, and the need to craft concrete metaphors to represent abstract ideas.

ENGL 310. Introduction to Technical Writing. Cr. 3. This course teaches engineering and science students to write and talk about design and research problems in terms that satisfy a specialist and also enable a non-specialist to understand what the problem is and how it was (or can be) solved.

ENGL 321. Intermediate Composition. Cr. 3. Students examine and practice procedures common to all kinds of academic and professional writing. Particular attention is given to editing, revising, and evaluating prose forms. Not open to students who have taken ENGL 431.

ENGL 365/565. Studies in American Literature. Cr. 3. A study of a significant movement in American literature, such as Transcendentalism, Romanticism, Naturalism and Realism, or a group of writers related generally, ethnically or in some other special way.

ENGL 380/580. Topics in Writing. Cr. 2-3. An open topics course, which may involve intensive writing in a particular genre (for example, the personal essay, dramatic poetry, longer fiction), or writing for a particular audience (for example, writing for children and young adults).

ENGL 386. Internship in English. Cr. 0.5-3. Students gain experience working for organizations or agencies in which skills in effective writing, critical thinking, or literary scholarship are essential. A written report is required. Prerequisite: approval of the Chair of the Department.

ENGL 389. Teaching English to Speakers of Other Languages. Cr. 3. A study of methods of teaching English to all ages of speakers of other languages. Topics include basic concepts of language learning, methods of teaching basic skills, preparation of teaching materials, means of assessing progress; Principles are applied in a concurrent practicum. Prerequisite: CORE 110 and 115.

ENGL 390/590. Topics in Literature. Cr. 2-3. An open-topics course, which may concern a single writer or group of writers; a literary type or theme (e.g., Politics and Literature, Novel of Social Criticism, Sacred Tales, Black Spiritual Narrative); a contemporary art form (e.g., Contemporary Poetry), or an aspect of modern popular culture.

ENGL 396. Traditions of Giving and Serving in American Life. Cr. 3. Selected readings in the nature and purpose of philanthropy and service in American Life. Texts will be drawn from the fields of literature, theology, social history, and philosophy that raise questions of ethics, stewardship and the common good.

ENGL 400. New Literacies, Technologies, and Cultures of Writing. Cr. 3. A course in theory and practice that examines how media of expression shape texts and their interpretations. Course readings
include literature and theories of textual studies in print and electronic formats. Readings emphasize the history of the book and evolving electronic text. The course requires written papers and projects in electronic format.

ENGL 401. American Literature I. Cr. 3. A study of selected works of major American writers (including minority and women writers) from the Colonial period to the Civil War.

ENGL 402. American Literature II. Cr. 3. A study of selected works of major American writers (including minority and women writers) from the Civil War to the present day.

ENGL 408. Masterpieces of World Literature. Cr. 3. A survey of major works of the Occident and Orient from ancient times to the present day.

ENGL 408/508. Methods of Literary Criticism and Research. Cr. 3. Designed to give students practical experience in the theories and methods of modern literary scholarship and criticism. The course aims to acquaint students with the presuppositions about which underlie critical writing and thus to provide standards for evaluating critical and scholarly works. It also provides intensive training in the analysis of literary texts. Required for English majors.

ENGL 409/509. Literature of the Medieval Period. Cr. 3. A survey of medieval English lyric, ballad, narrative, drama, and romance (including Chaucer), with attention to intellectual, religious, and social background materials.


ENGL 420/520. Literature of the Sixteenth and Seventeenth Centuries. Cr. 3. An intensive survey of the poetry, prose, and drama of the English Renaissance, excluding Shakespeare, with attention to the historical and cultural backgrounds of the period. Representative writers may include Marlowe, Sidney, Jonson, Donne, and Milton.

ENGL 423. Short Story Writing. Cr. 3. A workshop in the various techniques of writing short fiction. English majors (not writing majors or minors), as well as other students, may take this course on the S/U basis.

ENGL 424. Poetry Writing. Cr. 3. A workshop in the various techniques of writing poetry. English majors (not writing majors or minors), as well as other students, may take this course on the S/U basis.

ENGL 425/520. Literature of the Restoration and Eighteenth Century. Cr. 3. A survey of English poetry, fiction, nonfiction prose, and drama from 1660-1785, with attention to the historical and cultural background of the period. Representative writers may include Dryden, Swift, Pope, Fielding, Johnson, and Sheridan.

ENGL 431. Advanced Composition. Cr. 3. A course for students who have mastered fundamental writing skills and are prepared to study and practice the writing process in a more sophisticated and rigorous fashion. The course considers how to generate and organize ideas, how to adapt writing to various audiences and purposes, and how to revise, edit, and polish writing components of a developing and mature style.

ENGL 441/541. History of the English Language. Cr. 3. An introduction to the development of modern English from Indo-European with emphasis upon structure and vocabulary.

ENGL 442/542. Modern English Grammar. Cr. 3. An introduction to recent linguistic developments such as structural grammar and transformational-generative grammar.

ENGL 443/543. Introduction to Linguistics. Cr. 3. An introduction to the theory and methodology of linguistics. The course includes descriptive and historical linguistics, basic notions of grammatical theory and exploration of some of the relations of linguistics to other branches of knowledge. The presentation of general principles is supplemented by practical problems in linguistic analysis.

ENGL 450/550. British Literature of the Nineteenth Century. Cr. 3. A survey of British poetry and prose of the Romantic and Victorian eras, with reference to the context of British and European social and political history. Major writers may include Wordsworth, Coleridge, Keats, Hazlitt, Scott, Carlyle, Tennyson, Browning, Arnold, Dickens, Newman, and Hardy.

ENGL 456/556. The Novel. Cr. 3. A study of representative English novels of the eighteenth and nineteenth centuries, with discussion of the social background.

ENGL 460/560. Twentieth Century Drama. Cr. 3. A study of plays typical of the various phases of the development of British and American drama after 1890, with some attention to related Continental drama.

ENGL 470/570. Twentieth Century Fiction. Cr. 3. Readings of representative works of the most important British and American novelists of the twentieth century, with emphasis on various theories of fiction dominant during the period.

ENGL 475/575. Twentieth Century Poetry. Cr. 3. Readings in selected modern poets and their forerunners, especially the French Symbolists. The British and American poets included may range from Yeats and T.S. Eliot to Auden, Robert Lowell and other contemporary figures.

ENGL 478. Literature for Children. Cr. 3. A survey of types of writing for children, including selected works of some of the writers who have best expressed and projected the worlds of children. Required for elementary education majors.

ENGL 479/579. Literature for Adolescents. Cr. 3. A survey, by types, of distinguished literature for adolescents, including works of distinguished historians, with emphasis on selecting works of children by distinguished writers. Selected works may include those of some of the writers who have best expressed and projected the worlds of adolescents. Required for elementary education majors.

ENGL 481. Cooperative Education in English I. Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisite: admission to Teacher Education.

ENGL 482-483. Cooperative Education in English II-III. Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisite: approval of the Chair of the Department.

ENGL 482-483. Cooperative Education in English II-III. Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisite: approval of the Chair of the Department.

ENGL 487. History of the English Language. Cr. 3. See Honors Work page 54.

ENGL 488. Honors Candidacy in English Literature. Cr. 3. See Honors Work page 54.
Environmental Science

Administrative Committee:
Professors Arkkelin (Psychology),
Caristi (Mathematics and Computer
Science), Janke (Geography and
Meteorology); Associate Professor
Aljohb (Civil Engineering),
Eberhardt (Biology), Luther
(Mathematics and Computer
Science, Chair), Shingleton
(Economics), Assistant Professor
Schoer (Chemistry).

Students who complete the
Environmental Science program will have
fulfilled the major field requirements for the
Bachelor of Science degree.

Objectives. The Environmental Science
Program gives the student the requisite
scientific background for adequately
assessing environmental systems. Field
work extends that knowledge into
environmental modeling techniques to give
students an opportunity for directed
research and tempers the student's
expertise with a modicum of philosophical
and social reflection on his or her
understanding of scientific issues. The Science
major should well position the student to
enter into graduate work in environmental
science or policy or into the professions
of environmental management and protection.
Science courses are distributed among
biology, chemistry, and geography; a
modeling course provides techniques for
applying knowledge and skills gained in the
science courses to environmental problems;
philosophy and economics courses help
students develop conceptual frameworks in
which to link environmental and human
career. Outside the classroom,
Earthtones, a student organization,
coordinates campus and community
environmental action.

Students will choose between the
Ecology track and the Water Resources
track. The Ecology track is intended for
students interested in assessment and
management of terrestrial and aquatic
ecosystems; the Water Resources track is
intended for students interested in
assessment and management of
freshwater systems such as lakes, rivers,
groundwater and watersheds. These tracks
are unofficial designations that will
not appear on transcripts, but will guide
students during selection of courses.

Students interested in pursuing the
Environmental Science Program should
consult with a member of the Administrative
Committee.

Major Requirements. A minimum of
67 credit hours approved by the
Administrative Committee is required.
Introductory courses for breadth of
knowledge must include BIO 171, 172,
CHEM 121, 122, GEO 104, 215; and MATH
122 or 132 (27 credits). Students in the
Water Resources track should take MATH
132.

Intermediate courses will expose
students to techniques used in various
disciplines to investigate and solve
environmental problems; these include
BIO 250 or GEO 260, CHEM 221, ECON 210,
PHIL 230, PSY 201, ENVS 320 or MATH
320.

Further study for depth of knowledge in
introductory courses includes
research projects on topics such as
CHEM 222, GEO 415, CHEM 230
Students in the Water Resources track
should take CHEM 230.

Students explore the interaction between humans and their
environment by selecting an Environmental
issues course (GEO 204, ENGL 365, PSY
355, or THEO 340).

Upper level electives provide depth
of knowledge in topics of interest through
three courses selected from BIO 350, BIO
440, CE 332, ENVS 340, and GEO 385.
Choice of the specific GEO 385 offering
requires the approval of the Chair of
Environmental Science. Students in the
Water Resources track should take CE 332
and ENVS 340; students in the Ecology
track should take BIO 350 and BIO 440.

Students will extend coursework to
professional preparation by undertaking an
independent research project on campus or
by participating in an internship or
cooperative educational experience off campus.
Results from this experience are
presented in the Environmental Science
Colloquium, ENVS 499. Majors enrolled in
ENVS 499 during both junior (0 credits) and
senior (1 credit) years.

Minor Requirements. The
Environmental Studies minor is described in
the section of Interdisciplinary Programs,
page 225.

REQU!RED MAJOR COURSES

Introductory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 171</td>
<td>Biology of Life</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>BIO 172</td>
<td>Diversity of Life</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>CHEM 121</td>
<td>General Chemistry I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>CHEM 122</td>
<td>General Chemistry II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>GEO 104</td>
<td>Geomorphology</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>GEO 215</td>
<td>Introduction to Geographic Information Systems</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 122</td>
<td>Calculus</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>MATH 132</td>
<td>Calculus II</td>
<td>4 Cr.</td>
</tr>
</tbody>
</table>

Intermediate Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 250</td>
<td>Human Environmental Biology OR Environmental Economics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GEO 260</td>
<td>Environmental Conservation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CHEM 221</td>
<td>Organic Chemistry I</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ECON 210</td>
<td>Environmental Economics and Policy</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHIL 230</td>
<td>Environmental Philosophy and Ethics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Psychological Methods</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENVS 320</td>
<td>Environmental Modeling OR Environmental Engineering</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 320</td>
<td>Mathematical Models in Environmental Science</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

Further Study

Choose at least two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 222</td>
<td>Organic Chemistry II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CHEM 333</td>
<td>Analytical Chemistry</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CHEM 365</td>
<td>Physical Chemistry</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GEO 415</td>
<td>Advanced Environmental Information Systems</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

Environmental issues

Choose at least one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 204</td>
<td>Fishing Parks</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 365</td>
<td>Environmental Literature</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PSY 355</td>
<td>Environmental Psychology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>THEO 340</td>
<td>Environmental Ethics</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

Upper Level Courses

Choose at least three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 350</td>
<td>Field Biology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>BIO 440</td>
<td>Ecology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CHE 332</td>
<td>Hydrology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENVS 340</td>
<td>Water Resource Science and Management</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GEO 385</td>
<td>Field Study (Biogeochemistry)</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

Total | 9-10 Cr.

Professional Preparation and Experience

Choose at least one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 381</td>
<td>Cooperative Education in Environmental Science</td>
<td>1-3 Cr.</td>
</tr>
<tr>
<td>ENVS 385</td>
<td>Cooperative Education in Environmental Science</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ENVS 495</td>
<td>Independent Research in Environmental Science</td>
<td>1 Cr.</td>
</tr>
</tbody>
</table>

Total | 1-3 Cr.

Colloquium

ENVS 499 Colloquium on Environmental Science and Management | 3 Cr.   |

Total Program Requirement | 67-71 Cr.

Recommended Elective Courses

One or more of the following are recommended for Environmental Science majors, depending on
availability and interest:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 334</td>
<td>Fluid Mechanics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CE 364</td>
<td>Environmental Engineering</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CE 365</td>
<td>Environmental Engineering Design</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CE 466</td>
<td>Environmental Engineering Design</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 300</td>
<td>Introduction to Professional Writing</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 310</td>
<td>Introduction to Technical Writing</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENVS 300</td>
<td>Topics in Environmental Science</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MET 103</td>
<td>Meteorology</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MET 216</td>
<td>Climatology</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

ENVS 320. Environmental Modeling.
Cr. 3. A study of the interrelation between
science, policy, and management of water
resources. Topics include the hydrologic cycle,
limnology, wetlands, water quality and water
equality indicators, federal and state
water regulation and standards, watershed
management, water law, and restoration of
ecosystems. Prerequisite: approval of the Chair of Environmental Science.

Cr. 3. A study of the interaction between
science, policy, and management of water
resources. Topics include the hydrologic cycle,
limnology, wetlands, water quality and water
equality indicators, federal and state
water regulation and standards, watershed
management, water law, and restoration of
ecosystems. Prerequisite: approval of the Chair of Environmental Science.

ENVS 381. Cooperative Education in Environmental Science.
Cr. 1-3. Experience in environmental research or
management with a cooperating employer.
Midterm and final written reports required, as well as an oral presentation in ENVS 499.
Credit hours assigned per College of Arts and
Sciences guidelines. SUA grade only. May be
repeated for additional credit. Prerequisites:
Environmental Science major or minor and
consent of the Chair of Environmental Science.

ENVS 385. Internship in Environmental Science.
Cr. 1. Summer professional experience in
cooperating public or private organizations such as
state environmental agencies or
environmental consulting firms. Final
presentation in ENVS 499 required. SUA grade
only. Prerequisites: Environmental Science
major or minor and consent of the Chair of Environmental Science.
ENVS 495. Independent Research in Environmental Science.
Cr. 1. Students work on a project of environmental and scientific merit under the guidance of a faculty sponsor. Final written report and oral presentation in ENVS 499 required. S/U grade only. May be repeated for additional credit. Prerequisites: Environmental Science major or minor, consent of the Chair of Environmental Science and consent of the chair of the sponsoring department.

ENVS 499. Colloquium on Environmental Science and Management.
Cr. 0-1. This course contains (1) presentations by students, faculty, and guest speakers on current topics in environmental research, issues, policy, and management; (2) reading and discussion of items of interest in the environmental literature; and (3) occasional workshops on topics such as public communication or technical and grant writing skills. Specific content will vary based on interests of students and faculty. Environmental Science majors must enroll during both junior (0 cr.) and senior (1 cr.) years; it is assumed students will be making presentations during the senior year. Environmental Studies minors must enroll during junior or senior year. Attendance is encouraged for all students in the Environmental Science/Studies programs. S/U grade only.

Foreign Languages and Literatures

Professors S. DelMaris, Kumpf;
Associate Professors Ames, Duvick (Chair), Zamora; Assistant Professors Bjornstad, Farmer, Houl, Kavanagh, Malchow, Tomasik; Instructor Rivers-Parroquin; Lecturers Berrier, Meng;
Adjunct Assistant Professor Jennings.

Acquaintance with a foreign language and a foreign culture has a profound effect on the way individuals view their own language and their own heritage. Pursuit of studies in this area raises the sights of individuals from the level of provincialism to the level of broadened human concern and is, therefore, a vital part of students' experience, regardless of their fields of specialization. Students, while thus deepening their backgrounds in the humanities, at the same time acquire a working knowledge of another language, a practical skill valued in many of today's professions.

A major in a foreign language may lead to such careers as foreign trade, airlines management, international banking, foreign news correspondent, publishing, teaching, the ministry; paralegal professions, social work among the non-English speaking, translation, tourism or government service.

Objectives. In the lower division courses, numbered in the 100s, the Department has the following objectives:

Modern Foreign Languages
1. To teach the fundamental skills of reading, writing, aural comprehension and speaking in a foreign language.
2. To provide students with a solid basis for further study of the language, literature and civilization.
3. To enhance students' awareness of language in general: its structures, uses and relationship to the culture of the lands in which the language is spoken.

Classical Languages and Hebrew
1. To read the original text with understanding.
2. To study the ideas, history and culture that are the basis of Western Civilization.

In the upper division courses, numbered 200 to 499, the objectives are to continue the work done in the lower division, to prepare students for graduate study, for teaching or for entering careers which demand use of a foreign language; more specifically:

1. To refine the skills acquired in the lower division courses.
2. To study literature both as individual works of art and as a reflection of the civilization and era from which it sprang.
3. To study a foreign civilization and its development.
4. To offer such specialized work as is necessary for persons who plan to teach or those who would use foreign language in their careers.

The Department of Foreign Languages and Literatures cooperates with the Departments of Economics, Geography, History and Political Science in a major in International Economics and Cultural Affairs designed for students considering careers in the fields of international commerce or government service (see page 122 for details) and also participates in the International Service major (see page 124) and the Valparaiso University International Engineering Program in German (see page 204).

Study Abroad. Through University programs and affiliations, an opportunity to study abroad is afforded students of any of the foreign languages. Foreign language majors and minors are strongly encouraged to study abroad. See pages 19-25 for details. Placement and Special Credit.

Before beginning the study of a foreign language already studied in high school, students are required to take a placement examination administered by this Department.

Students who wish to begin languages they have not studied before must register for course 101 of those languages. Those students must complete level 102 to fulfill the foreign language requirement.

Students who have completed Level II of a foreign language in high school and also place into 101 of that language may enroll in 101 for elective credit only, but must complete level 203 to fulfill the foreign language requirement.

Students who place directly into level 203 of a language shall receive 4 credit hours for
level 102 and 4 credit hours for level 203 when they pass course 203 at Valparaiso University. Students who place directly into level 204 or higher in a language shall receive 4 credit hours for level 102, 4 credit hours for level 203 and the credit hours for the course into which they have placed when they pass this latter course at Valparaiso University. Students who have taken the equivalent of level 203 at another institution will not be awarded retroactive credit. However, they will have fulfilled their Valparaiso University foreign language requirement.

**Advanced Placement by Examination.** It is possible to fulfill the Foreign Language General Education Requirement through the Advanced Placement Program of the College Entrance Examination Board or through the College Level Examination Program.

**Special Exception to Foreign Language Requirement.** International students whose native language is not English and who are studying on a nonimmigrant visa are exempt from the Foreign Language General Education Requirement approved by their Foreign Language advisors at registration. A list of specific courses required of majors and minors is available from the Chair of the Education Department.

**Chinese**

**Minor.** A minimum of 16 credit hours in Chinese constitutes a minor. EAST courses 109, 110, 209, 210, taken at the Hangzhou China study center, and EAST 495 when the topic is Chinese Language study, may count toward the minor.

**Study Abroad Opportunities:** Hangzhou Foreign Language Institute, foreign language institute in Hangzhou, China. May be taken for credit at the level of course 101-102. See page 21 for details.

**FLC 101. Beginning Chinese I.** Cr. 4. Basic elements of modern Chinese (Mandarin), including the four tones, sentence structure, and the Chinese characters. May not be taken by students who have taken language study courses in China. Refer to Foreign language credit policies stated on pages 101-102.

**FLC 102. Beginning Chinese II.** Cr. 4. Continuation of FLC 101. Prerequisite: FLC 101 or equivalent. May not be taken by students who have taken language study courses in China.

**FLC 203. Intermediate Chinese I.** Cr. 4. Development of FLC 101 and 102, focusing on speaking, aural comprehension, reading, writing. Emphasis on drills and discussion of readings. Introduction of simplified characters and cursive script. Continuously increasing use of Chinese in class. Prerequisite: FLC 102 or permission of the instructor.

**FLC 204. Intermediate Chinese II.** Cr. 4. Continuation of FLC 203, emphasizing development of speaking, aural comprehension, reading and writing. Includes readings from a variety of sources including contemporary Chinese short stories, lectures, and newspapers. Class sessions conducted in Chinese as much as possible. Prerequisite: FLC 203 or permission of the instructor.

**FLC 488. Internship in Chinese.** Cr. 1-4. Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Chinese. May not be applied to a minor. S/U grade only. Prerequisite: consent of the Chair of the Department.

**FLC 495. Supervised Reading and Research in Chinese.** Cr. 1-4. A guided study of Chinese Language and Literature. Prerequisites: FLC 204 or equivalent and consent of the Chair of the Department.

**Classics**

**Major.** Students must choose one of two tracks: the Classical Language and Literature track or the Classical Civilization track.

**Classical Language and Literature Track:** Requirements for the major are 15 credits of Classical Civilization courses, which must include CLC 200, FLL 220, and either CLC 310 or CLC 311.

**Teaching Programs.** Students who plan to teach Latin in secondary schools with a major or minor in Classics should consult their departmental advisor and the Education Department for specific details.

**Scholarships.** Special scholarships for Classics students include The Rev. and Mrs. Arthur L. Reinke and the Rev. and Mrs. Augustus Reinke Memorial Scholarship, the John and Dorothya Helms Endowed Scholarship, and the Delta Upsilon Chapter of Eta Sigma Pi Scholarships.

**Study Abroad Opportunities:** College Year in Athens (available fall only); American School of Classical Studies at Athens (available summer only); Archaeological Field Work (available summer only).

See page 21 for details; students considering study abroad should consult with the Department Chair and their academic advisor as early as possible.

**Classical Civilization**

See Classics for description of Classical Civilization concentration in Classics major and minor.

**CLC 200. Classical Literary and Artistic Expression.** Cr. 3. A study of Greek or Roman literature in translation and art. May be repeated for credit provided there is no duplication of material. No knowledge of Greek or Latin required. This course may be used to fulfill the Fine Arts/Fine Arts Literature component of the General Education Requirement.
CLC 220. Introduction to Classical Archaeology.
Cr. 3. A study of classical archaeological sites including sculpture, painting, and architecture, and their relationship to political and cultural history. Field trips to a major museum. No knowledge of Greek or Latin required. This course may be used to fulfill the Fine Arts/Fine Arts Literature component of the General Education Requirements.

Cr. 3. A travel course in which the study of Greek or Roman artistic and literary expression takes place in a classical environment. Study trips will be conducted to Greece, Italy, or Roman Germany. May be repeated for credit if the trips are different. No knowledge of Greek or Latin required. Offered summers only.

CLC 251. Classical Mythology.
Cr. 3. Survey of Greek and Roman myths and their influence on modern literature and art. No knowledge of Greek or Latin required. This course may be used to fulfill the Fine Arts/Fine Arts Literature component of the General Education Requirements.

CLC 290. Special Topics in Classical Civilization.
Cr. 3. A study of a particular issue or theme in Classical Civilization. Topics will be selected on the basis of student and faculty interest. Possible topics include The Roman World in Film and Cultural Diversity in the Classical World. May be repeated for credit provided there is no duplication of material. No knowledge of Greek or Latin required. The topic, Cultural Diversity in the Classical World, may be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

CLC 310. Greek Civilization.
Cr. 3. (Also offered as HIST 310). A study of Greek civilization from the late Bronze Age through the Hellenistic period, with emphasis on political, social, and cultural developments. No knowledge of Greek or Latin required. Prerequisite: sophomore standing or consent of the Chair of the Department. This course may be used to fulfill the Philosophical and Historical Studies component of the General Education Requirements.

CLC 312. Archeological Practicum.
Cr. 1-3. Participation in an approved excavation of a classical site. Participants must receive some on-site instruction in excavation goals and methods. Two weeks' work will normally earn 1 credit. Formal report required. Prerequisites: FLGK 102 or FLGK 102, CLC 220, either CLC 310 (HIST 310) or CLC 311 (HIST 311), and approval of Department Chair and excavation director.

CLC 411. Studies in Classical Epic or Classical Drama.
Cr. 3. Close reading of selected epics by Homer, Apollonius, and Vergil or of selected plays by Aeschylus, Sophocles, Euripides, Aristophanes, Plautus, and Terence. Discussion of historical context, poetic technique, and the values and concerns that the works reflect. May be repeated for credit provided there is no duplication of material. No knowledge of Greek or Latin required. Prerequisite: either CLC 310 or 311 or instructor's approval.

CLC 481. Cooperative Education in Classical Civilization I.
Cr. 0.5–3. Work experience with a cooperating employer. Prerequisites: 20 credits of work in CLC, including CLC 220 and either CLC 310 or 311, and approval of Department Chair. S/U grade.

CLC 482-483. Cooperative Education in Classical Civilization II-III.
Cr. 0.5-3. Continuation of CLC 481. Prerequisites: CLC 481 and approval of Department Chair. S/U grade. May be repeated beyond 483 for additional credit.

CLC 495. Supervised Reading and Research in Classical Civilization.
Cr. 1-4. Intended for students capable of doing independent study in Classical Civilization. Scholarly paper required. Prerequisite: Consent of Department Chair.

CLC 497. Honors Work in Classical Civilization.
Cr. 3. See Honors Work, page 54.

CLC 498. Honors Candidacy in Classical Civilization.
Cr. 3. See Honors Work, page 54.

French
Major. A minimum of 27 credit hours in French beyond FLF 203 constitutes a major. Courses must include FLF 204, 211, 222, 231, and 493.

Minor. A minimum of 14 credit hours beyond FLF 203 constitutes a minor. Courses must include FLF 204 and one course from FLF 221, 222, 231, or 232.

Special Placement. Students who plan to teach French in secondary schools with a major or minor in French should consult their departmental advisor and the Education Department for specific requirements.

Teaching Programs. Students who plan to teach French in secondary schools with a major or minor in French should consult their departmental advisor and the Education Department for specific requirements.

The Roger and Hazel Guillaumant Award. See page 31 for details.

The Patterson MacLean Friedrich Scholarship. See page 31 for details.

Study Abroad Opportunities: Sorbonne Paris Program (available full year or spring semester); Paris Internship Program (available fall or spring semester). See page 23 for details; students considering study abroad should consult with the Department Chair and their academic advisor as early as possible.

FLF 101. First Semester French.
Cr. 4. Introduction to French language and culture with emphasis on understanding, speaking, reading, and writing. Refer to foreign language credit policies stated on pages 101-102.

FLF 102. Second Semester French.
Cr. 4. A continuation of FLF 101. Prerequisite: FLF 101 or equivalent.

Cr. 4. A course designed to review and refine knowledge of basic grammar, to improve aural comprehension and verbal skills through classroom and laboratory work and to introduce reading and composition. Prerequisite: FLF 102 or equivalent.

FLF 204. French Composition and Conversation I.
Cr. 4. A course designed to build communication skills and understanding of French and Francophone culture. Grammar review, composition on varied topics, extensive oral practice, reading of a novel in French. Prerequisite: FLF 203 or equivalent. May be repeated for credit at the Paris Centers or similarly accredited programs.

FLF 250. French Composition and Conversation II.
Cr. 4. A continuation of FLF 204 with work of increased complexity. Prerequisite: FLF 204. May be repeated for credit at the Paris Centers or similarly accredited programs.

FLF 221. French Literature from the Middle Ages to 1789.
Cr. 3. A survey of French literary history from the Middle Ages to the end of the 18th century with reading of representative works. Prerequisite: FLF 204.

FLF 222. French Literature from 1800 to the Present.
Cr. 3. A survey of French literary history of the 19th and 20th centuries with reading of representative works. Prerequisite: FLF 204.

FLF 231. French Civilization to 1870.
Cr. 3. A survey of French cultural history encompassing political, social, and artistic components to the beginning of the Third Republic. Prerequisite: FLF 204.

FLF 232. French Civilization from 1870 to Present.
Cr. 3. A survey of French cultural history encompassing political, social, and artistic components from the Third Republic to the present, including study of contemporary French society. Prerequisite: FLF 204.

FLF 240. French Phonetics.
Cr. 3. A study of the principles of French phonetics with special emphasis on the difficulties encountered by American students. Much practical training in the laboratory. Prerequisite: FLF 203 or equivalent.

FLF 250. Topics in French Literature and the Fine Arts.
Cr. 3. Study of selected works of French literature in English translation and of their correlates in the visual arts and/or music. No knowledge of French required. May not be counted toward a major or minor in French.

Cr. 4. French newspapers, magazines, radio, television, film, and internet are used as a basis to build more advanced language skills and to familiarize the student with modern-day France. Prerequisite: FLF 204.
Foreign Languages and Literatures

FLGR 307. Professional French. Cr. 3. A study of the French language as it is used in the international business world, including general commercial technology, correspondence, and the basic workings of French business. Prerequisite: FLG 204.

FLGR 390. Seminar in French. Cr. 3. A study of selected themes or issues in French or Francophone literature, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: one course from the following: FLG 221, 222, 231, or 232.

FLG 481. Cooperative Education in French I. Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLG 203 and approval of the Chair of the Department. S/U grade.

FLG 482-483. Cooperative Education in French II-III. Cr. 0.5-3. Continuation of FLG 481. Prerequisites: FLG 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

FLG 486. Internship in French. Cr. 1.4. Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of French. May not be applied to a major or minor in French. S/U grade only. Prerequisite: consent of the Chair of the Department.

FLG 489. The Teaching of Foreign Languages. Cr. 3. (See ED 489.) A study of the methods of teaching foreign languages in secondary schools. A field component is required. May not be counted toward a major or minor in the Department of Foreign Languages and Literatures. Prerequisite: admission to Teacher Education.

FLG 493. Senior French Seminar. Cr. 3. A senior-level capstone course which integrates knowledge and skills from previous French courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of French history, literature, culture and contemporary events. Prerequisites: senior standing and consent of the Chair of the Department.

FLG 495. Supervised Reading and Research in French. Cr. 1.4. Intended for students capable of doing independent study in French language, civilization and literature. Prerequisite: consent of the Chair of the Department.


German

Major. A minimum of 27 credit hours in German beyond FLG 203 constitutes a major. Courses must include FLG 204, 221, 222, 231, 232, and 493.

Minor. A minimum of 14 credit hours beyond FLG 203 constitutes a minor. Courses must include FLG 204 and one course from FLG 221, 222, 231, or 232.

Special Placement. Students who place directly into a course higher than level 204 need not complete level 204 but must complete all other requirements for the major or minor, including the required total of 27 credit hours (major) or 14 credit hours (minor).

Teaching Programs. Students who plan to teach German in secondary schools with a major or minor in German should consult their departmental advisor and the Education Department for specific requirements.

Valparaíso University International Engineering Program (VIEP-German). Engineering students who wish to enhance their program with German language study, study abroad, and an overseas cooperative education placement should see page 204 for details about the VIEP-German program.

Study Abroad Opportunities: Reutlingen Program (available fall or spring semester); Tübingen Program (available full year only). See page 25 for details; students considering study abroad should consult with the Department Chair and their academic advisor as early as possible.

The Walther M. Miller Memorial Prize. See page 31 for details.

Also available: Reutlingen Semester Scholarship and Tübingen Orientation Scholarship.

FLGR 101. First Semester German. Cr. 4. Introduction to German language and culture with emphasis on understanding, speaking, reading, and writing. Refer to foreign language credit policies stated on pages 101-102.

FLGR 102. Second Semester German. Cr. 4. A continuation of FLGR 101. Prerequisite: FLGR 101 or equivalent.

FLGR 203. Intermediate German. Cr. 4. A course designed to review and refine knowledge of basic grammar, to improve aural comprehension and verbal skills through classroom and laboratory work and to introduce reading and composition. Prerequisite: FLGR 102 or equivalent.

FLGR 204. German Composition and Conversation I. Cr. 4. A course designed to build communication skills and understanding of German-language culture. A grammar review, composition on varied topics, extensive oral practice, reading of a novel in German. Prerequisite: FLGR 203 or equivalent. May be repeated for credit at Reutlingen Center.

FLGR 205. German Composition and Conversation II. Cr. 4. A continuation of FLGR 204, with work of increased complexity. Prerequisite: FLGR 204.

FLGR 221. Selected Readings in German Literature to 1800. Cr. 3. Representative examples from different genres of German literature through the end of the 18th century. Prerequisite: FLGR 204.

FLGR 222. Selected Readings in German Literature since 1800. Cr. 3. Representative examples from different genres of German literature from the age of Goethe to the present. Prerequisite: FLGR 204.

FLGR 231. German Civilization to 1800. Cr. 3. A historical and interdisciplinary survey of German culture to the end of the 18th century. Prerequisite: FLGR 204.

FLGR 232. German Civilization since 1800. Cr. 3. A historical and interdisciplinary survey of German culture in the 19th and 20th centuries. Prerequisite: FLGR 204.

FLGR 250. Topics in German Literature and the Fine Arts. Cr. 3. Study of selected works of German literature in English translation and of their correlates in the visual arts and/or music. No knowledge of German required. May not be counted toward a major or minor in German.

FLGR 260. History of the German Film. Cr. 1. A survey of the German film from the 1920's to the present. No knowledge of German required. May not be counted toward a major or minor in German. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

FLGR 306. Contemporary German Language in the Mass Media. Cr. 4. German-language newspapers, magazines, radio, television, films, and internet are used as a basis to build more advanced language skills and to familiarize the student with modern-day German language countries. Prerequisite: FLGR 204.

FLGR 307. Professional German. Cr. 3. A study of the German language as it is used in the international business world, including basic commercial technology, correspondence, and the basic workings of business in German language countries. Prerequisite: FLGR 204.

FLGR 341. History of the German Language. Cr. 3. A historical study of the development of the German language. Students are introduced to the basics of linguistics, to linguistic change from Indo-European to present, and to contemporary dialect variation in German. Prerequisite: FLGR 204.

FLGR 390. Seminar in German. Cr. 3. A study of selected themes or issues in German literature, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: one course from the following: FLG 221, 222, 231, or 232.

FLGR 481. Cooperative Education in German I. Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLG 203 and approval of the Chair of the Department. S/U grade.

FLGR 482-483. Cooperative Education in German II-III. Cr. 0.5-3. Continuation of FLG 481. Prerequisites: FLG 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

FLGR 486. Internship in German. Cr. 1.4. Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of German. May not be applied to a major or minor in German. S/U grade only. Prerequisite: consent of the Chair of the Department.

FLGR 489. The Teaching of Foreign Languages. Cr. 3. (See FLG 489 and ED 489.) A field component is required. Prerequisites: admission to Teacher Education.

FLGR 493. Senior French Seminar. Cr. 3. A senior-level capstone course which integrates knowledge and skills from previous French courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of French history, literature, culture and contemporary events. Prerequisites: senior standing and consent of the Chair of the Department.

FLGR 495. Supervised Reading and Research in French. Cr. 1.4. Intended for students capable of doing independent study in French language, civilization and literature. Prerequisite: consent of the Chair of the Department.


Greek

See Classics for description of Greek concentration in Classics major and minor.

FLGK 101. First Semester Greek.
Cr. 4. A course designed to give the student the essentials needed to read ancient Greek and to provide a brief introduction to Greek literature and culture. Refer to foreign language credit policies stated on pages 101-102.

FLGK 102. Second Semester Greek.
Cr. 4. A continuation of FLGK 101 with readings from Classical and/or New Testament authors. Prerequisite: FLGK 101 or equivalent.

FLGK 203. Intermediate Greek.
Cr. 4. Reading and analysis of selections from classical and/or biblical authors with a review of grammatical forms and syntax; parallel study of pertinent aspects of Greek civilization. Prerequisite: FLGK 102 or equivalent.

FLGK 410. Greek Poetry.
Cr. 2-4. A study of a major poet, genre, or period. This course may be repeated provided there is no duplication of material. Prerequisite: FLGK 203 or equivalent.

FLGK 411. Greek Prose.
Cr. 2-4. A study of a major author, genre, or period, or of prose composition. This course may be repeated provided there is no duplication of material. Prerequisite: FLGK 203 or equivalent.

FLGK 495. Supervised Reading and Research in Greek.
Cr. 1-4. Intended for students capable of doing independent study in Greek language and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

Hebrew

Minor. A minimum of 16 credit hours in Hebrew constitutes a minor.

FLH 101. First Semester Hebrew.
Cr. 4. Elements of Hebrew grammar stressing oral and reading ability. Refer to foreign language credit policies stated on pages 101-102.

FLH 102. Second Semester Hebrew.
Cr. 4. A continuation of FLH 101, with reading of simpler prose sections of the Old Testament. Prerequisite: FLH 101 or equivalent.

Cr. 4. Selected reading of Old Testament prose and poetry, with attention to increased vocabulary and linguistic structure. Prerequisite: FLH 102 or equivalent.

FLH 495. Supervised Reading and Research in Hebrew.
Cr. 1-4. Intended for students capable of doing independent study in Hebrew language and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

Japanese

Minor. A minimum of 16 credit hours in Japanese constitutes a minor.

Study Abroad Opportunities: Kansai Gaidai Program (available fall and/or spring semesters); Osaka University International Program (available full year only).

See page 22 for details. Students considering study abroad should consult with the Department Chair and their academic advisor as early as possible.

FLJ 101. Beginning Japanese I.
Cr. 4. An introduction to the basic grammar of Japanese. Refer to foreign language credit policies stated on pages 101-102.

FLJ 102. Beginning Japanese II.
Cr. 4. A continuation of FLJ 101. Prerequisite: FLJ 101 or equivalent.

FLJ 203. Intermediate Japanese I.
Cr. 4. Reading, writing, and discussion in Japanese on the intermediate level, with a review of Japanese grammar. Prerequisite: FLJ 102 or equivalent.

FLJ 204. Intermediate Japanese II.
Cr. 4. A continuation of FLJ 203. Prerequisite: FLJ 203 or equivalent.

Cr. 3. Study of selected works of Japanese literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Japanese required. The topic Japanese Poetry and Calligraphy may be used to fulfill the Fine Arts/Fine Literature component of the General Education Requirements.

FLJ 251. Introduction to Japanese Literature.
Cr. 3. Readings of representative works of Japanese literature in English. No knowledge of Japanese required. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

FLJ 305. Advanced Japanese I.
Cr. 4. Continuation of FLJ 204. Introduction of extended prose readings. Simple conversation in everyday Japanese. Prerequisite: FLJ 204 or equivalent.

FLJ 306. Advanced Japanese II.
Cr. 4. Continuation of FLJ 305. Emphasis on syntax of prose texts; review of grammar. Conversation in everyday Japanese. Composition in the expository style. Prerequisite: FLJ 305 or equivalent.

FLJ 481. Cooperative Education in Japanese I.
Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLJ 203 and approval of the Chair of the Department. S/U grade.

FLJ 482-483. Cooperative Education in Japanese II-III.
Cr. 0.5-3. Continuation of FLJ 481. Prerequisites: FLJ 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

FLJ 488. Internship in Japanese.
Cr. 1-4. Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Japanese. May not be applied to a minor in Japanese. S/U grade only. Prerequisite: consent of the Chair of the Department.

FLJ 495. Supervised Reading and Research in Japanese.
Cr. 1-4. Intended for students capable of doing independent study in Japanese language, civilization, and literature. Research paper required. Prerequisite: consent of the Chair of the Department.

Latin

See Classics for description of Latin concentration in Classics major and minor.

Teaching Programs. Students who plan to teach Latin in secondary schools should consult the Chair of the Department and the Education Department for specific requirements.

FLL 101. First Semester Latin.
Cr. 4. A course designed to give the student the essentials needed to read ancient Latin and to provide a brief introduction to Roman literature and culture. Refer to foreign language credit policies stated on pages 101-102.

FLL 102. Second Semester Latin.
Cr. 4. A continuation of FLL 101, followed by easy selections from Latin prose. Prerequisite: FLL 101 or equivalent.

Cr. 4. A course designed to review and refine knowledge of basic grammar and syntax, to introduce reading and composition, and to study pertinent aspects of Roman life and history. Prerequisite: FLL 102 or equivalent.

FLL 204. Vergil.
Cr. 4. Readings from the works of Vergil and an introduction to Vergilian scholarship. Prerequisite: FLL 203 or equivalent.

Cr. 4. Readings in the Vulgate and in medieval prose and poetry. Prerequisite: FLL 203 or equivalent.

FLL 410. Latin Poetry.
Cr. 2-4. A study of a major poet, genre, or period. This course may be repeated provided there is no duplication of material. Prerequisite: FLL 203 or equivalent.

FLL 411. Latin Prose.
Cr. 2-4. A study of a major author, genre, or period, or of prose composition. This course may be repeated provided there is no duplication of material. Prerequisite: FLL 203 or equivalent.

FLL 489. The Teaching of Foreign Languages.
Cr. 3. (See FLF 489 and ED 489.) A field component is required. Prerequisite: admission to the Professional Semester.

FLL 495. Supervised Reading and Research in Latin.
Cr. 1-4. Intended for students capable of doing independent study in Latin language and literature. Scholarly paper required. Prerequisite: consent of the Chair of the Department.


**Spanish**

**Major.** A minimum of 27 credit hours beyond FLS 203 constitutes a major. Courses must include FLS 204, 220, 230 or 231, 321 or 322, and 493.

**Minor.** A minimum of 14 credit hours beyond FLS 203 constitutes a minor. Courses must include FLS 204 and one course from FLS 220, 230, or 231.

**Special Placement.** Students who place directly into a course higher than level 204 need not complete level 204 but must complete all other requirements for the major or minor, including the required total of 27 credit hours (major) or 14 credit hours (minor).

**Teaching Programs.** Students who plan to teach Spanish in secondary schools with a major or minor in Spanish should consult their departmental advisor and the Education Department for specific requirements.

**Study Abroad Opportunities:**
- Granada, Spain (available fall semester or for the full year but not for the spring semester);
- Puebla, Mexico Program (available spring semester only).

See pages 24 and 258 for details; students considering study abroad should consult with the Department Chair and their academic advisor as early as possible.

**FLS 101. First Semester Spanish.** Cr. 4. Introduction to Spanish language and Hispanic cultures with emphasis on understanding, speaking, reading, and writing. Refer to foreign language credit policies stated on pages 101-102.

**FLS 102. Second Semester Spanish.** Cr. 4. A continuation of FLS 101. Prerequisite: FLS 101 or equivalent.

**FLS 203. Intermediate Spanish.** Cr. 4. A course designed to improve communication and comprehension skills in Spanish, review and refine knowledge of basic grammar, broaden vocabulary and increase familiarity with Hispanic cultures. Prerequisite: FLS 102 or equivalent.

**FLS 204. Spanish Composition and Conversation.** Cr. 4. Practice in speaking, understanding, reading and writing everyday Spanish. Increased understanding of the Hispanic world through reading and discussion. Prerequisite: FLS 203 or equivalent.

**FLS 220. Selected Readings in Hispanic Literature.** Cr. 4. The reading and discussion of works of Hispanic literature representative of various literary genres, with emphasis on the techniques of literary analysis. Prerequisite: FLS 204.

**FLS 230. Spanish Civilization.** Cr. 4. A course intended to further the student's knowledge of the varied elements of Spanish history and culture. Lectures and individual oral participation in Spanish. Prerequisite: FLS 204.

**FLS 231. Spanish-American Civilization.** Cr. 4. A course intended to further the student's knowledge of the varied elements of Spanish-American history and culture. Lectures and individual participation in Spanish. Prerequisite: FLS 204.

**FLS 250. Topics in Hispanic Literature and the Fine Arts.** Cr. 3. Study of selected works of Hispanic literature in English translation and of their correlations in the visual arts and/or music. No knowledge of Spanish required. May not be counted toward a major or minor in Spanish. The topics, Spanish America in Literature and the Arts, may be used to fulfill the Fine Arts/Fine Studies/Literature and the Global Cultures and Perspectives component of the General Education Requirements.

**FLS 306. Contemporary Hispanic Society through Communications.** Cr. 4. Latin American and Spanish newspapers, magazines, radio, television, and films are used to build more advanced language skills and to familiarize the student with the modern-day Hispanic world. Prerequisite: FLS 204.

**FLS 307. Professional Spanish.** Cr. 3. A study of the Spanish language as it is used in the international business world, including writing of business letters and general commercial terminology. Prerequisite: FLS 204.

**FLS 321. Spanish Literature.** Cr. 3. A study of representative works of the literature of Spain from the Middle Ages to the present. Prerequisite: FLS 220.

**FLS 322. Spanish American Literature.** Cr. 3. A study of representative works of the literature of Spanish America from the Encounter to the present. Prerequisite: FLS 220.

**FLS 341. The Spanish Language.** Cr. 3. An introduction to the historical development of the Spanish language through the study of linguistics, phonemics and philology. Prerequisite: FLS 204.

**FLS 390. Seminar in Spanish.** Cr. 3. A study of selected themes or issues in Spanish or Spanish American literatures, language, or civilization. May be repeated for credit if the topic varies. Prerequisite: one course from the following: FLS 220, 230, or 231.

**FLS 481. Cooperative Education in Spanish I.** Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond FLS 203 and approval of the Chair of the Department. S/U grade.

**FLS 482-483. Cooperative Education in Spanish II-III.** Cr. 0.5-3. Continuation of FLS 481. Prerequisites: FLS 481 and approval of the Chair of the Department. May be repeated beyond 483 for additional credit.

**FLS 486. Internship in Spanish.** Cr. 1-4. Direct, supervised experience in a cooperating business, government agency, or service agency, involving significant use of Spanish. May not be applied to a major or minor in Spanish. S/U grade only. Prerequisite: consent of the Chair of the Department.

**FLS 489. The Teaching of Foreign Languages.** Cr. 3. (See FLF 489 and ED 489.) A field component is required. Prerequisite: admission to Teacher Education.

**FLS 493. Senior Spanish Seminar.** Cr. 3. A senior-level capstone course which integrates knowledge and skills from previous Spanish courses. Language skills (speaking, listening, writing, reading) are refined as depth and nuance are added to the understanding of Hispanic history, literature, culture, and contemporary events. Prerequisites: FLS 220, senior standing and consent of the Chair of the Department.

**FLS 495. Supervised Reading and Research in Spanish.** Cr. 1-4. Intended for students capable of doing independent study in Hispanic language, civilization or literature. Research paper required. Prerequisite: consent of the Chair of the Department.

**FLS 497. Honors Work in Spanish.** Cr. 3. See Honors Work, page 54.

**FLS 498. Honors Candidacy in Spanish.** Cr. 3. See Honors Work, page 54.
Geography and Meteorology

Professor Janke; Associate Professors Kilipinen (Chair), Wolf; Assistant Professors Bais-Eisholz, Longan, Min; Instructor Clark.

Geography

Geography is a diverse subject that provides students with a strong, practical liberal arts education and offers a wide variety of employment opportunities. The diversity of the discipline stems from its fundamental concern with how humans as individuals and in groups interact with the physical environment.

The Department's two major objectives are:
1. To provide students with knowledge of the physical environment and human use of that environment;
2. To equip students with marketable skills for employment positions related to the discipline or to prepare them for graduate programs leading toward advanced degrees.

While graduate training usually enlarges a student's opportunities, employment may be found upon graduation with a baccalaureate degree and a geography major. The following are some of the fields of employment for geography majors: cartography, demography, climatology, industrial location planning, land use planning, soil conservation, transportation planning, and teaching of resource management.

Student interested in geography outside the classroom is encouraged through the Geographical Society, which organizes social activities as well as cultural programs. In addition, those who distinguish themselves by high scholarship may be elected to membership in Gamma Theta Upsilon, the international geographic honor society. The Alpha Xi Chapter of Gamma Theta Upsilon was installed at Valparaiso University in 1950.

Valparaiso University, with over 125,000 maps, is the only map repository of the Army Map Service and the United States Geological Survey in Northwest Indiana. Annually thousands of national, regional and topographic maps of all continents are received.

Major. A minimum of 30 credit hours in geography chosen by the student in consultation with the Chair of the Department constitutes a major. Two 100-level, two 200-level, and four 300-level or higher courses must be included.

Within the geography major, students may focus their studies further by selecting one of the following concentrations: Cartography and Geographic Information Systems (GIS), Environmental Geography, Urban Geography and Regional Planning, and Human/Cultural Geography. The Department maintains detailed information sheets on these concentrations, including course listings, internship recommendations, and career options. Contact the Chair of the Department for details.

Minor. A minimum of 16 credit hours in geography, chosen by the student in consultation with the Chair of the Department, constitutes a minor. One 100-level, one 200-level, and two 300-level or higher courses must be included.

American Indian Studies Minor. A minimum of 16 credit hours is required for the minor and must include at least one 100-level geography course and at least six credit hours from the following courses: GEO 200, 274 and 490, and six additional credit hours selected from GEO 385, 474, and 486.

Because geography offers undergraduate students excellent opportunities to develop their professional skills through course work, field study, and internships, the Department maintains information sheets on geography as a second major or minor tailored specifically to disciplines such as biology, civil engineering, business, foreign language, history, sociology/anthropology, and political science.

The new Kallay Laboratory was designed to facilitate research and teaching in the area of computerized geographic analysis, including GIS, remote sensing, and cartography. Other courses analyzing ethnic relations and global cultures will strengthen student interests in the humanities and social sciences. Contact the Chair of the Department for more information or visit the Department's web page at <http://www.valpo.edu/geomet/>.

Meteorology

The meteorology course of study at Valparaiso University leads to a Bachelor of Science degree in Meteorology. The science of meteorology draws heavily on the fields of mathematics, physics, computer science, and chemistry. As such, students considering a Bachelor of Science option should possess a strong mathematics and science background. The local chapter of Chi Epsilon Pi meteorology honor society promotes excellence and further training in meteorology.

The job market in meteorology is as rich and diverse as the field itself. A majority enter the job market with airlines, private forecasting and environmental consulting firms, or the National Weather Service. Others pursue professional opportunities with the U.S. Air Force through the University’s Air Force ROTC program (see page 234). Still others pursue careers in research and academia, which require graduate training. Valparaiso University graduates have gone on to many of the finest graduate meteorology programs in the country.

Broadcast meteorology represents another promising career sector, and several recent graduates from our Department have achieved success in this field. There is considerable demand nationwide for trained meteorologists able to communicate meteorological information effectively and accurately, either through the broadcast media (cable, television, and radio) or in association with various consulting firms.

Students for this field through hands-on training and experience in broadcasting in the new television weather studio in Schnabel Hall and through internships at a variety of broadcast stations across the country, including WGN-TV in Chicago. Those interested in careers in broadcast meteorology should complete a Television-Radio Minor through the Department of Communication (see page 74) from among the following courses, in addition to the Bachelor of Science degree in meteorology:

- COMM 100 Survey of Communication Fields
- COMM 198 Nonlinear Video Editing
- COMM 250 Radio and Audio Production
- COMM 250 Introduction to Broadcast Production
- COMM 490 Introduction to Broadcast Production
- COMM 380 Television Producing and Directing
- COMM 385 Television Field Production

Students interested in extracurricular learning opportunities are encouraged to participate in the National Weather Association chapter and VSIT program and avail themselves of the program's field course opportunities, including the Severe Convective Storm Field Studies. Internships and cooperative education experiences are also available to qualified students. The department maintains a well-equipped weather center with instrumented tower, MciDAS-X, GEMPAK, and Doppler radar data available.

Major. A minimum of 32 credit hours constitutes a major in meteorology for the Bachelor of Science degree. For this meteorology program, students are required to take MET 103, 215, 216, 369, 372, 373, 480, 481, and one course from 279, 319, 330, or 490. The meteorology major must also take PHY 141, 141L, 142, and 142L, (MATH 131 and 132) or (MATH 151 and 152), MATH 234, and MATH 263. Students must maintain a minimum cumulative grade point average of 2.50 in all Valparaiso University meteorology courses and those mathematics and physics courses required for meteorology to remain in the major. Students will be reviewed initially at the end of their second semester on campus, and each semester thereafter.

Minor. A minimum of 17 credits in meteorology constitutes a minor. This must include the following meteorology courses: MET 103, 215, 216, 369, and 372.

Geology

The Valparaiso University-Indiana University Northwest Geography and Geology Association (VIGGA) Major in Geology. The purpose of this association is to provide educational opportunities at the undergraduate level in the geological and geographical sciences to the students enrolled at Valparaiso University and Indiana University Northwest, Gary. Since the school year of 1970-1971, full-time undergraduate students in these academic disciplines have been permitted to enroll in Association courses under the following conditions:

1. Students may take a maximum of two courses per semester at the other participating institution.
2. These courses are treated as part of the student's normal load at the home institution and tuition and fees are levied accordingly.
3. The total number of credit hours to be taken, determined by the student's home institution.
4. Students who wish to take courses at the host institution should obtain the recommendation of the Chair of the Geography Department (VU).
5. Grades earned shall be recorded at the student home institution.
6. A C or 2.00 average must be achieved on VIGGA courses to qualify the student to register for courses at the host institution in the following semester.

Association students at Valparaiso University are expected to complete satisfactorily the following curriculum from course offering at Valparaiso University and Association offerings at Indiana University Northwest in order to complete the major in Geography. Degrees are awarded by the home institution.

### GEOGRAPHY

**GEO 101. World Human Geography**
Cr. 3. A topical emphasis is given to many themes and subfields of human geography, especially population, economic, cultural, urban, and political geography. Examples highlight these themes drawn from relevant contemporary events in both the industrialized and developing worlds. This course may be used to fulfill a part of the Social Analysis component of the General Education Requirements.

**GEO 102. Globalization and Development**
Cr. 3. A regional survey of the developing countries, with an emphasis on their economic, social, and political development in the context of ongoing global interconnectedness. The course will explore issues of colonization, cultural change, ethnic conflict, and environmental degradation. This course may be used to fulfill a part of the Social Analysis component and the Global Cultures and Perspectives component of the General Education Requirements.

**GEO 104. Geomorphology**
2+4, Cr. 4. The scientific analysis of natural processes and human impacts affecting the development of landscapes on the earth and other planets. Emphasis is given to the relationships of geologic, climatic, hydrologic, and biological cycles in creating and reshaping landforms. Field trips. This course may be used to fulfill four credit hours of the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

**GEO 200. American Ethnic Geography**
Cr. 3. An analysis of the rich ethnic diversity of the United States, including the immigration and settlement of each of the major cultural groups and their physical expression on the North American landscape. Topical themes include language, religion, politics, and urban imprints. This course may be used to fulfill a part of the Social Analysis component and the U.S. Diversity component of the General Education Requirements.

**GEO 201. Economic Geography**
Cr. 3. An analysis of the location of economic activities as parts of a system. Prerequisite: Sophomore standing or above. This course may be used to fulfill a part of the Social Analysis component of the General Education Requirements.

**GEO 204. National Parks**
Cr. 3. A study of geographic concepts, both physical and cultural, of many national park areas, including all of the 55 national parks, many national monuments, and other areas controlled by the park system. Required four-day field trip during the fall break to Mammoth Cave National Park.

**GEO 210. Current Themes in Geography**
Cr. 1-3. This course is designed to examine current geographic topics. These may include American minority settlement patterns and communities, environmental policies and programs associated with the global environment. May be repeated when the topic is different. The three-credit course extends throughout the semester, the two-credit course for seven weeks.

**GEO 215. Introduction to Geographic Information Systems**
2+2, Cr. 3. An introduction to the theory and practical use of geographic information systems. These powerful research tools combine computer mapping and databases to provide diverse combinations of spatial information and modeling capabilities to enhance decision-making processes and planning. GIS usage is also highly multidisciplinary; the class may be of interest to students of several other programs such as computer engineering, biology, business, health sciences.

**GEO 225. Cartography**
2+2, Cr. 3. An introduction to cartographic history and techniques and the composition and construction of maps, with a focus on the contributions of both manual and computerized techniques to modern map design.

**GEO 230. Remote Sensing**
Cr. 3. An introduction to the fundamentals of earth analysis in geography and meteorology using digital and photographic data acquired by a variety of aircraft and satellite sensors. Topics include image interpretation and processing, photogrammetry, change analysis, and environmental monitoring. May be of interest to students in biology, environmental science and civil engineering.

**GEO 260. Environmental Conservation**
Cr. 3. Study of American and international resource problems and environmental issues; the institutions and attitudes involved and solutions for correcting them.

**GEO 274. North American Indian on Film**
Cr. 2. Through analysis of films, novels, and other forms, this course helps us to understand distinctive features of Native American life as understood by Native Americans. This course provides an introduction to Native American cultures and examines the strategies used to maintain their identities, and provides insights into their values and religious beliefs. May be used to fulfill the U.S. Diversity component of the General Education Requirements.

**GEO 301/501. Regional Geographies of the World**
Cr. 3. A geographic interpretation of the environmental, cultural, political, and economic patterns of one of the world's major regions, such as the United States and Canada, Latin America, Europe, Asia, or Africa. May be repeated for credit when the regional offering is different. Certain regional offerings may satisfy the Global Diversity component of the General Education Requirements. Prerequisite: junior standing or consent of the Chair.

**GEO 318. Field Study in European Geography**
Cr. 3. Overseas Study Program only.

**GEO 320. Urban Geography**
Cr. 3. A course treating urban settlements as distinct geographic units. Topics covered include the history of urban settlement, economic classification of cities and patterns of urban land use. Field trip. Prerequisite: junior or senior standing.

**GEO 321. Urban and Regional Planning**
Cr. 3. A course treating the nature, purposes and objectives of modern community planning for the promotion of social and economic well-being. Field trip. Prerequisite: junior or senior standing.

**GEO 361. Research Design**
Cr. 3. A course in the methods of research. Each time the course is offered, a different topic is selected for examination. Normally topics deal with current problems of Northwestern Indiana. The result of this course may subsequently contribute to the solution of the problem studied. Prerequisite: junior or senior major or permission of the instructor.

**GEO 385/585. Field Study**
0-4, Cr. 1-3. A course designed to develop methods of research and field work. May include a week of intensive work at a field site at a time when University is not in session, possibly in late summer. Additional fees may be charged to cover expenses. Prerequisite: consent of the Department Chair.

**GEO 415/515. Advanced Geographic Information Systems**
Cr. 3. A course in design and execution using GIS. Students will enhance their knowledge of GIS packages and advanced operations while researching a topic or problem. Individual and/or class projects will also focus on designing research for GIS. Prerequisite: GEO 215.

**GEO 470/570. Political Geography**
Cr. 3. An investigation of the relations among political activities and organizations and the geographic conditions within which they develop. A political geography course is offered in spring semester. Prerequisite: GEO 215.

**GEO 474/574. Historical Geography of the United States**
Cr. 3. A regional treatment of the exploration, colonization, territorial expansion, migration, transportation, settlement and economic development in the United States.
Geography and Meteorology

development of our country in relation to the physical environment. Course is primarily designed for students majoring in one of the social sciences. Prerequisite: junior or senior standing. May be of particular interest to history majors.

GEO 486. Internship in Geography.
Cr. 1-6. Students gain experience by working in public or private agencies, such as planning firms, national parks and map companies. Prerequisites: geography major or minor and consent of internship coordinator. S/U grade only.

GEO 490/590. Selected Topics in Geography.
Cr. 1-3. Advanced studies in geography. Topics as landform analysis, human environmental impact, biogeography, environmental management, and international business are considered. May be repeated when the topic is different. Prerequisites: junior or senior standing.

GEO 495. Independent Study.
Cr. 1-4. Individual research readings on a topic in geography agreed upon by a student and a faculty member of his/her choice from the Department. Prerequisites: junior or senior standing and consent of the Chair of the Department.

GEO 497. Honors Work in Geography.
Cr. 3. See Honors Work, page 54.

GEO 498. Honors Candidacy in Geography.
Cr. 3. See Honors Work, page 54.

METEOROLOGY

MET 103. Meteorology.
2+4, Cr. 4. An introductory course providing a general overview of atmospheric science with emphasis on midlatitude cyclones and anticyclones, air masses, atmospheric stability, precipitation processes and convection. This course may be used to fulfill four credit hours of the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

MET 216. Climatology.
2+2, Cr. 3. A study of the scope and controls of climate and an investigation at the global, regional and local scales. Included are climate classification, climate models and climate change. Prerequisite: MET 103 or consent of the instructor.

MET 216. Introduction to Meteorological Observation and Analysis.
Cr. 3. Introduces the student to upper-air, surface and radar observation codes; elementary techniques of surface and constant pressure map analysis; case studies of various examples. Introduction to atmospheric observing systems, emphasizing those being phased in by the National Weather Service, including conventional and Doppler radar, satellite interpretation, wind profiler systems, ASOS, and McIDAS. Prerequisite: MET 103 and MATH 131 or 151.

MET 279. Severe Storm Prediction and Nowcasting.
Cr. 3. Introduces the student to the structure of supercell and multicell thunderstorms and tornadoes, as well as their synoptic or mesoscale environments. Examines current methods of forecasting convective weather systems. Prerequisite: MET 216.

MET 290. Topics in Meteorology.
Cr. 1-3. Seminar in selected meteorological topics appropriate for more intensive investigation at the intermediate level, with an emphasis on the relationship between meteorology and other disciplines. Topics may include remote sensing, natural hazards, and meteorology in the humanities or social sciences. May be repeated for credit if the topic is different. Prerequisite: MATH 103 or consent of instructor.

MET 319. Tropical Meteorology.
Cr. 3. Introduction to the synoptics and dynamics of tropical weather systems, including their interaction with and influence on the global circulation. Topics include oceanic current systems, monsoons, tropical cyclones, ENSO, and local/mesoscale circulations. Prerequisite: MET 216 and MATH 131 or 151.

Cr. 3. An introduction to computing in an atmospheric science context. FORTRAN programming in Windows and UNIX environments is used to analyze meteorological processes such as convention, advection, phase changes, etc. Additional programming languages may be included as appropriate. Prerequisite: MATH 110 or higher.

MET 368/568. Atmospheric Thermodynamics.
Cr. 3. Survey of the atmospheric system, including basic characteristics and variables; radiation thermodynamics; vertical temperature structures; stability concepts and evaluation; physics of clouds and precipitation processes. Prerequisites: MATH 253 and MET 216.

MET 372/572. Atmospheric Dynamics I.
3+2, Cr. 4. A general survey of the fundamental forces and laws that govern atmospheric processes, particularly those motions associated with weather and climate. Emphasis is on the applications of the basic equations of motion, atmospheric thermodynamics, gradient and geostrophic flow, and the general circulation. Prerequisites: MATH 253 and MET 216.

MET 373/573. Atmospheric Dynamics II.
3+2, Cr. 4. Second semester dynamics course emphasizing quasi-geostrophic dynamics; wave motions, barotropic and baroclinic instabilities; cyclones, air masses, fronts and frontogenesis, various development theories; cyclone climatologies, jet streaks, and secondary thermal circulations. Laboratory case studies and exercises. Prerequisite: MET 372.

MET 385/585. Field Study in Meteorology.
0+4, Cr. 3. Field work emphasizing aspects of meteorological analysis and forecasting. Topics include severe storm prediction, spotting and interception and aviation meteorology. May be repeated for credit if the topics are different. Additional fees charged to cover expenses.

MET 480/580. Synoptic Scale Analysis and Forecasting.
3+2, Cr. 4. An introductory course providing an overview of atmospheric science context. Emphasizes case studies of various topics, including land-sea breezes and lake effect snow; downslope flows; synoptic setting for severe weather; atmospheric stability; analysis and forecasting procedures; convection theory; thunderstorm models, isolated convective systems, organized convective systems and tornadoes; atmospheric discontinuities; drylines, outflow boundaries, fronts; introduction to atmospheric observing systems. Prerequisite: MET 480.

MET 486/586. Internship in Meteorology.
Cr. 1-6. Students gain experience by working in National Weather Service offices, government laboratories, private consulting firms, or media and broadcasting stations. Prerequisites: meteorology or broadcast meteorology major and consent of internship coordinator. S/U grade only.

MET 490/590. Selected Topics in Meteorology.
Cr. 1-3. Advanced studies in applied and theoretical meteorology. Topics such as weather systems analysis, micrometeorology and atmospheric observing systems may be considered. May be repeated when topics different. Prerequisites: MET 216 and consent of instructor.

MET 495. Independent Study.
Cr. 1-3. Individual research readings on a topic in meteorology agreed upon by a student and a faculty member of his/her choice from the Department. Prerequisites: junior or senior standing and consent of the Chair of the Department.

MET 497. Honors Work in Meteorology.
Cr. 3. See Honors Work, page 54.

MET 498. Honors Candidacy in Meteorology.
Cr. 3. See Honors Work, page 54.
History

Professors Austensen, Berg, Rubchak; Associate Professors Schaefer (Chair), Seguin; Assistant Professors Bloom, Martinez, Whitefield.

One of the central disciplines of the traditional liberal arts, history is concerned with understanding the development of societies and cultures which produced the world as we know it. The historian operates under the assumption that the past is of fundamental importance in today's decision-making, and in formulating tomorrow's dreams. History provides a solid major for those with career goals in law, teaching, journalism, government and the ministry. Combining a history major with a Liberal Arts Business Minor has proved to be a popular alternative for those who have strong interests in history and who plan to pursue a business career. Since the history student integrates materials from the social and behavioral sciences, literature, philosophy, religion and the arts, history is also a field for students who view the undergraduate years as a time to explore a variety of subjects.

Major. A minimum of 30 credit hours in history constitutes a major. Courses must include HIST 200, 210, and 493. Twelve hours of the major must be taken in courses numbered 300 or above in addition to those listed; for these twelve hours the student must elect at least one course in each of the following fields:

- History of the Americas, European history, Non-Western history
- Students who plan on graduate work in history are strongly urged to acquire reading proficiency in at least one modern foreign language

Minor. A minimum of at least 18 credit hours in history constitutes a minor. Courses must include HIST 200 and 210. Nine of the remaining hours must be in courses numbered 200 or above, one course from each of the three fields listed under the major.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in history leads to the Bachelor of Arts degree.

Pre-Law Students. Prelaw students who are taking a major in history should consult the advisor about appropriate course selections and about the selection of a second major or a minor.

Credit by Examination. Credit for HIST 200 and 210 may be earned through the College Level Examination Program subject examination in Western Civilization or through the Advanced Placement Examination offered by the College Entrance Examination Board. Credit for HIST 220 and 221 may be earned through the College Level Examination Program subject examination in American History or through the Advanced Placement Examination offered by the College Entrance Examination Board.

Approval of Schedules. Students taking a major or minor in history must have their schedules approved by the Chair of the Department each semester. In addition, each class of majors is assigned to a member of the Department for advising.

Note: The survey courses, HIST 200 through 250, may be used to fulfill the Philosophical and Historical Studies component of the General Education Requirements. HIST 222, 240, 242, and 250 may be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

HIST 200. Development in Western Culture through the Ages.
Cr. 3. A study of the social, intellectual, cultural, and political history of the Western world from ancient Greece to the eve of World War I.

Cr. 3. A survey of modern Western and non-Western history. Particular emphasis is placed on the development of the various world civilizations in recent centuries and on the interaction that has occurred among them.

Cr. 3. A survey of Europe in the Middle Ages with particular emphasis on feudalism, chivalry, religion and religious persecution, early state formation, and the Black Death.

HIST 220. The American Experience to 1877.
Cr. 3. A survey of American history from the Columbian exchange through the end of Reconstruction, with emphasis on cultural contact, democratic ideals and realities, western expansion, and sectional conflict.

Cr. 3. A survey of American history from Reconstruction to the present, with emphasis on industrialization, reform movements, immigration, civil rights, and global wars.

HIST 222. Alternative Perspectives of United States History.
Cr. 3. An examination of oppression, resistance, and identity formation in African American, American Indian, Latino, or Asian American culture. This course may be repeated for credit if the selected subjects are different. Although history majors may take any number of these courses, they may include no more than two in a thirty-hour major.

Note: The courses listed below require at least sophomore standing or consent of the Chair of the Department.

EUROPEAN HISTORY

HIST 304/504. European Imperialism and the Colonial Experience.
Cr. 3. A study of European theories of imperialism will be investigated as they were implemented in specific colonies throughout the Americas, Africa, Eurasia, and Asia. Particular attention will be given to the historical and psychological experience of being colonial master or servant by drawing on film, novels, and post-colonialist literature. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

HIST 310/510. Greek Civilization.
Cr. 3. Also offered as HIST 310. A study of Greek civilization from the late Bronze Age through the Hellenistic period, with emphasis on political, social, and cultural developments.

HIST 311/511. Roman Civilization.
Cr. 3. Also offered as HIST 311. A study of Roman civilization from the 8th century B.C. to the Council of Nicaea in A.D. 325, with emphasis on political, social, and cultural developments. No knowledge of Greek or Latin required.

HIST 400. Introduction to East Asian Culture.
Cr. 3. An exploration of the main political, social, and cultural values in traditional China, Japan, Korea, and Vietnam and of the ways that they flourish today. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

HIST 402. African History and Society.
Cr. 3. A survey of pre-colonial and colonial African history that highlights the diversity of African societies. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

HIST 404. Latin American History.
Cr. 3. A study of Latin American history, encompassing indigenous civilizations, the Spanish colonial period, and national histories, with emphasis on enduring colonial patterns in the region's government, economy, gender and race issues, and church-state relations. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

Cr. 3. A study of world history, 1300-present, examining the major developments and themes and institutions of the modern world.

HIST 408. Modern World.
Cr. 3. An examination of modern German history emphasizing selected problems. Reutlingen Center.

HIST 410. History of Modern Europe.
Cr. 3. A survey of European history from the French Revolution to the present, with emphasis on political, social, and cultural developments. No knowledge of French or Latin required.

HIST 412. History of Modern Europe.
Cr. 3. Also offered as THEO 320/520. A study of the political, socioeconomic and religious conditions in Europe during the Reformation movements of the sixteenth century, with emphasis on popular piety, gender relations, and missionary activity.

HIST 413. History of Modern Britain.
Cr. 3. An overview of British history from the Glorious Revolution to the present. Particular attention is given to industrialization, sex and gender in the Victorian era, social reform, imperialism, Anglo-Irish relations, and World Wars I and II.

HIST 415. Contemporary Europe: Century of Violence.
Cr. 3. A study of twentieth-century Europe, with emphasis on relations between Nazi Germany and Europe, including the USSR and the United

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HIST 316/516. The Great Witchcraft Delusion. Cr. 3. A study of the social, cultural, economic, religious, and political causes of the early modern European witch hunt. It includes the formation of the concept of witchcraft, the systematization of beliefs, and methods of persecution.

HIST 319/519. Imaging Revolution in Modern Russia. Cr. 3. Visual and literary representation of twentieth century Russia supplemented by historical narrative. It begins with the Russian Revolution, moves through the "Stalin Revolution," to the demise of Stalin himself.

HIST 460/560. The Old Regime and the French Revolution. Cr. 3. A detailed study of the causes and effects of the French Revolution. Topics discussed include the Enlightenment, social conditions, the monarchy, human rights, and the Napoleonic Era. Seminar discussions will be based on both primary and secondary source readings.

HISTORY OF THE AMERICAS

HIST 320/520. Colonial America. Cr. 3. A detailed study through readings and discussion of the major issues in colonial life. Topics will range from contact with Native Americans, to the Salem witch trials, to the origins of slavery. Students will examine European settlement patterns in the four regions of British North America, including family, religious, and political life. The course will conclude by studying the social, military, and political strain placed on colonial institutions by the Seven Years' War.

HIST 321/521. The American Revolution, 1763-1789. Cr. 3. A detailed study through readings and discussion of the unresolved conflicts between Great Britain and her American colonies; the political, military and social aspects of the revolution; and the postwar problems culminating in the adoption of the Constitution.

HIST 322/522. Slavery, Abolitionism and Sectionalism, 1815-1860. Cr. 3. A detailed study through readings and discussion of the institution of slavery, the growth of abolitionism and other reform movements, and the development of sectionalism leading to the outbreak of the Civil War.

HIST 323/523. Civil War and Reconstruction. Cr. 3. A study of the great watershed conflict in American history, with special emphasis on the problems of Black Americans.

HIST 324/524. Depression and War: The United States, 1929-1945. Cr. 3. This course examines the nature of the Great Depression and its effects on the relationship of government to citizens in the United States. It also traces the European and Far Eastern origins of the American involvement in World War II as well as the diplomatic and military conduct of that war.


HIST 331/531. Ideas and Power in Latin American History. Cr. 3. A study of the relationship between ideas and power in Latin America. Using primary sources and important works that have conditioned the way Latin Americans view their world, the course looks at the intellectual impact of the European discovery of America, the nature of the new world, the nineteenth century idea of progress, and the significance of modernism, indigenismo, Marxismo, anarcho-syndicalism, and liberation theology. May be used to fulfill the Global Cultures and perspectives component of the General Education Requirements.

HIST 394/594. Beats and Hippies. Cr. 3. A study of the nature of post-War II American culture through the examination of a cross section of its critics. Course materials include writings of poets, novelists, essayists, and journalists as well as collections of photos, documentaries, and commercial films.

NON-WESTERN HISTORY

HIST 341/541. Revolution and Its Roots: The Making of Modern China. Cr. 3. A study of the decline of traditional civilization resulting from domestic crises and foreign pressures, and the search for a new orthodoxy in the Chinese revolution. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

HIST 342/542. Tragedy and Triumph: The Making of Modern Japan. Cr. 3. A study of Japan's rise to its position as a world power, the tragedy of the war period, and its triumph as an economic power in the postwar world. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.


HIST 355. Modern Middle Eastern History. Cr. 3. A retrospective look through documents, films, and literature at the history of the region beginning with the rise of Islam and the legacy of early splinter movements that profoundly impact twentieth century history. Particular attention is given to the breakup of the Ottoman Empire and the rise of Zionism in order to contextualize the Arab-Israeli conflict. Lastly, individual countries are studied to understand the awakening of the Middle East's influence on international affairs. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

SPECIALIZED OFFERINGS

HIST 386. Internship in History. Cr. 3. Students gain experience working for an organization that utilizes historical applications. Such organizations might include historical museums and historical parks. Prerequisite: junior standing and application in writing to department chair a semester in advance.

HIST 390/590. Topics in History. Cr. 3. A study that covers a particular, large subject in history (e.g., a period or a field), selected according to student interest and instructor choice. This course may be repeated for credit if topics are different. Although history majors may take any number of these courses, they may include no more than two in a thirty-hour major.

HIST 393/593. History through Film. Cr. 3. A study of the relationship among history, film, and theory in a specific geographical and chronological context. This course may be repeated for credit if the selected subjects are different. Although history majors may take any number of these courses, they may include no more than two in a thirty-hour major.

HIST 489. The Teaching of Social Studies. Cr. 3 (See ED 489.) A study of methods of teaching social studies in secondary schools. A field component is required. Prerequisite: Admission to Teacher Education. This course may not be counted toward a major or minor in the Department.

HIST 492/592. Reading and Discussion Seminars. Cr. 2-3. Full- or half-semester courses cover a variety of subject areas with subtitles and content dependent on student interest and instructor choice. In recent years these have included Slavery in the Americas, History of the American South, American Environmentalism, Pearl Harbor, American Immigration History and Cuban Revolution. This course may be repeated for credit if topics are different. Prerequisite: junior or senior standing or consent of the Chair of the Department.

HIST 493. Research Seminars. Cr. 3. These are full-semester courses designed for majors, but also open to other students with junior or senior standing. They offer intensive research in both primary and secondary sources and instruction in historical methodology. A major paper constitutes the largest part of the semester's work. This course may be repeated for credit if topics are different. Prerequisite: history major with junior or senior standing. Offered in the fall semester only.

HIST 495. Supervised Study. Cr. 2-3. An opportunity for students to read a number of significant works on a given topic in history, or to do research and write a major paper on a topic not covered in any scheduled offering of the Department. Open to students who have taken at least eighteen credit hours of history and who have obtained the prior consent of both the instructor and the Chair of the Department. This course may be taken only once from a given instructor, only once per subject area and only once for a thirty-hour major.


International Economics and Cultural Affairs

**Administrative Committee:**
Professor Trost (Political Science); Associate Professors Ames (Foreign Languages and Literatures, Chair), Duvick (Foreign Languages and Literatures), Kilpinen (Geography and Meteorology); Assistant Professors Kavanagh (Foreign Languages and Literatures), Malchow (Foreign Languages and Literatures), Martinez (History), Raman (Economics).

Students who complete the International Economics and Cultural Affairs Program will have fulfilled major area requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

**Objectives.** This interdisciplinary program, with a focus on Europe, Latin America, or Asia, is designed to provide essential background for students considering careers in the fields of international commerce or government service. To implement this goal, it provides a foundation in a modern language and the culture and customs of those who speak it, instruction in international economics, and a survey of appropriate areas of geography, history, and political science. Students interested in pursuing the International Economics and Cultural Affairs Program should confer with the Chair of the Administrative Committee.

Qualified students are encouraged to consult the following Cooperative Education courses: FLF 481, FLGR 481, FLJ 481, or FLS 481.

**Requirements.** A minimum of 54 credit hours in courses approved by the Administrative Committee. Courses must include Foreign Language and Literature, 17-18 credit hours beyond course number 203 (or 19 credit hours in Japanese or 19-21 credit hours in Chinese); Economics, 15 credit hours; appropriate courses in Geography, History, and Political Science, 18 credit hours. See course listing below.

A senior seminar of one credit (IECA 493) in the fall semester is followed in the spring semester of the senior year by a senior research project earning 3 credits (IECA 495). Honors Work may be undertaken in International Economics and Cultural Affairs with appropriate approval. Students should register for Honors Work in International Economics and Cultural Affairs (IECA 497), and Honors Candidacy in International Economics and Cultural Affairs (IECA 498). One may apply for Honors Work on a major or minor, or a major and minor. See Honors Work, page 54.

Any departmental major or departmental minor may be added to the International Economics and Cultural Affairs program, with the exception of an Economics minor and a Foreign Language minor.

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**Foreign Language and Literature**

Choose one of the following language options:

**CHINESE**

FLC 101 Beginning Chinese I or EAST 109 Intensive Elementary Chinese (Course B) 4-5 Cr.

FLC 102 Beginning Chinese II or EAST 110 Intensive Elementary Chinese: Conversation 4-6 Cr.

FLC 202 Intermediate Chinese I or EAST 209 Intensive Intermediate Chinese 4-6 Cr.

FLC 204 Intermediate Chinese II or EAST 210 Intensive Intermediate Chinese: Conversation 4-6 Cr.

FLJ 250 Topics in Japanese Literature and the Fine Arts or FLJ 251 Introduction to Japanese Language or EAST 395 Chinese Culture and Civilization 3 Cr.

**FRENCH**

FLF 204 French Composition and Conversation I 4 Cr.

FLF 232 French Civilization from 1870 to the Present 3 Cr.

FLF 250 Topics in French Literature and the Fine Arts or FLF 222 French Literature from 1800 to the Present 3 Cr.

FLF 306 Contemporary French Language and Communication 4 Cr.

FLF 307 Professional French 3 Cr.

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**GERMAN**

FLGR 204 German Composition and Conversation I 4 Cr.

FLGR 232 German Civilization since 1800 3 Cr.

FLGR 250 Topics in German Literature and the Fine Arts or FLGR 222 Selected Readings in German Literature since 1800 3 Cr.

FLGR 306 Contemporary German Language in the Mass Media 4 Cr.

FLGR 307 Professional German 3 Cr.

**JAPANESE**

FLJ 101 Beginning Japanese I 4 Cr.

FLJ 102 Beginning Japanese II 4 Cr.

FLJ 203 Intermediate Japanese I 4 Cr.

FLJ 204 Intermediate Japanese II 4 Cr.

FLJ 280 Topics in Japanese Literature and the Fine Arts or FLJ 261 Introduction to Japanese Literature 3 Cr.

**SPANISH**

FLS 204 Spanish Composition and Conversation 4 Cr.

FLS 230 Spanish Civilization or FLS 231 Spanish-American Civilization 4 Cr.

FLS 250 Topics in Hispanic Literature and the Fine Arts 3 Cr.

FLS 306 Contemporary Hispanic Society Through Communications 4 Cr.

FLS 307 Professional Spanish 3 Cr.

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**ECONOMICS**

ECON 221 Principles of Economics-Macro 3 Cr.

ECON 222 Principles of Economics-Micro 3 Cr.

ECON 236 Comparative Economic Systems 3 Cr.

ECON 326 International Economics 3 Cr.

ECON 336 Economics of Developing Nations 3 Cr.

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**POLITICAL SCIENCE**

POLS 130 Comparative Politics 3 Cr.

POLS 200 International Relations 3 Cr.

POLS 330 Politics of Industrialized States 3 Cr.

POLS 335 Politics of Developing States 3 Cr.

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**HISTORY**

HIST 232 Survey of Latin American History 3 Cr.

and one of:

HIST 331 Ideas and Power in Latin American History 3 Cr.

HIST 390 Topics in History (when topic is Latin America) 3 Cr.

or

HIST 210 The World in the Twentieth Century 3 Cr.

HIST 318 Contemporary Europe: Century of Violence 6 Cr.

or

HIST 341 Revolution and Its Roots: The Making of Modern China 6 Cr.

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**IECA 495. Internship.**

Cr. 1-4. Direct, supervised experience in a cooperating business, government agency, or service agency, abroad or in the United States. Prerequisite: consent of the Chair of the Program.

**IECA 493. Senior Seminar.**

Cr. 3. Senior majors write a major research paper on a topic identified in IECA 493. Senior Seminar. Prerequisite: IECA 493, and senior standing or consent of the Chair.

**IECA 495. Senior Independent Research Project.**

Cr. 3. Senior IECA majors write a major research paper on a topic identified in IECA 493. Senior Seminar. Prerequisite: IECA 493, and senior standing or consent of the Chair.

**IECA 497. Honors Work in International Economics and Cultural Affairs.**

Cr. 3. See Honors Work, page 54.

**IECA 498. Honors Candidacy in International Economics and Cultural Affairs.**

Cr. 3. See Honors Work, page 54.
International Service

Administrative Committee: Professor Trost (Political Science); Associate Professors Evans (Biology), Kilippen (Geography and Meteorology, Chair), Schaefer (History).

Students who complete the International Service Program (15-20 credits) will have fulfilled major area requirements for the Bachelor of Arts degree under the Interdisciplinary Program Option.

Objectives. This interdisciplinary program is designed for students considering careers with international humanitarian and development organizations and agencies or students who wish to equip themselves for international service as they prepare for a different primary career. It provides background in the concept of service, in social policy and global issues, and in the learning and practice of service.

Program requirements. A minimum of 50 credit hours in courses approved by the Administrative Committee. Courses must include the Introductory Courses (6 credit hours), the Service Learning Core (3 credits of Political Science, 6 credits of Social Work and 8 credits of Theology), the Regional Emphasis (7-8 hours of Foreign Language beyond course numbered 102 or 202, 12 credits in one Area Studies concentration), and the Support Core (6 credit hours). See course listing below. Additional regional or support core courses may be approved by the Chair on an ad hoc basis.

Majors are required to do the International Service-Learning Internship (ISP 486) for three credits, and if the internship is abroad, must participate in preparation and reentry instruction for the internship (GLST 484 and GLST 485). The Senior Seminar is required in the senior year.

Complementary Major. A student fulfilling major field requirements under a Major Option in another field may present as a second major the International Service Complementary Major of a minimum of 29 credit hours. Courses must include GLST 150, SOCW 210 and 330, two courses from the Theology of Service Issues and Theory category, the Regional Emphasis (Foreign Language courses 203 or 204 and 3 credits from an Area Studies concentration), and one Support Core course (3 credits). See course listing below.

Complementary majors take the International Service-Learning Internship for from 1 to 3 credits, and if the internship is abroad, must participate in preparation and reentry instruction for the internship (GLST 484 and GLST 485), and must take the Senior Seminar in the senior year.

Introductory Courses
GLST 150 Global Perspectives ..... 3 Cr.
ECON 138 Economics of Health, Education, and Welfare ..... 3 Cr.

Service Learning Core
POLLS 230 International Relations ..... 3 Cr.
SOCW 210 Social Welfare: Policy and Services ..... 3 Cr.
SOCW 330 Vulnerable Populations ..... 3 Cr.

Theology of Service Issues and Theory (select two courses):
THEO 330 Topics in Contemporary Theology (when topic is approved) ..... 3 Cr.
THEO 337 Black Theology and Black Church ..... 3 Cr.
THEO 353 Studies in Theology and Practice (Christian Faith and Contemporary Politics; Christian Response to Social Victims; or other approved topic) ..... 3 Cr.
THEO 357 The Church in the World ..... 3 Cr.
THEO 358 Studies in Theology, Health, and Healing (Medical Missions or other approved topic) ..... 3 Cr.
THEO 451 Theology of Diaspora Ministry ..... 3 Cr.
THEO 470 Topics in Theology (when topic is approved) ..... 3 Cr.

Theology of World Religions (select one course from this category or an additional course from the above category):
THEO 362 Understanding Islamic Religion and Culture ..... 3 Cr.
THEO 363 Religions of China and Japan ..... 3 Cr.
THEO 364 The Buddhist Tradition ..... 3 Cr.
THEO 365 Religion in Africa ..... 3 Cr.

Regional Emphasis
Foreign Language appropriate for the region:
French
Spanish
Latin American
One elective numbered above 204 ..... 3-4 Cr.

Chinese or Japanese
Chinese
Japanese

Two courses with the same regional focus as the foreign language.

EUROPE
HIST 315 Contemporary Europe: Century of Violence ..... 3 Cr.
HIST 352 Problems in Modern German History (Reutlingen) ..... 3 Cr.
GEOL 301 Regional Geography: Europe ..... 3 Cr.
POLS 300 Political Development of Industrialized States
FLS 230 French Civilization from 1870
or FLGR 232 German Civilization since 1870
or GLST 230 Spanish Civilization ..... 3 Cr.

LATIN AMERICA
HIST 232 Survey of Latin American History
or HIST 331 Ideas and Power in Latin American History ..... 3 Cr.
FLS 231 Spanish American Civilization ..... 4 Cr.
GEOL 301 Regional Geography: Latin America ..... 3 Cr.
POLS 300 Politics of Developing States
SOC 330 Points of Intersection (Puebla) ..... 3 Cr.

AFRICA
GEOL 301 Regional Geography: Africa ..... 3 Cr.
HIST 250 African History and Society ..... 3 Cr.
HIST 250 Modern African History ..... 3 Cr.
POLS 490 Topics (when topic is African) ..... 3 Cr.
Namibia Study Center (appropriate course) ..... 3 Cr.

ASIA
HIST 240 Introduction to East Asian Culture
or HIST 341 Revolution and its Roots: The Making of Modern China
or HIST 342 Tragedy and Triumph: The Making of Modern Japan
GEOL 301 Regional Geography: Asia ..... 3 Cr.
POLS 490 Topics (when topic is Asian) ..... 3 Cr.
ENGL 390 (when topic is Asian) ..... 3 Cr.

Support Core
Each student develops a support core in consultation with the ISP advisor. The following courses have prior approval (courses with an asterisk have prerequisites):
BIO 205 Fundamental Nutrition ..... 3 Cr.
ENGL 200 Human Nutrition* ..... 3 Cr.
ECON 223 Principles of Economics
International
ECON 233 Economics of Race and Gender ..... 3 Cr.
ECON 236 Comparative Economic Systems ..... 3 Cr.
ECON 326 International Economics* ..... 3 Cr.
ECON 336 Economics of Developing Nations* ..... 3 Cr.
ENGL 389 Teaching English as a Second Language ..... 3 Cr.
GEOL 470 Political Geography ..... 3 Cr.

Service Learning Internship
GLST 484 The International Experience: Preparation. ..... 0.5 Cr.
GLST 485 The International Experience: Reentry. ..... 0.5 Cr.
ISP 486 International Service-Learning Internship. ..... 1.5 Cr.
ISP 493 International Service Senior Seminar ..... 3 Cr.

GLST 190. Global Perspectives. 
Cr. 3. An interdisciplinary introduction to the concept of culture from both the Western and non-Western view, to the meaning of culture for the development of religious, economic, political, and social institutions, and to the significance of cultural perspective in approaching global issues. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

GLST 484. The International Experience: Preparation. 
Cr. 5. Preparation for the International Service Learning Internship or other international study semester through reading, discussion, and experience with cross-cultural perspectives, stereotypes, and problems. Last eight weeks of the semester.

GLST 485. The International Experience: Reentry. 
Cr. 5. A debriefing of the students' international experience in order to process, focus, and interpret what they have learned. Discussion, reading, and interaction with students preparing for an international study semester. First eight weeks of the semester.

Cr. 1-3. Students gain experience through placement with an organization or agency involved in international service. Prerequisites: junior standing and application in writing to the Chair one semester in advance. Generally taken concurrently with a study-abroad semester. SU grade only.

ISP 493. International Service Senior Seminar. 
Cr. 3. Research, discussion, and writing on a topic central to international humanitarian concerns. Required of all senior majors and complementary majors. Prerequisite: senior standing or consent of the Chair.
Mathematics and Computer Science

Professors Caristi, Gillman (Chair), Marion; Associate Professors Hull, Hume, J. Lehmann, Luther, Pearson, Sullivan, Szaniszlo, Wagenblast; Assistant Professors Allen, El-Houbi, Glass; Instructor Marrero (Visiting).

Mathematics is the disciplined form of communication which serves both to lend structure to scientific, engineering and economic principles, and to provide a beauty of formalism in its own right. It is characteristic that many important mathematical discoveries have been made by scientists, while at the same time pure mathematics has opened up unexpected new advances in science.

As a data processing tool, the computer has made possible extending both numerical manipulation and forms of language communication far beyond ordinary human capabilities. Computing has developed languages of its own to ease the human-machine interface. Learning how best to use these languages and to design strategies for problem solving are major objectives of computer science. Computer science also studies computer design and computer architecture and the integration of computer components into systems.

Careers in mathematics include statistical analysis, education, scientific, industrial, and mathematical research, operations research and actuarial science. Students can prepare themselves for the first two actuarial examinations by completing an appropriate sequence of courses. Careers in computer science include systems programming, applications programming and data management.

Mathematics

Major. A minimum of 36 credit hours in mathematics constitutes a major. Students must complete the core, survey elective, theory elective, and advanced electives as specified below:

Core: MATH 131 or 151, 132 or 152, 264, 265, 199, 299, 399, and 499.

Survey Elective: One course chosen from MATH 240, 253, or 269.

Theory Electives: Two courses chosen from MATH 451, 461, 421, and one course chosen from MATH 452, 462, 422.

Advanced Electives: Three additional courses of 3 credits or more numbered above 300.

Mathematics majors must complete CS 157 and are strongly encouraged to take CS 158. Students should enroll in an appropriate section of MATH 199, 299, 399, or 499 each semester.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in mathematics leads to a Bachelor of Arts or a Bachelor of Science degree. A student having a mathematics major in view should begin mathematics in the freshman year.

Complementary Major. A student with a first major in another discipline may take a complementary major in mathematics. A minimum of 30 credit hours in mathematics constitutes a complementary major.

Students machine in the course, survey elective, theory elective and advanced electives as specified below:

Core: MATH 131 or 151, 132 or 152, 264, 265, 199, 299, 399, 499.

Survey Elective: MATH 240, 253, or 269.

Theory Elective: MATH 451, 461, or 421.

Advanced electives: Three additional courses of 3 credits or more numbered above 300. Students should enroll in the appropriate section of MATH 199, 299, 399, or 499 each semester.

Recommended Electives: Students interested in the following areas of study should choose the recommended electives.

Secondary Education: MATH 240; MATH 461, 421, 462 or 422; MATH 314, 312, and one more course.

Statistics: MATH 240; MATH 421, 422, 451 or 461; MATH 434, 342, 344.


Scientific Mathematics: MATH 253; MATH 451, 452, 461, MATH 430, 434, one more course.

Preparation for Mathematics in Graduate School: MATH 253; MATH 451, 452, 461, 462; MATH 434, one more course.

Minors. A minimum of 15 credit hours in mathematics, including at least 7 credits numbered above 220, constitute a minor in mathematics. See page 226 for a description of the Applied Statistics Minor.

Teacher Programs. Students who plan to teach mathematics in middle or secondary schools with a major or minor in mathematics must consult the Chair of the Department and the Education Department for specific requirements.

Cooperative Education. Qualified students may combine semesters of professional experience with other semesters of traditional academic studies, usually lengthening their college education beyond the normal eight semesters. During the semesters of their employment, students are financially reimbursed by the cooperating employer and receive college credit. This program normally commences at the end of the sophomore year and consists of two semesters plus three summers of full time employment with the same company. Two credits in mathematics are granted for each semester and one for each summer. This program may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics.

MATH 110. Quantitative Problem Solving.

* 2, 2, Cr. 3. A course to assist students in developing fundamental mathematical concepts and processes. Emphasis placed on problem solving, reasoning, communication, and mathematical connections. Students recommended for this course should take it prior to enrolling in courses with quantitative content. Credit may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics.

MATH 114. Precalculus.

* Cr. 1-4. (See paragraph on Placement.) A course for students who plan to take a calculus sequence. Topics may include sets and numbers, relations and functions, trigonometric functions, exponential and logarithmic functions. This course may not be used to fulfill the General Education Requirement in the College of Arts and Sciences nor be counted toward a major or minor in mathematics. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

MATH 120. Mathematical Ideas.

* Cr. 4. (See paragraph on Placement.) A one-semester course intended primarily for students majoring in the humanities. The relationship between mathematics and modern society is studied. Emphasis placed on the development of mathematical concepts. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

MATH 122. Intuitive Calculus of One or More Variables.

* Cr. 4. (See paragraph on Placement.) A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management or social sciences. Topics include limits, continuity, derivatives and their applications, integrals and their applications and selected topics in multivariable calculus. Not open to students with credit for MATH 131 or 151. Prerequisite: MATH 114 or placement of MATH 122, 131, or 151 on the math placement examination.
MATH 124. Finite Mathematics. 
Cr. 4. (See paragraph on Placement.) A course for students with a good foundation in mathematics who are interested in mathematical models for the life, management or social sciences. Topics include matrix algebra, linear programming, finite probability, sequences, and mathematics of finance. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

MATH 131. Analytic Geometry and Calculus I. 3+2, Cr. 4. (See paragraph on Placement.) A first course in the calculus sequence designed for students who plan to major in mathematics, engineering or a physical science. Topics include limits, continuity, differentiation, application of the derivative, The Intermediate Value Theorem, definite integrals and The Fundamental Theorem of Calculus. Not open to students with credit for MATH 122 or 151. Prerequisite: MATH 114 or placement of MATH 131 or 151 on the math placement examination.

MATH 132. Analytic Geometry and Calculus II. 3+2, Cr. 4. A continuation of MATH 131. Topics include techniques of integration, applications of the definite integral, improper integrals, convergence of sequences and series, Taylor series, and calculus of transcendental functions. Not open to students with credit for MATH 152. Prerequisite: MATH 131 or 151.

MATH 140. General Statistics. Cr. 3. (See paragraph on placement.) A non-calculus based introduction to the major concepts and tools for collecting, organizing, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, planning a study, anticipating patterns, and statistical inference. Offered only for AP credit in statistics with a score of 4 or higher.

MATH 151. Calculus I - Honors. 3+2, Cr. 4. A first course in the calculus sequence designed for students interested in an intensified calculus course with exceptional preparation in algebra and trigonometry. Topics include those of MATH 131, with a stronger emphasis on theory and on techniques of mathematical proof. Not open to students with credit for MATH 122 or 131. Prerequisite: placement of MATH 151 on the math placement examination, or MATH 114 and consent of instructor.

MATH 152. Calculus II - Honors. 3+2, Cr. 4. A continuation of MATH 151. Topics include those of MATH 132, with a stronger emphasis on theory and on techniques of mathematical proof. Not open to students with credit for MATH 132. Prerequisite: MATH 151 or consent of the instructor.

MATH 168. Discrete Structures I. Cr. 3. An introduction to mathematical reasoning, algorithm analysis, and the concepts that provide a mathematical foundation for computer science. Topics include logic; sets; functions; order notation; proof techniques, including mathematical induction; elementary counting techniques; iterative and recursive algorithms; elementary complexity analysis and applications. Prerequisite: CS 157; corequisite: MATH 122 or 131 or 151.

MATH 199. Mathematics Colloquium I. Cr. 0. All freshmen mathematics majors must register for this course in both the fall and spring semesters. Students are required to attend sessions of MATH 499 and participate in the activities and discussions of the colloquium. S/U grade.

MATH 211. Laboratory in Elementary Mathematics I. 0+1, Cr. 0. This course is designed to provide an opportunity for prospective elementary teachers to learn mathematical concepts in an active, materials-oriented context and to acquaint them with materials appropriate for use in the elementary school. Topics correspond to those in MATH 213. Enrollment is restricted to students majoring in elementary education. Prerequisite: concurrent registration in MATH 213; S/U grade.

MATH 212. Laboratory in Elementary Mathematics II. 0+1, Cr. 1. A continuation of MATH 211. Topics correspond to those in MATH 214. Prerequisite: concurrent registration in MATH 214; S/U grade.

MATH 213. Mathematics for Elementary Teachers I. Cr. 4. This course is restricted to students majoring in elementary education. Topics include elementary logic, sets, problem solving, numeration systems, the whole number system, the rational number system and elementary number theory. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

MATH 214. Mathematics for Elementary Teachers II. Cr. 4. A continuation of MATH 213. Topics include two- and three-dimensional geometry, measurement, functions, graphing, probability and statistics. Prerequisite: Mathematics 213.


MATH 240. Statistical Analysis. Cr. 3. An introduction to concepts that provide a mathematical foundation for probability and statistics. Topics include probability, empirical and theoretical frequency distributions, sampling, correlation and regression, testing hypotheses, estimation of parameters. Emphasis is placed on illustrations and applications of these techniques. Prerequisites: MATH 124 and 122 or 132 or 152.

MATH 253. Calculus III. Cr. 4. A continuation of MATH 132 or 152. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: MATH 132 or 152.

MATH 260. Foundations of Advanced Mathematics. Cr. 3. An introduction to the type of mathematical reasoning and subject matter which will be encountered in advanced mathematics. Topics include basic logic, set theory, relations and functions, and infinite sets. Prerequisite: MATH 122 and 124 or 132 or 152 or the equivalent.

MATH 264. Linear Algebra I. Cr. 3. The purpose of this course is twofold: to introduce students to mathematical reasoning and to explore topics in linear algebra. By studying the mathematical vocabulary and the logical structure of the foundation of linear algebra, students learn the fundamental logic of deductive and inductive reasoning; encounter and construct proofs of elementary theorems using direct, indirect, existence and inductive arguments; and understand the role of mathematical definitions and counter examples. Topics in linear algebra include systems of linear equations, matrices, determinants, vectors in n-space, abstract vector spaces, and linear transformations. Prerequisite: MATH 132 or 152 or 168.

MATH 265. Linear Algebra II with Differential Equations. Cr. 3. A continuation of MATH 264. Linear algebra topics include further study of linear transformations, eigenvalues, and eigenvectors. Topics from differential equations include first-order differential equations, linear differential equations, systems of differential equations, and phase plane analysis. Prerequisite: MATH 132 or MATH 152 and MATH 264.

MATH 285. Practicum in Mathematics. Cr. 0.5-3. Intensive professional experience in/ or technical training in a mathematics related field. A written report is required. S/U grade. Prerequisite: MATH 264 and consent of the chair.

MATH 299. Mathematics Colloquium II. Cr. 0. All sophomore mathematics majors must register for this course in both the fall and spring semesters. Students are required to attend sessions of MATH 499 and participate in the activities and discussions of the colloquium. S/U grade. Prerequisite: MATH 199.

MATH 312. History of Mathematics. Cr. 3. A study of the development of mathematics. This will usually be a survey of mathematics from earliest times to the present, though special topics may be chosen according to the interest of the class. Prerequisite: consent of the instructor. Offered upon sufficient demand.

MATH 314. Elements of Geometry. Cr. 4. Logic, axiom systems and models, consistency, independence and completeness; consideration of the foundations of Euclidean and non-Euclidean geometries; topics from projective and transformational geometries. Prerequisite: MATH 264.

MATH 320. Mathematical Models in the Life and Environmental Sciences. Cr. 3. A course on the interplay of ideas and design and solution of mathematical models. Theory includes discrete and continuous models, steady state and transient models, deterministic and stochastic models, modeling by differential and difference equations, Markov chains, game theory, and curve fitting. Applications are drawn mostly from the life and environmental sciences, and include compartment models, population models, ecological models, and hydrologic models. Prerequisite: MATH 132 or 152. Offered in alternate years.

MATH 322. Optimization. Cr. 3. Theory and computer algorithms for the solution of mathematical programming problems and applications. Topics include the simplex method, cutting planes, branch and bound methods and numerical methods for unconstrained optimization, game theory and dynamic programming. Prerequisites: MATH 234 or 264. Offered in alternate years.

MATH 340. Statistics for Decision Making. Cr. 3. (Also offered as IDS 340.) A study of statistical concepts and methods to facilitate decision making. Content includes analysis of variance, sampling, multiple regression, correlation, time-series analysis, and nonparametric methods. Prerequisite: MATH 240 or IDS 205 or CE 202 or completion of or concurrent registration in ECE 485.
MATH 341. Probability.
Cr. 3. A course in probability with some topics applicable to statistics. Topics include probability spaces, random variables, classical discrete and continuous probability distributions. Prerequisites: MATH 122 and 240, or 152 and 240.

MATH 342. Mathematical Statistics.
Cr. 3. This course continues the study of probability and covers statistics based on the background of MATH 341. Topics include multivariate probability distributions with an introduction to multivariable calculus, joint and conditional distributions, Central Limit Theorem, covariance, moments, estimation, tests of hypotheses, and sampling theory. Prerequisite: MATH 341. Offered upon sufficient demand.

Cr. 3. A survey of probabilistic models used in decision theory. Topics include stochastic processes, queuing theory, forecasting, Bayesian decision theory, reliability, and simulation. Prerequisites: MATH 240 or IDS 205. Offered in alternate years.

MATH 350. Differential Equations.
Cr. 3. Elementary and linear differential equations, systems of equations, series solutions including the method of Frobenius, LaPlace transforms, applications. Prerequisites: MATH 263 and (234 or 264).

Cr. 3. (Also offered as CS 370). The analysis and implementation of basic numerical techniques: matrix methods for the solution of systems of equations, interpolating polynomials, finite differences, numerical differentiation and integration, numerical solution of differential equations, zeros of nonlinear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisite: CS 157 or its equivalent and one of the following: MATH 234 and 253; 265; or 350.

MATH 381. Cooperative Education in Mathematics.
Cr. 1-2. The application of mathematical concepts in a professional setting. Grade based on employer's evaluation and student's written and oral reports. May be repeated for additional credit. Prerequisite: MATH 265 or approval of the Chair of the Department. SU grade.

MATH 399. Mathematics Colloquium III.
Cr. 0. All junior mathematics majors must register for this course both in the fall and spring semesters. Students are required to attend sessions of MATH 499 and to participate in the activities and discussions of the colloquium. Prerequisite: MATH 298. SU grade.

MATH 421. Combinatorics I.
Cr. 3. Theory of combinatorics, including elementary counting techniques, generating functions, Pólya's Theorem, and an introduction to graph theory. A variety of applications are discussed depending on the interests of the students. Prerequisite: MATH 264.

MATH 422. Combinatorics II.
Cr. 3. A continuation of MATH 421, with topics selected from Ramsey Theory, coding theory, algorithmic graph theory and network theory. Prerequisite: MATH 421 or consent of the instructor.

MATH 430. Fourier Series and Boundary Value Problems.
Cr. 3-4. Fourier representation of functions. Generalized orthogonal sets of functions including Bessel Functions and Legendre polynomials. Fourier, Fast Fourier, and Laplace transforms. An introduction to distributions. A variety of applications depending on the interests of the students. Prerequisites: MATH 253 and (234 or 265).

MATH 434. Introduction to Complex Variables.
Cr. 3. Analytic functions, derivatives, power and Laurent series, integrals, residues, conformal mapping, applications to partial differential equations. Prerequisites: MATH 253 and (234 or 264). Offered upon sufficient demand.

MATH 451. Analysis I.
Cr. 3. Properties of real numbers; theory of continuity, differentiation and integration of real-valued functions of a real variable; sequences, series, and uniform convergence. Prerequisites: MATH 152 and 264.

MATH 452. Analysis II.
Cr. 3. Theory of continuity and differentiation of real and vector-valued multivariable functions; multiple integration and the Jacobian; implicit and inverse function theorems; topology of real n-space. Prerequisites: MATH 253 and 451.

MATH 461. Abstract Algebra I.
Cr. 3. A study of mathematical structures: groups, rings, and fields. Properties of groups; substructures, quotient structures, and homomorphisms. Prerequisite: MATH 264.

MATH 462. Abstract Algebra II.
Cr. 3. A continuation of MATH 461. Topics may include a more detailed study of rings, polynomial rings, field extensions, field automorphisms, an introduction to Galois theory, further work in group theory, an introduction to additional structures. Prerequisite: MATH 461. Offered upon sufficient demand.

MATH 489. The Teaching of Mathematics.
Cr. 3. (See ED 489) A study of the methods of teaching mathematics in secondary schools. A field component is required. Prerequisite: admission to Teacher Education. This course may not be counted toward a major or minor in Mathematics.

MATH 491. Advanced Topics in Mathematics.
Cr. 1-3. An advanced course for mathematics majors. The topic studied, which may change from year to year, is ordinarily one of the following: number theory, advanced abstract algebra, differential geometry, partial differential equations, measure and integration or functional analysis. Prerequisite: consent of the Chair of the Department. Specific course requirements depend on the content. Offered upon sufficient demand.

Cr. 3. (Also offered as ECON 493 and as IDS 493.) An intensive study of selected topics, methods, and problems in applied statistics. Prerequisite: MATH 340 or IDS 340 or ECON 325.

MATH 499. Independent Study in Mathematics.
Cr. 1-3. Students study advanced topics in mathematics under the supervision of a faculty member. Written work is required. Prerequisite: consent of the Chair of the Department. S/U grade.

MATH 497. Honors Work in Mathematics.
Cr. 3. See Honors Work, page 54.

MATH 498. Honors Candidacy in Mathematics.
Cr. 3. See Honors Work, page 54.

MATH 499. Mathematics Colloquium IV.
Cr. 1. Student presentation of selected topics in mathematical literature. Students are required to register for this course during one semester of their senior year and are encouraged to do so during the other semester. Prerequisite: MATH 399.

Computer Science

Major. A minimum of 32 credit hours in Computer Science constitutes a major. Courses must include CS 157, 158, 246, 257, 322, 347, 372, 492. The remaining credits must be from Computer Science courses numbered 230 or above. Majors must complete the following mathematics courses: MATH 122 or 132 or 152; MATH 168; MATH 240; and MATH 269. Any student considering the study of computer graphics or graduate study in Computer Science is strongly encouraged to take a course in linear algebra before graduation. A student seeking the Bachelor of Science degree with a major in Computer Science must complete the above program. In addition the student must complete CS 358. The minimum number of credits in Computer Science for the Bachelor of Science degree is 36.

Minor. A Computer Science minor consists of a minimum of 15 credit hours in computer science. Courses must include CS 157, 158, and 257. The remaining Computer Science credits must come from CS 246 or courses numbered above 300. In addition, the student must complete either MATH 122, 131, or 151.

Cooperative Education. Credit in Computer Science may be obtained for cooperative education experiences relating to Computer Science. Students must prepare a brief proposal describing the intended experience and secure a Computer Science advisor, who will decide whether the work merits Computer Science credit. For each term of Computer Science related work, students may receive 2 credits for a summer experience, or 3 credits for a full-time semester experience. No more than 3 credits may be counted toward the minimum major requirements or the Computer Science minor. (An exception may be made in the case of the Bachelor of Science degree, where up to 4 credits in Cooperative Education may be counted toward the 32-hour single major.) If these credits are used to fulfill minimum credit hour requirements for a major or minor, at least two Computer Science experiences are required, at least one of which must be a full-time semester experience. In addition to meeting the College of Arts and Sciences 2.50 cumulative grade point average requirement, students must present a 2.50 grade point average for all required Computer Science courses in the major taken prior to participation in the Cooperative Education program. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Cr. 4. A general survey of central topics in computer science with emphasis on the scientific aspects of computation. This approach stresses analysis and inquiry into the limits of computation and the properties of new computational models. Topics such as algorithms and their analysis, human-machine interfaces, artificial intelligence, software engineering, modelling of data, and serial and parallel computation will be introduced.
CS 128. Introduction to Programming.
Cr. 1-3. An introduction to computer problem-solving techniques using a high level language. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

3+2, Cr. 4. A first course in algorithm development and problem solving and an introduction to the use of a computer system with special emphasis on object-oriented programming. Topics include algorithms for the solution of elementary problems, and writes, and logic, and programs for the implementation of those algorithms. Techniques of software design and algorithm analysis are introduced. Students may not receive credit for both CS 157 and ECE 155. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

CS 158. Algorithms and Abstract Data Types.
3+2, Cr. 4. A continuation of CS 157, with emphasis on developing more skills in complex program development and data structures. Topics include stacks, queues and linked lists. Students design and write intermediate sized programs. Prerequisites: CS 157 or ECE 155.

Cr. 3. (Also offered as IDS 310.) This course offers an overview of potentialities, policies, politics, possibilities, and pitfalls of electronic commerce (conducting business on-line) and electronic business (using information technology to manage the supply-chain), including hardware and software applications required for both. Prerequisite: junior standing and consent of the chair.

2+2, Cr. 3. Fundamentals of the structure of digital computers and an introduction to assembly language programming. Topics include machine instructions, data representation, addressing techniques and program segmentation and linkage. Corequisite: CS 158.

CS 257. Data Structures and Programming Languages.
Cr. 4. A more detailed study of data structure and programming paradigms used in a variety of languages. Topics include lists, graphs, hash tables, object oriented programming, non-imperative languages, syntax and basic characteristics of grammars, parsing and runtime considerations. Prerequisites: MATH 122 or 131 or 151, CS 158 or ECE 252.

Cr. 0.5-3. Intensive professional experience and/or technical training in a computing related field. A written report is required. Prerequisites: CS 257, CS 246 and consent of department chair. S/U grading.

CS 290. Topics in Computer Programming.
Cr. 1-2. The content of this course may change from semester to semester, but is ordinarily a study of a computer programming language not covered in other Computer Science courses. Possible languages to be studied include Ada, C, Lisp, and Prolog. This course may be repeated for credit, provided that topics are different. Prerequisite: specific courses required for course content; usually equivalent to CS 167.

CS 320 (formerly CS 220). Digital Logic Design.
2.5+0.5, Cr. 3. (Also offered as ECE 221.) An introduction to digital logic concepts, including the analysis and design of combinational and sequential digital circuits.

CS 325. Simulation and Modeling.
Cr. 3. An introduction to computer simulation of mathematical models of discrete and continuous phenomena. Some standard simulations are examined, others implemented using a simulation language. Prerequisites: a course in calculus, a course in probability and statistics, and a course in programming.

CS 332. Databases and Artificial Intelligence.
Cr. 4. An introduction to information models and systems, including relational and object-oriented database management systems, data modeling, knowledge representation, problem spaces, models of reasoning, non-symbolic artificial intelligence, and other topics in intelligent systems. Prerequisite: CS 257.

CS 347. Operating Systems and Networking.
Cr. 4. Introduction to the concepts of operating system and networks. Topics include procedures, processes, resource management, interrupt-driven processing, protocols for communicating messages, such as Transport Control Protocol and User Datagram Protocol, error detection, methods for routing messages, application protocols, such as HTTP and SMTP. Prerequisites: CS 246 and 257.

CS 358. Software Design and Development.
3+2, Cr. 4. The specification, design, implementation, documentation, testing and management of software systems. Intensive work on a group project, directed by the instructor, to design and develop a usable software system. Students will also learn fundamentals of graphics and graphical user interfaces. Prerequisite: CS 257.

Cr. 3. A study of the fundamentals of interactive computer graphics systems and software. Emphasis is placed on graphics primitives, geometric transformations, projection, methods of creating visual realism, and selected graphics algorithms. Prerequisites: CS 158 (CS 257 is recommended) and MATH 122, 131, or 151.

Cr. 3. (Also offered as MATH 370.) The analysis and implementation of basic numerical techniques: matrix methods for the solution of systems of equations, interpolating polynomials, finite differences, numerical differentiation and integration, numerical solution of differential equations, zeros of nonlinear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisites: CS 157 or the equivalent and one of the following: MATH 350; MATH 234 and 235; MATH 265.

Cr. 4. Emphasis on the limits to the power of computation and a systematic analysis of the algorithms that harness it. Computability topics include the Chomsky hierarchy, several automata and language models, and demonstrations of uncomputable problems. Complexity topics include various design strategies such as greedy, divide and conquer and backtracking, and fundamental computing algorithms, such as searching, sorting, graphs, trees, pattern matching and computational geometry, with a short foray into distributed algorithms. Prerequisites: CS 257 and MATH 269.

CS 376. Theory of Computation.
Cr. 3. Basic principles of computer science in formal languages, automata, nondeterminism, regular expressions, context free grammars, Turing machines, the halting problem, and unsolvability. Prerequisites: CS 236 and MATH 267. Last offered Fall 2003.

CS 381. Cooperative Education in Computer Science.
Cr. 0.5-3. The application of computer science concepts in a professional setting. Grade based on employer’s evaluation and student’s written and oral reports. Prerequisites: CS 257; approval of Cooperative Education Advisor and the Chair of the Department. S/U grading. May be repeated for additional credit.

Cr. 3. Problems and techniques associated with programming in systems with shared resources, e.g., operating systems and data base management systems. Topics include concurrent processes, communication and deadlock, queuing and scheduling, resource protection and access. Prerequisites: CS 347 and a course in probability and statistics. Offered upon sufficient demand.

CS 455. Theory of Programming Languages.
Cr. 3. Concepts used in the translation of programming languages and the design of computers. Topics include grammars, scanners and symbol tables, formation of projection, and pushdown automata and techniques of automatic code generation and improvement. Applications may include general purpose languages as well as special purpose languages such as data base definition and inquiry languages. Prerequisites: CS 246 and 257 and MATH 269. Offered upon sufficient demand.

CS 458. Senior Project.
Cr. 3. The student defines a suitable computer application, develops the necessary software using appropriate techniques and prepares documentation for the use and support of the completed system. An oral report is required. Prerequisites: CS 358, senior standing, and a proposal approved by the Chair of the Department.

CS 491. Advanced Topics in Computer Science.
Cr. 1-3. An advanced course for computer science majors. The topic studied may change from year to year. Possible topics: data communications and networks, supercomputers, parallel processing or computer architecture. Prerequisites: consent of the Chair of the Department. Specific course requirements depend on topic. Offered upon sufficient demand. Prerequisite: consent of the instructor.

CS 492. Research in Computer Science.
Cr. 1-3. The student undertakes a research problem in Computer Science under the direction of a faculty member. Written and oral reports are required. Prerequisite: consent of the Chair of the Department, S/U grading.

Cr. 2. Student and faculty presentations in the context of professionalism and ethical responsibilities in software development and human-computer interaction. Topics include laws, risks, and liabilities, codes of ethics, privacy, international and gender related issues, philosophical frameworks, and economic implications. Students will learn and develop oral presentation and research skills. Prerequisites: CS 246 and 257.

CS 495. Independent Study in Computer Science.
Cr. 1-3. The student studies an advanced topic in Computer Science under the direction of a faculty member. Written work is required. Prerequisite: consent of the Chair of the Department.

CS 497. Honors Work in Computer Science.
Cr. 3. See Honors Work, page 54.

CS 498. Honors Candidacy in Computer Science.
Cr. 3. See Honors Work, page 54.
Modern European Studies

Administrative Committee:
Professors Rubchak (History, Chair),
Olmsted (Christ College), Trost
(Political Science); Associate
Professors N. Corazzo (Art), DuVick
(Foreign Languages and Literatures).

Modern European Studies is an
interdisciplinary program that may be taken
either as a complementary academic major
or as an academic minor in partial fulfillment
of the major field requirements.

Objectives. Throughout all of the
modern centuries, Europe has been central to the
cultural, economic, and political development
of the entire West, as well as a major force in
shaping events and patterns of change in the
world beyond the West. Today there are
numerous signs to indicate that it will
continue as one of the world's most
significant areas far into the future. For a
comprehensive understanding of Europe, it is
necessary to study it in terms of time and
space and to inquire into the major currents
detectable in its cultural, economic and
political life, past and present. The Modern
European Studies Program affords an
opportunity for this broad study. By
combining courses from various
departments, it spans the modern centuries
(i.e., from the sixteenth century to the
present) and explores present thought and
issues from a variety of perspectives.
Designated to address the needs of students
who consider an understanding of
movements, issues, and achievements
associated with modern Europe as an
essential part of a broad liberal education,
the Program will provide a natural extension
or supplement for a number of traditional
departmental majors. It affords a particularly
strong background for students planning to
pursue graduate work in a field involving
knowledge of Europe, and for those
preparing themselves for a professional
future in the cultural arts, public affairs, and
business fields with a European dimension.
For those hoping to work in educational,
informational and journalistic areas related to
Europe, the Program is an ideal course of
study.

Major. Thirty-three credit hours
constitutes a major. They must include the
Program Core courses, 15 credit hours in
courses selected from at least three of the
participating departments, and MEUR 495.
No more than four courses from the
Program major may be used to fulfill another
major, minor or general education
requirement.

Minor. Eighteen credit hours constitutes a
minor. They must include the Program Core
courses and 3 credit hours of electives. No
more than two courses from the Program
minor may be used to fulfill another major,
minor or general education requirement.

Students in this Program must meet the
general education requirement in a European
language. Courses approved by the Program
Chair taken at the university's European
study centers or in European study-abroad
programs may also be counted as part of the
Program. All courses beyond those in the
Program Core must have the approval of the
Chair of the Program's Administrative
Committee.

Program Core

There are no prerequisites for ECON 370 for Modern
European Studies majors. Foreign Language and
English Literature courses listed as option in the
Program Core but not selected may be taken as
electives in the Program.

ART 318 19th Century European Art or
ART 319 Early 20th Century European Art .... 3 Cr.
ECON 369 Modern European Economic History or
ECON 370 History of Economic Thought .... 3 Cr.
HIST 318 Contemporary Europe: Century
of Violence .... 3 Cr.
POLS 330 Politics of Industrialized States .... 3 Cr.

Select one of the following:

FLF 222 French Literature from 1800
to the Present .... 3 Cr.
FLGR 222 Selected Readings in German
Literature since 1800 .... 3 Cr.
FLS 321 Spanish Literature .... 3 Cr.
English Literature, select from 400-
level English Literature courses .... 3 Cr.

Elective Courses

Foreign Language courses numbered 250 are taught
in translation and may be counted
when the topic is appropriate. Topical courses
numbered 390 or 490 may be taken from participating
departments when they focus on a European topic.

ART 102 Renaissance to Modern Art History .... 3 Cr.
ART 318 19th Century European Art .... 3 Cr.
ART 319 Early 20th Century European Art .... 3 Cr.
ECON 236 Comparative Economic Systems .... 3 Cr.
ECON 369 Modern European Economic
History .... 3 Cr.
ENGL 450 British Literature of the 19th Century .... 3 Cr.
ENGL 450 The Novel .... 3 Cr.
ENGL 460 Twentieth Century Drama .... 3 Cr.
ENGL 470 Twentieth Century Fiction .... 3 Cr.
ENGL 478 Twentieth Century Poetry .... 3 Cr.
FLF 232 French Civilization from 1870
to the Present .... 3 Cr.
FLF 232 French Civilization from 1870
to the Present .... 3 Cr.
FLF 250 Topics in French Literature and
the Fine Arts .... 3 Cr.
FLG 222 Selected Readings in German
Literature since 1800 .... 3 Cr.
FLG 232 German Civilization since 1800 .... 3 Cr.
FLG 250 Topics in German Literature and
the Fine Arts .... 3 Cr.
FLS 230 Spanish Civilization .... 3 Cr.
FLS 321 Spanish Literature .... 3 Cr.
GE 301 Regional Geography: Europe .... 3 Cr.

MEUR 495. Independent Study.
Cr. 3. An independently supervised course that
may be taken in any of the departments
participating in the Program. Students are
expected to produce a major paper involving at
least two of the disciplines included in the
Program and meet the course criteria established
by the Administrative Committee. Before
registering for the course, students must have
the approval of the supervising professors and the
Program Chair.
Music

Professor Ferguson (Chair); Associate Professors Berntal, Bognar, Brugh, Cock, Doebler, Friesen-Carper, Lewis; Adjunct Assistant Professors J.C. Brown, Maugans; Instructor Olson (Visiting).

The Department of Music offers three degree programs: Bachelor of Arts, Bachelor of Music, and Bachelor of Music Education. The Bachelor of Arts may be pursued as a traditional liberal arts major, as an interdisciplinary track in Music Industry, or with an emphasis in Performance or Church Music. Deaconess training may be available in conjunction with the study of music. Bachelor of Music majors interested in emphasizing music performance, theory, and history may choose the Performance-Liberal Arts Option. This Option requires completion of the 31-credit music core (see above) plus the following: MUS 209 and MUS 264 or 463, and two courses selected from MUS 213, 309, 401.

Church Music Option. Music majors with an academic year of study in church music are advised to complete the 31 credit music core (see above) plus the following: MUS 213, 313, 473, and an independent study (MUS 495) church music practical experience for a total of 40 music credits. Students in the church music option are required to complete 203 level in the primary performance medium and must also complete 103 level in piano or organ if the primary performance medium is not piano or organ.

Music Industry Option. This interdisciplinary concentration combines the 31 credit music core (see above), 9 additional credits in music (MUS 285, 376, 465, 468), and the minor in Business Administration (see page 226). The Music Industry Option is designed to prepare students for management positions in the manufacturing, publishing, distribution, and retailing aspects of the music industry.

Bachelor of Music Education

The General Education Requirements for this degree are given on page 48. Also required are PSY 110 and one course from COMM 145, 243 or THTR 141. The music requirements are outlined below.

Bachelor of Music

Music Core

MUS 109, 110, 209, 309 Musicianship ........ 6 Cr.
MUS 163, 164, 263, 264 Music Theory ........ 12 Cr.
MUS 201, 318, 319, 401 History and Literature of Music ........ 10 Cr.
MUS 213 Basic Conducting ........ 2 Cr.
MUS 313 Intermediate Conducting ........ 2 Cr.
Music Ensemble ........ 6 Cr.
MUS 499 Music Colloquium .................. 0 Cr. Total ........ 40 Cr.

Music Education Core

Principal Instrument* ....................... 8 Cr.
Secondary Instrument* ...................... 5 Cr.
MUS 239 .................. 1 Cr.
MUS 231, 233, 235, 237 ........ 4 Cr.
MUS 312 .................. 2 Cr.
MUS 389 .................. 3 Cr.
MUS 489 .................. 3 Cr.
Total credits ........ 26 Cr.
Total for graduation ........ 142 Cr.

* Piano 2 Cr. and Guitar 1 Cr.: if principal instrument is piano, then Voice 2 Cr. and Guitar 1 Cr. (which may be fulfilled either by 1 Cr. of studio guitar or MUS 236, Guitar Methods).
** Completion of level 303 is required.

Other Requirements

Program: Church Music

MUS 312 ........ 2 Cr.
MUS 313 ........ 2 Cr.
MUS 404 ........ 1+2 1+2
MUS 415 ........ 2 Cr.
MUS 454 ........ 1 Cr.
MUS 473 ........ 3 Cr.
Composition ........ 12 Cr.
Performance Study* ........ 12 Cr.
Piano ........ 4 Cr.
Organ ........ 20 Cr.
Voice ........ 4 Cr.
Total credits ........ 40 Cr.
Elective credits ........ 4 Cr.
Total required ........ 128 Cr.

*Performance study requires completion of level 203 in a primary performing area and completion of level 103 in piano or organ if primary performing area is not one of these. Up to 6 credits of performance study may be fulfilled with instrumental methods courses (at 1 credit).

Program: Performance

Piano VOICE ORGAN
MUS 312 ........ 8 Cr.
MUS 313 ........ 8 Cr.
MUS 213 ........ 3 Cr.
MUS 404 ........ 1+2 1+2
MUS 423 ........ 2 Cr.
MUS 464 ........ 1 Cr.
Piano ........ 4 Cr.
Principal Instrument ........ 20# 20# 20#
Total ........ 30 Cr.
Elective credits ........ 5 Cr.
Total required ........ 128 Cr.

*Completion of MUS 453 is required.
**Completion of MUS 453 is required; the total may include MUS 239.

Music Minor. A minimum of 16 credit hours in Music constitutes a minor. Courses must include MUS 109, 110, 163, 164, and 201 and four credit hours of studio instruction (completion of MUS 103).
Cr. 3. A study of the basic forms and styles of musical art in Western civilization and in non-Western cultures. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

Cr. 1. A course for students who plan to take a music theory sequence. Topics include fundamentals of note-reading, rhythm notation, scale and melody, and intervals. This course is offered for S/U grade only and may not be used to fulfill the General Education Requirement in the College of Arts and Sciences or be counted toward a major or minor in music. Available only for students identified through the Music Theory Placement Exam.

MUS 109. Musicianship I. 
2+1, Cr. 2. A practical course in which basic musicianship is developed through sight-singing, dictation and guided listening. An introduction to non-Western music is included. The course is usually taken concurrently with MUS 163.

MUS 110. Musicianship II. 
2+1, Cr. 2. A practical course in which basic musicianship is developed through sight-singing, dictation and guided listening. An introduction to jazz forms is included. Prerequisite: MUS 109.

MUS 163. Music Theory I. 
Cr. 3. A course in the fundamentals of music which emphasizes the development of analytical and listening skills. Topics include notation, elements of pitch and rhythm, harmonic organization, and part writing. Prerequisite: concurrent enrollment in MUS 102 or placement into MUS 163 determined by Music Theory placement component of Music Diagnostic Exam.

MUS 201. Development of Western Music. 
Cr. 2. An overview of the stylistic trends in Western art music from the Middle Ages to the contemporary era. Prerequisite: MUS 163.

MUS 209. Musicianship III. 
2+1, Cr. 2. An intermediate course in ear-training, sight-singing, and guided listening. Prerequisites: MUS 110 and completion of all proficiency requirements as outlined in the Music Department Student Handbook.

MUS 210. Language Diction. 
Cr. 1. A study of IPA (International Phonetic Alphabet) spellings, symbols, and sounds as applied to the English language.

MUS 211. Foreign Language Diction. 
Cr. 2. Application of IPA to perform the principal singer's languages (Italian, French, and German) and actor's international dialects. Prerequisite: MUS 210.

MUS 221. Basic Conducting. 
Cr. 2. An introduction to conducting including a study of score reading, beat patterns, acoustics and interpretive principles. Prerequisite: MUS 164 or consent of the instructor.

MUS 231. Stringed Instructional Methods. 
0+2, Cr. 1. Violin, viola, violincello and contrabass are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

MUS 233. Woodwind Instructional Methods. 
0+2, Cr. 1. Clarinet, saxophone, oboe, bassoon and flute are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

MUS 235. Brass Instructional Methods. 
0+2, Cr. 1. Trumpet, French horn, trombone, baritone horn and tuba are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

MUS 237. Percussion Instructional Methods. 
0+2, Cr. 1. Percussion instruments are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

MUS 239. Voice Instructional Methods. 
0+2, Cr. 1. This course is designed to give the student a fundamental technical and teaching knowledge of the voice as an instrument.

MUS 263. Music Theory III. 
Cr. 3. A continuation of MUS 164 with special emphasis on the harmonic developments of the 19th century and an introduction to 20th century practices. Topics include binary and ternary forms, mode mixture, altered chords, enharmonic modulation, as well as melodic and harmonic materials of the 20th century. Prerequisite: MUS 164.

MUS 264. Music Theory IV. 
Cr. 3. A course in which the skills of analysis, writing, and listening are developed in the study of 18th century counterpoint (melodic construction, two-voice writing, canon, inversion, and fugue). Also included is a study of larger forms (sonata, variations, and rondo). Prerequisite: MUS 263.

Cr. 2. An overview of the history, trends and scope of the music industry as it relates to career opportunities, including field trips and introduction to retailing, publishing, manufacturing, performing and recording, and managing musical enterprises. Prerequisite: sophomore standing or above.

Cr. 3. A study of materials, methods and techniques of general classroom music for the primary grades. This course is open only to elementary education majors and may not be counted toward a major or minor in Music.

MUS 309. Musicianship IV. 
2+1, Cr. 2. An advanced course in ear-training, sight-singing and guided listening. Prerequisite: MUS 299.

MUS 310. Music in History. 
Cr. 3. A study of music as a cultural expression in the history of Western civilization through the examination of the major stylistic traditions of musical art. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

MUS 312. Scoring and Arranging. 
Cr. 2. The techniques of scoring for orchestra and band and of arranging music for choral performance. Through guided exercises and assigned readings, students learn how to prepare music written in one medium for use in another. Knowledge of vocal and instrumental capabilities is learned; skills in combining voices and instruments in various ensembles are practiced. Prerequisite: MUS 164.

MUS 313. Intermediate Conducting. 
Cr. 2. A continuation of MUS 213. Includes rehearsal techniques, specific choral and instrumental conducting problems and ensemble conducting experience. Prerequisite: MUS 213.

Cr. 3. The development of musical thought and literature from 1700 to 1880. Prerequisite: MUS 201. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

MUS 319. Music of the Late Romantic and Modern Eras. 
Cr. 3. A study of music and musical thought from 1880 to the present. Prerequisite: MUS 201. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements.

MUS 385. Legal Aspects of the Music Industry. 
Cr. 2. A study of the unique relationship between publishing and copyright. Selected topics in copyright management, music licensing and public contracts are explored through application of case studies and current legislation. Prerequisite: MUS 285.

MUS 389. School Music I. 
Cr. 3. A course designed to deal with materials, procedures, organization, administration and musical growth and development of children in elementary and junior high/schools. Prerequisite: MUS 164.

MUS 390. Topics in Music. 
Cr. 1-3. Specific topics based on interests of students and faculty. Topics may vary from one semester to another. May be repeated for credit if topics are different. Prerequisite: sophomore standing.

MUS 401. Early Music Seminar. 
Cr. 2. A history of Western music from antiquity to the early Baroque era; emphasis is placed on historical research and the study of notation and performance practice. Prerequisite: MUS 318.

MUS 404. Recital. 

MUS 413/613. Advanced Conducting, Choral/Instrumental. 
Cr. 2. A study of instrumental and choral scores, conducting techniques and materials. Prerequisite: MUS 313 or the equivalent.

Cr. 2. A continuation of MUS 413/613.

MUS 415/615. Liturgical Organ Playing. 
Cr. 2. A practical course in playing hymnals and chants, accompanying, realization of figured bass, score reading and improvising in small forms. The historic and current roles of the organ in the liturgy are discussed. Prerequisites: three years of organ study, completion of level 203 in a keyboard studio area, and MUS 164, or permission of the instructor. Offered in alternate years.

MUS 421/521. Pro-Seminar in Music. 
Cr. 2-3. An intensive study of a limited area in the history or theory of music. This course may be repeated for credit. Prerequisite: consent of the Chair of the Department.

MUS 423/523. Pro-Seminar in the Pedagogy of Music. 
Cr. 2. A consideration of the problems of teaching basic musicianship at all levels. Special attention is given to the adaptation of basic principles to the media of most interest to the members of the pro-seminar. Prerequisite: consent of the Chair of the Department.
MUS 432/532. Workshop in Music Education. 
Cr. 1-2. A study of current topics in music education in summer workshop sessions of one or two weeks.

Cr. 1. A survey of pedagogical materials and methodology of the student's performance area. Students will be required to observe lessons and do practice teaching during the semester. Must be taken concurrently with MUS 453.

MUS 456/556. Twentieth Century Techniques. 
Cr. 3. A study of selected 20th century musical works demonstrating stylistic characteristics of impressionism, neoclassicism, non-silver atonality, serialism, minimalism, indeterminacy, and neo-romanticism. Particular attention is paid to compositional technique and style. Prerequisite: MUS 263.

MUS 464/564. Studies in Counterpoint. 
Cr. 3. In this course 16th century counterpoint is studied through the writing of music based on stylistic models and through analysis of representative works of the period. Also included in the course is an introduction to Schenkerian analysis. Prerequisite: MUS 264.

Cr. 3 An intensive academic study of the history, philosophies, and practices of music in Christian churches with an emphasis on the Lutheran heritage. Readings from the standard scholarly texts in the field and from current professional publications, discussed in a seminar format. Topics include theology of music, hymnody, music in worship, church music organizations, and sacred music repertoire. Open to upper division and graduate music majors; non-majors may be admitted by permission of the instructor.

Cr. 2. A study of current issues and trends in the music industry. This capstone course includes in-depth research into each student’s area of career focus and culminates in a presentation or project. Prerequisite: MUS 385 or permission of the instructor.

MUS 486. Internship. 
Cr. 3. Controlled, on-the-job experience with participating businesses for senior music students. May be taken during the regular term with part-time employment of 18 to 20 hours weekly or during the summer session with 36 to 40 hours per week. Term project required. Applications should be made early in the semester preceding registration for this course. The application is reviewed on the basis of the student’s academic standing, faculty recommendations, professional progress and demonstrated interest. May not be repeated for credit. SU Option may be elected. Prerequisite: MUS 385.

MUS 489. School Music II. 
Cr. 3. A study of music materials, procedures, organization, administration and musical growth and development of students in junior high, middle and high schools. Includes introduction of philosophical foundations, principles and literature of the music education profession. Prerequisite: MUS 389 and admission to Teacher Education.

MUS 495. Independent Study in Music. 
Cr. 1-3. A course of study arranged by the student with the consent of and under the supervision of a faculty advisor. The study results in a written essay on a topic approved by the advisor. Prerequisites: MUS 264 and 381 and approval of the Chair of the Department.

MUS 497. Honors Work in Music. 
Cr. 3. See Honors Work, page 54.

MUS 498. Honors Candidacy in Music. 
Cr. 3. See Honors Work, page 54.

MUS 499. Music Colloquium. 
Cr. 0. All music majors will register for this course each semester in residence as outlined in the Handbook for Music Students. SU Grade.

PERFORMANCE

Notes: Non-music majors who are candidates for degrees in the College of Arts and Sciences are restricted to a maximum of 16 credit hours in performance, including no more than four credit hours in ensemble music, which may be applied toward degree requirements.

A. Studio Instruction. See page 257 for appropriate fees.

Cr. 1-3. A four-year undergraduate and graduate program of study is offered to students of Valparaiso University in piano, organ, harpsichord, orchestral and band instruments; voice, guitar, and composition. The choice and use of materials are determined by the instructor in each area following guidelines which appear in the Department of Music Handbook for Music Students. A limited number of studio spaces are available for non-majors. All non-major studio enrollments are for 1 credit hour. Bachelor of Music Education and Bachelor of Music majors may register for 2 credit hours in their principal performance medium. Only Bachelor of Music majors may register for 3 credit hours in their principal performance medium. Studio instruction for music majors is supplemented with a required performance colloquium which meets for one 50-minute period per week (MUS 459, 6 cr.), non-majors enrolled in studio instruction are welcome to participate in the colloquium and are urged to do so. Students will register for one of the following levels in their studio instruction medium: MUS 303, 103, 203, 303, 403, 453, 503, 603.

Students with no prior or minimal study should register for MUS 003.

Music majors are accepted into the music program following an audition and are placed at an appropriate level as specified by the guidelines of their chosen degree program. Other students will be placed at an appropriate level through consultation with the Chair of the Department and the studio faculty.

Studio instruction is available in: 

Voice 
Flute 
Viola 
Violin 
Viole 
Viooncello 
Contrabass 
Classical Guitar 
Composition, Private instruction in musical forms, techniques, and materials leading the development of new works. Approval of the chair required.

B. Ensemble Music Instruction.

Instruction in one of the major ensembles for a period of one semester gives one credit hour. Instruction in one of the minor ensembles gives 0.6 credit hour. If a student has earned eight credit hours in ensemble music, any additional enrollments are graded on the SU basis. The following are considered major ensembles: University Singers, Valparaiso University Chorale, Kantorei, Concert Band, Jazz Band, Chamber Orchestra. All other ensembles listed here are considered minor ensembles. All ensemble courses are available for graduate credit at the 500 level. Enrollment at the 500 level is limited to students who have specialized training and background to participate in the ensemble in some capacity (such as assistant conductor, section leader or project director) to be determined by the instructor of the ensemble and with the approval of the Chair of the Department. Note: Non-music majors may apply no more than four credit hours of ensemble music toward a degree in the College of Arts and Sciences.

University Singers, Valparaiso University Chorale, Kantorei, admission by audition only.

MUS 502/552. Bands. 
Concert Band, Luce Band, Jazz Band, admission by audition only. Also Community University Band, audition not required.

MUS 504/554. Orchestra. 
University Symphony Orchestra. Admission by audition only.

Admission by audition only.

Small specialized ensembles to study and perform an array of repertoires, including Trumpet Choir, Trombone Choir, Guitar Ensemble, and Jazz Combo. Open to students at a variety of skill levels. Some sections required audition or prior consultation with the instructor.

MUS 508, 558. Chamber Music. 
Specialized ensembles, one to a part, for study and performance of standard chamber music repertoire (typically instrumental duos, trios, quartets, etc.) Admission and placement in sections by department screening only.
Philosophy

Professor Kennedy (Chair);
Associate Professors Geiman, Visser;
Assistant Professor Mullen (Visiting).

Courses in philosophy offer students the opportunity to examine basic issues which arise in all fields of endeavor and also to explore the positions of the great thinkers of both Western and non-Western civilizations. These courses encourage students to reflect philosophically on those concepts which significantly shape human life because of the capacity to play in language, thought, belief, and action. Reflection is philosophical if it is analytical, critical, and evaluative. The study of philosophy tends to develop and sharpen analytical and critical thinking generally, not only about philosophical topics, but also about other disciplines as well. Philosophy courses can also help educated Christians think critically about various issues raised by involvement in their religious communities.

A major in philosophy may lead to careers such as law, the ministry, teaching, and enhances careers in medicine, business, education, writing, and public service.

Major. A minimum of 36 credit hours in philosophy constitutes a major. Courses must include PHIL 150 275, 280 and one additional 200-level course, 375 and two additional 300-level courses, 425 and 450.

The Department recommends specific plans of study for those preparing for entrance into law school, seminary, or other study in philosophy. Majors who are preparing for graduate study in philosophy are advised to complete a minimum of 36 credit hours of philosophy. Recommended plans of study are available at the Departmental Office.

Minor. A minimum of 18 credit hours in philosophy constitutes a minor. Courses must include PHIL 150, 275, 280, and one 300-level or 400-level philosophy course.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in philosophy leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major or minor must have their schedules approved by the Chair of the Department at the beginning of each semester.

Prerequisites. Courses numbered 100 are considered introductory courses and have no course prerequisites. Courses numbered 200 are considered advanced introductory courses and require sophomore standing or consent of the instructor. Courses numbered 300 and above are considered advanced courses and have, as prerequisite, any one course numbered under 300, or sophomore standing in Christ College, or consent of the instructor. Courses numbered 400 and above are designed for majors and minors.

General Education. Any course in philosophy will satisfy the General Education Historical and Philosophical Studies requirement, but students will usually be best served by choosing PHIL 115, 120, 125, or 150. From time to time certain philosophy courses are cross-listed with upper level Theology courses and thus may satisfy that requirement under the Theology number. PHIL 120 will also satisfy the U.S. Cultural Diversity requirement. PHIL 220 will satisfy the Diversity: Global Cultures and Perspectives requirement. PHIL 210 will satisfy the Fine Arts/Fine Arts Literature requirement.

Note: Students should consult the Philosophy Department Course Descriptions Brochure published by the Department each semester and the Schedule of Classes to ascertain when any particular course will be offered. The brochure gives a detailed description of each course offered in the following semester. Copies are available at the departmental office and before every registration.

PHIL 115. Introduction to Philosophy: Reason and Reality.

CR. 3. An introduction to philosophy which features some of the most fundamental questions raised by both ordinary persons and philosophers in their attempts to understand themselves and their world. Questions are raised about the nature of reality, the foundations of knowledge and value, the nature of persons, freedom and causality, and the relationship between faith and reason.

PHIL 120. Introduction to Philosophy: Democracy, Education and Multiculturalism.

CR. 3. An introduction to some philosophical problems relating to ethnicity and multiculturalism particularly as these arise in political philosophy and philosophy of education in the American context. May be used to fulfill the U.S. Cultural Diversity component of the General Education Requirements.

PHIL 125. Introduction to Philosophy: The Good Life.

CR. 3. A philosophical introduction to moral issues which confront us in everyday life. When should the concerns of others inhibit my personal freedom? How much should I care about others? What are my responsibilities to myself? My family? The hungry of the world? What sort of person should I be? The course emphasizes the importance of being reflective about how to live one's life.

PHIL 150. Logic and Critical Thinking.

CR. 3. An introduction to different strategies for constructing and evaluating arguments. Emphasis is placed on the development of skills needed to deal competently with arguments encountered in everyday life as well as on some of the more formal techniques of logical analysis.

PHIL 205. Philosophy of Science.

CR. 3. A philosophical approach to the language, practices, and goals of the physical sciences. Special attention is given to the concepts, methods, and theories of the physical and biological sciences, leading toward an interpretation of science. Prerequisite: sophomore standing or consent of the instructor.

PHIL 210. Philosophy of Art.

CR. 3. A study of theories of art and aesthetic experience. Readings from classical and contemporary sources. Reference is made to works of art accessible to the student through field trips, slides, performances and recordings. This course may be used to fulfill the Fine Arts/Fine Art Literature component of the General Education Requirements. Prerequisite: sophomore standing or consent of the instructor.

PHIL 220. Non-Western Philosophy.

CR. 3. An introduction to some major philosophical themes in non-Western thought. Emphasis is upon the analysis of primary texts. Prerequisite: sophomore standing. This course fulfills the Global Cultures and Perspectives component of the General Education Requirements. Prerequisite: sophomore standing or consent of the instructor.

PHIL 230. Environmental Philosophy and Ethics.

CR. 3. A survey of major conceptions of the relationship between humanity and the environment and the kinds of beliefs, attitudes, and actions entailed by those conceptions. Topics may include conservationism, deep ecology, bioregionalism, political ecology, and creation spirituality. Prerequisite: sophomore standing or consent of the instructor.

PHIL 240. Feminist Philosophy.

CR. 3. A philosophical examination of feminist theory or some issue or issues in feminist philosophy. Issues may include gender and knowledge, the social construction of reality, women and law, and nature and identity. Prerequisite: sophomore standing or consent of the instructor.

PHIL 250. Political Philosophy.

CR. 3. (Also offered as POLS 250.) A survey of the major formulations and problems of Western political thought as developed by political philosophers from the Greeks through the modern era. Prerequisite: sophomore standing or consent of the instructor.

PHIL 275. Ancient and Medieval Philosophy.

CR. 3. An introduction to great philosophers and themes of the ancient and medieval world. Emphasis will be placed upon Plato and Aristotle, Augustine and Thomas Aquinas. Primary documents are read throughout. Prerequisite: any 100-level philosophy course or consent of the instructor.

PHIL 280. Early Modern Philosophy.

CR. 3. An introduction to major thinkers and themes of seventeenth and eighteenth century Europe: Descartes, Leibniz, Hobbes, Locke, and Hume. Emphasis will be placed upon the Rationalist and Empiricist traditions and their synthesis in Kant. Primary documents are read throughout. Prerequisite: any 100-level philosophy course or consent of the instructor.

PHIL 290. Philosophical Topics.

CR. 3. A study of a focused philosophical theme or issue. This course may be repeated for credit if the topics are different. Prerequisite: sophomore standing or consent of the instructor.

PHIL 310. Theory of Knowledge.

CR. 3. An examination of selected topics which illustrate dominant themes of traditional and contemporary theories of knowledge, such as skepticism, perception, evidence, verifiability, memory, belief, justification, and truth. Prerequisite: any two courses in philosophy or consent of the instructor.

PHIL 315. Philosophy of Language.

CR. 3. How do words mean? The nature of meaning and of language has been at the center of twentieth century philosophy. This course will examine these and other issues in the philosophy of language, concentrating on the discussions of recent philosophers. Prerequisite: PHIL 150 or MATH 151 or consent of the instructor.
PHIL 320. Metaphysics.
Cr. 3. An examination of traditional and contemporary metaphysical topics, such as time, substance, agency, freedom, appearance and reality, persons, the mind-body problem. Prerequisite: PHIL 150 or MATH 151 or consent of the instructor.

PHIL 330. Philosophy of Religion.
Cr. 3. A philosophical analysis of some of the beliefs, concepts, and problems involved in traditional theistic belief and its critics. Problems include arguments for the existence of God, religious experience, the problem of evil, and faith and reason. Prerequisite: one course in philosophy or any Level II Theology course.

PHIL 335. Ethical Theory.
Cr. 3. A study of some significant ethical theories and issues. Emphasis is on issues concerning the nature of moral discourse and practice: the existence of objective moral values, the relation of religion and morality, the possibility of moral knowledge, the place of reason and convention in moral discourse and practice. Prerequisite: any two courses in philosophy or consent of the instructor.

PHIL 341. Biomedical Ethics.
Cr. 3. (May also be offered as THEO 341.) A study of moral issues raised in biomedical research and biological engineering, genetic engineering, and resource allocation. Attention is given both to ethical theory and to practical issues. Prerequisite: one course in philosophy or any Level II Theology course.

PHIL 345. Advanced Logic.
Cr. 3. A study of formal deductive logic as codified in first-order predicate logic, including the concepts of proof, consistency, and completeness, and topics in logical theory and the foundations of mathematics. The relationship between formal logic and rational inquiry is also explored. Prerequisite: PHIL 150 or MATH 151 or consent of the instructor.

PHIL 375. Advanced History of Philosophy.
Cr. 3. An advanced study of the major philosophical themes of some period, for example, nineteenth century German philosophy, eighteenth century Scottish philosophy, or medieval philosophy. Prerequisite: PHIL 275 and 280 or consent of the instructor.

PHIL 386. Internship in Philosophy.
Cr. 1-3. Students gain experience working for organizations or agencies in which writing proficiency and critical thinking skills are essential. A written report is required. May not be used for the major or minor. SU/grade only. Prerequisite: approval of the chair of the department.

PHIL 425. Advanced Philosophical Topics.
Cr. 3. An examination of the work on one major philosopher such as Aristotle, Wittgenstein, or Kant, or of a single philosophical approach such as Augustinianism or phenomenology, or of one philosophical problem such as free will or moral realism. Prerequisite: PHIL 275 and 280 or consent of the instructor.

PHIL 450. Philosophy Seminar.
Cr. 3. A seminar required of all philosophy majors in their senior year. An examination of the nature and value of philosophy through the study of some philosophical problem, and classic and contemporary texts. Prerequisite: PHIL 275 and 280 or consent of the instructor.

PHIL 495. Independent Projects.
Cr. 1-3. A student may undertake independent study of some person, problem, theme, etc., under the supervision of some member of the Philosophy Department. The student will propose a topic, generate a bibliography and specify the scope and goals of the study.

PHIL 497. Honors Work in Philosophy.
Cr. 3. See Honors Work, page 54.

PHIL 498. Honors Candidacy in Philosophy.
Cr. 3. See Honors Work, page 54.

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Physical Education

Associate Professor Stieger (Chair); Assistant Professors Morrison, Tyree; Adjunct Assistants Trouh, Moore; Adjunct Instructors Daughtery, Hayes, Seibert.

The Physical Education Department seeks to provide students with knowledge and skills designed to enhance the quality of campus life as well as to provide them with suitable basic experiences for lifelong personal use. Although physical education within a school setting is a continuing area of professional opportunity, personal physical activity and enjoyment of spectator sports has created new areas of opportunity for the physical educator: adult fitness, leisure services, exercise science, sports writing and broadcasting, and sports management. Students can select courses from the departmental curriculum to reflect these new areas.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in physical education leads to the Bachelor of Science in Physical Education degree. The Sports Management major and Exercise Science major are noted on a student's transcript as Physical Education: Sports Management or Physical Education: Exercise Science.

Physical Education Major. A minimum of 28 credit hours in physical education constitutes a major. Courses must include PE 150, 190, 230, 235, 240, 350, 370, 410, and 440. In addition, students must complete BIO 151, 152, and 205, CHEM 111, and PSY 110.

Physical Education Minor. A minimum of 18 credit hours in physical education constitutes a minor. Courses must include PE 150, 190, 230, and 370.

Physical Education Teacher Education. Students who plan to teach elementary or secondary schools with a major or minor in Physical Education must also complete a complementary major in secondary education.

The Physical Education Teacher Education Major: All Levels (Early/ Middle Childhood, Middle Level, Adolescence/Young Adult). This teaching major requires a minimum of 53 credit hours. Courses must include PE 101 or 105, 150, 170, 180, 190, 210, 211, 230, 235, 240, 250, 260, 270, 350, 360, 370, 389, 410, 440, and 489. Students must also pass all portions of the Pre-Professional Skills Test (PPST) and gain formal admission into the Teacher Education program in the Education Department. The complementary major in Secondary Education for Physical Education Teacher Education must include ED 203, 204, 305, 370, 460, SPED 440, ED 485, and 459.

Physical Education Teaching Middle School/Secondary Major (Middle Level, Adolescence/Young Adult). This teaching major requires a minimum of 36 credit hours. Courses must include PE 150, 170, 190, 230, 235, 240, 250, 260, 350, 370, 389, 410, and 440. Additionally, students must pass all portions of the Pre-Professional Skills Test (PPST) and gain formal admission into the Teacher Education program in the Education Department.

Physical Education Teaching Middle School/Secondary Minor (Middle Level, Adolescence/Young Adult). This teaching minor requires a minimum of 22 credit hours. Courses must include PE 150, 170, 190, 235, 240, 260, 350, 389, and 370 or 440. In addition, students must complete BIO 151, 152, and 205.

Health Education Content Area. This teaching minor requires a minimum of 21 credit hours. Courses must include PE 190, 235, BIO 151, 152, 205 and SOC 160.

Coaching Certificate. This certificate requires a minimum of 17 credit hours. Courses must include PE 180, 190, 220, 235, 310, 370, and 440.

Sports Management Major. A minimum of 30 credit hours in physical education is required. Courses must include PE 150, 220, 233, 240, 310, 320, 333, 433, 410, 473, 496 (3 credit hours). Either the Senior Project or the Internship must be an off-campus experience. In addition, students must complete COMP 100 and 265, and the 21-credit Liberal Arts Business Minor.

Exercise Science Major. A minimum of 24 credit hours in physical education is required. Courses must include PE 150, 220, 370, 387, 410, 440, 473 (3 credits) 477. In...
addition, students must complete PHYS 111, PSY 201, either BIO 205 or BIO 260, and a minor in either chemistry or human biology.

Exercise Science Minor. The exercise science minor requires a minimum of 15 credit hours in physical education. Courses must include PE 150, 220, 370, 387, 440, 477. In addition, students must also complete BIO 205 or BIO 260.

Approval of Schedules. All students pursuing a major or minor in the Department, and all students who plan to achieve certification in the teaching of physical education must have their schedules reviewed by the Chair of the Department or a departmental advisor before each registration period.

Basic Courses in Physical Education. All students must take one credit hour of Fitness Principles and Activities courses PE 101-106. Each section meets twice a week for fourteen weeks. Anyone who has served in the Armed Forces for at least one year is exempted from this requirement, except a National Guard member.

No more than four credit hours earned in PE 100-149 may be counted toward any degree.

PE 101. Individual Exercise. 0-2, Cr. 1. Principles and physiology of physical fitness and topics such as aerobic exercise training, nutrition and aerobic conditioning. A personalized exercise program is developed.

PE 102. Aerobic Dance. 0-2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic dance program.

PE 103. Aerobic Run. 0-2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic run program.

PE 104. Aerobic Swim. 0-2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in an aerobic swim program.

PE 105. Weight Training. 0-2, Cr. 1. Principles and physiology of physical fitness is included in conjunction with the physical activities involved in a weight training program.

PE 106-149. Elective Activities. 0-1, Cr. 0.5. Individual, dual, team, indoor and outdoor activities are presented in various combinations. A specific activity may not be repeated for credit. Each course meets twice a week for seven weeks. S/U graded only.

PE 150. Introduction to Physical Education. Cr. 1. Seven weeks course. An introductory course for students interested in physical education. The course provides an opportunity for students to explore physical education: teacher education, athletic training, exercise science or sports management as fields of study.

PE 160. Advanced Lifesaving/Lifeguarding. 1-2, Cr. 2. Analysis and practice of skills in swimming and lifesaving which lead to an American Red Cross Advanced Lifesaving Certificate (2 Cr.). Analysis and practice of skills in swimming, lifesaving and lifeguarding which lead to an American Red Cross Lifeguarding Certificate (2 Cr.: Mini or Summer Session only). Prerequisite: approval of the instructor.

PE 170. Water Safety Instruction. 1-2, Cr. 2. A study of the techniques for teaching swimming and lifesaving. This course leads to an American Red Cross Water Safety Instructor's Certificate. Additional hours may be announced. Prerequisite: PE 160 or approval of instructor.

PE 180. Officiating in Sports. Cr. 1. May be offered as a seven weeks course. A study of the general principles and techniques involved in officiating interscholastic sports. May lead to state certification when appropriate. Because the course is divided into one-credit sections each dealing with a specific sport, no section may be repeated for credit.

PE 190. First Aid, Health and Safety. Cr. 2. Seven weeks course. A study of the prevention and emergency care of sudden illness and injury, which leads to American Red Cross Certification in Advanced First Aid Rescuing to Emergencies and Community CPR. Cr. 3. The course includes an introduction to the sports enterprise and the management function within these settings. Students are exposed to basic organizational and problem-solving techniques.

PE 220. Coaching Theory. Cr. 1-2. Seven week course. The 1-credit sections involve a study of the methods and principles of coaching interscholastic and intercollegiate sports. The 2-credit section also includes a study of the methods associated with the planning, periodization, peaking, and bio-motor development in coaching. Students will develop a comprehensive seasonal plan for a specific sport. The 1-credit sections may not be repeated with the same sport.


PE 233. Management and Development of Facilities. Cr. 3. The course explores planning, developing, and managing sports facilities. Students examine existing facilities and plan for the development and management of new sports facilities.

PE 240. Movement and Learning. 2-2, Cr. 3. Introduction to human motor development emphasizing major theoretical viewpoints; factors affecting motor development including physiological change, perceptual change, cognitive change, sociocultural practices, and intervention. The course will have applications to kinesiology, motor learning, adapted physical education, and both elementary and secondary education.

PE 250. Dance Patterns and Forms. 2-2, Cr. 3. A study of dance with emphasis on modern, tango, social and square dance forms as well as teaching techniques.

PE 260. Gymnastics. 1-2, Cr. 2. This course consists of methods and techniques of outdoor and tumbling techniques. May meet three times a week.

PE 270. The Learning Potentialities of the Out-of-Doors. 1-2, Cr. 2. Seven weeks course. An experience of learning opportunities as provided by camping and outdoor education, including outdoor elementary educational activities. Field trips are required as part of the laboratory experience.

PE 289. Physical Education and Health Methods for Classroom Teachers. Cr. 2. This course offers content, methods, and materials in health and physical education for elementary classroom teachers. Health and physical education lesson planning, peer teaching, cross-curricular lessons, rhythms and multi-cultural games will be included in course work. Prerequisite: sophomore standing.

PE 290. Special Topics in Recreation and Leisure Studies. Cr. 1-3. An open topic course which may investigate various topics pertaining to recreational and leisure programs (e.g., organization of intramural programs, adult fitness, outdoor recreation program management, pool management, SCUBA).

PE 310/311. Psychology of Sport. Cr. 3. A study of the competitive sports experience, with emphasis on the multidimensional factors involved in the psychology of sport. Prerequisite: PSY 110.

PE 320/320. Sport and Society. Cr. 3. A study of the role of sports in society and the effects of culture and society on sports.

PE 333. Management and Development of Facilities. Cr. 3. The course explores planning, developing, and managing sports facilities. Students examine existing facilities and plan for the development and management of new sports facilities.

PE 340. Movement and Learning. 2-2, Cr. 3. Introduction to human motor development emphasizing major theoretical viewpoints; factors affecting motor development including physiological change, perceptual change, cognitive change, sociocultural practices, and intervention. The course will have applications to kinesiology, motor learning, adapted physical education, and both elementary and secondary education.

PE 343. Sports Marketing, Promotions and Fund Raising. Cr. 3. A study of the roles of marketing, promotions, and fund raising in the sports enterprise. Students are involved in planning and organizing programs in these areas. Students also receive experience in implementing a group project on campus or in a community setting.

PE 350. Methods of Middle School Physical Education. 1-2, Cr. 3. A study of methods designed to address the specific needs of middle school physical education students. Course topics include specific needs of middle school learners, including teaching behaviors, instructional styles and strategies, and new technologies.

PE 360. Adapted Physical Education. Cr. 3. A study of the needs and problems of the exceptional individual with emphasis on adapting appropriate activities to meet these needs.

PE 370. Kinesiology. 2-2, Cr. 3. A study of the musculoskeletal and biomechanical principles of movement. Prerequisite: BIO 151.
PE 387. Fitness Assessment and Exercise Prescription.
Cr. 3. Introduction to physiological testing protocols, fitness evaluations and the design of exercise prescriptions based on direct and indirect measures, e.g., oxygen uptake, heart rate, caloric expenditure. Areas of study include but are not limited to cardiac rehabilitation, COPD, diabetes, pregnancy, youth and the elderly. Prerequisite: BIO 151, 152 or approval of the instructor.

PE 389. Teaching Physical Education in the Elementary School.
Cr. 3. Focuses on planning, teaching, and evaluating a developmental physical education program for elementary school students. Includes lab experience designed to enhance planning, management and teaching skills.

PE 410/515. Measurement and Evaluation in Physical Education.
Cr. 3. An analysis of evaluation techniques for physical education of physical education of central tendency, statistical designs, computer use and empirical research for physical education.

PE 440. Physiology of Exercise.
2+2 Cr. 3. An investigation of the physiological response of the human body to exercise and training, with laboratory experience. Prerequisite: BIO 152.

PE 473. Physical Education Senior Project.
Cr. 3. A personal investigation of a specific area in the field of Physical Education, Sports Management, or Exercise Science. Students utilize research techniques common to the field and culminate the experience with a written report. Prerequisites: senior standing and approval of the Chair of the Department.

PE 477. Advanced Physiology of Exercise.
Cr. 3. Critical review of the most current exercise science literature. Topics include biochemistry of exercise, carbohydrate and fat metabolism, ergogenic aids, muscle physiology, endocine physiology and cardiac rehabilitation. Prerequisites: PE 370, 387, 440, CHEM 122, or approval of the instructor.

PE 486. Internship in Physical Education or Athletics.
Cr. 1-3. An opportunity for students to gain practical experience under careful supervision by working in university programs or offices, public agencies or businesses, sport clubs, sports medicine clinics, community or adult fitness programs, high schools, media and communications, programs for the elderly, athletic administration, intramural and facility management or other appropriate work experiences. Objectives, evaluations and procedures for the conduct of the course are jointly planned by the student, the instructor and the program supervisor. This course may be repeated for a maximum of six credit hours. Prerequisites: junior standing, approval of the instructor and consent of the Chair of the Department.

PE 488. The Teaching of Physical Education.
Cr. 3. (See ED 489.) A study of the methods of teaching physical education in the elementary and secondary schools. This course may not be counted towards a major or minor in Physical Education. Prerequisite: admission to Teacher Education.

PE 490. Special Topics in Physical Education.
Cr. 1-3. An open-topic course which examines a variety of topics pertaining to the needs of the physical educator, e.g., motor learning, curriculum construction, advanced athletic conditioning, current issues in physical education.

PE 495. Independent Group Study.
Cr. 1-3. A personal investigation of a research-oriented concern pertaining to physical education. This course may be repeated for a maximum of six credit hours. Prerequisite: approval of the instructor and consent of the Chair of the Department.

PE 497. Honors Work in Physical Education.
Cr. 3. See Honors Work, page 54.

PE 498. Honors Candidacy in Physical Education.
Cr. 3. See Honors Work, page 54.

Physics and Astronomy

Professors Hrivnak (Chair), Manweiler; Associate Professors Stanislaus, Zygmunt; Assistant Professors Gibson (Visiting), Hillwig (Visiting), Morris, Richter.

Physics is the study of natural phenomena in an attempt to explain the interactions of matter and energy in terms of a limited number of fundamental laws. This study is predicated on careful observation and experimentation, thoughtful analysis, and creative insights. It is both descriptive and prescriptive and encompasses a realm from the submicroscopic particles of the atomic nucleus to the distant constituents of the universe.

In this context, the Physics and Astronomy Department offers a program of study to prepare students for graduate study and for entry-level work as a physicist in government or industry. Fields of study and employment include, but are not limited to, astrophysics, nuclear physics, elementary particle physics, molecular physics, condensed matter physics, quantum electronics, laser optics, astronomy, astrophysics, geophysics, and a The Department is well equipped, having a particle accelerator, an astronomical observatory and extensive computer resources. Students pursue research projects under the direction of members of the faculty.

The Department sponsors a local chapter of the national Society of Physics Students. Qualified students are elected to membership in the national honor society, Sigma Pi Sigma. More information about the department can be found on the internet at <http://www.physics.valpo.edu/>.

Qualified students may obtain cooperative education experiences in a variety of employment situations, including research laboratories and industrial and engineering companies. Up to four credits may be counted towards the minimum 28 credit hours needed for a physics major. With departmental approval, PHYS 481-483 or 497 may be substituted for PHYS 445. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Major. A minimum of 28 credit hours in physics and astronomy (32 credits for a Bachelor of Science degree) constitutes a major. Courses must include the core courses PHYS 243, 245, 250, 281, 310, 345, 371, 445 and 499.

Four concentrations within the physics major have been designed to meet students' educational and career goals. The departmental advisor will assist students in selecting the most appropriate physics major emphasis and the courses which apply within the emphasis.

One year of chemistry is recommended. It is assumed that students majoring in physics will acquire competency in at least one computer programming language (FORTRAN, C, C++). Courses in astronomy may be taken as electives.

The Fundamental Physics Concentration is intended for students primarily interested in pursuing a career in physics and who may anticipate graduate study in physics. In addition to the core courses, the following courses may be used to complete the major: PHYS 360, 372, 381, 421, 422, 430, 440, MATH 430 and 434 are also recommended.

The Astronomy and Space Science Concentration is intended for students interested in careers in astronomy and related fields and who might pursue graduate studies in astronomy or space science. In addition to the core courses, the following courses may be used to complete the major: ASTR 101, 190, 221, 252, 390, and 445, the latter substituted for PHYS 445.

The High School Teaching Concentration is intended for students planning to teach physics at the secondary school level. This emphasis combines the physics major with education courses and professional field experience, and includes Physics 489. See the description of the Secondary Education Program on page 86 for further details. In addition to the Core courses, ASTR 101, 110L, and 221 are recommended.

The Applied Physics Concentration is intended for students interested in the application of physics to problems in a business or industrial environment. In addition to the core courses, students are
advise to complete the major by electing courses most closely associated with the physics application intended. Participation in the University’s Cooperative Education program (see page 56) is strongly recommended to give the student practical work experience. The Applied Physics option is most useful to students who will seek employment immediately after graduation.

Mechanics and Materials—for careers in research and development fields involving mechanics and materials science. In addition to the major, students are encouraged to complete the Mechanics and Materials minor described below.

Electronics—for careers in research and development fields involving electronic devices. In addition to the major, students are encouraged to complete the Electronics minor described below.

Computational Physics—for computer-related applications of physics and computational problem solving. In addition to the major, students are encouraged to complete the Computer Science minor (page 131).

Industrial Project Management—for management and project leadership in technological and scientific environments in business and industry. In addition to the major, students are encouraged to complete the Liberal Arts Business Minor (page 230).

Physics Minor. A minimum of 16 credit hours in physics and astronomy constitutes a minor. PHYS 243 and 245 must be included.

Mechanics and Materials Minor. A minimum of 16 credit hours which must include PHYS 109, 252, and 440. Other courses should be selected from PHYS 215, 333, and 262 and MATH 251.

Electronics Minor. A minimum of 16 credit hours which must include PHYS 342, 372, and 240. Other courses should be selected from PHYS 320, ECE 221, 222, 263, 264, and 315.

Degrees. Completion of the degree requirements of the College of Arts and Sciences with a major in physics leads to the Bachelor of Arts degree or the Bachelor of Science degree.

Credit by Examination. Credit for PHYS 111, 112, 141, or 142 may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.

Approval of Schedules. All students taking a major or minor in physics and all students planning to teach physics must have their schedules approved by the department advisor.

Astronomy

ASTR 101, Astronomy.
3+0, Cr. 3. A study of the history of mankind’s view of the universe including our contemporary understanding of the physical universe. The tools and techniques employed by contemporary astronomers to probe the universe are studied. Topics include the structure of the solar system as revealed by modern space probes, the sun, stellar systems and classification, and the structure and evolution of stars, galaxies and the universe. Special topics such as neutron stars, black holes and the big bang may also be examined. Only elementary mathematics is required. This course, along with ASTR 101L, may be used to fulfill the Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination.

ASTR 101L, Astronomy Laboratory.
0+3, Cr. 1. Laboratory experiences designed to give students personal experience with astronomical equipment, including the astronomical observatory, and with the analysis of astronomical data. Techniques and skills appropriate to physical sciences will also be stressed. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement examination. Prerequisite or concurrent registration: ASTR 101 or 252.

ASTR 190, Topics in Astronomy and Space Science.
Cr. 1-2. The study of various topics of current interest in astronomy and space science, at an introductory level. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the Department Chair for specific information.

ASTR 221, Observational Astronomy.
0+3, Cr. 1. Practical observational experience using the 16 inch reflector telescope and other instrumentation including photographic cameras, photostelectric photometer, spectograph, and CCD camera and computer. Prerequisite: ASTR 101 and 101L or 252 or consent of the instructor.

ASTR 282, Introduction to Astrophysics.
3+0, Cr. 3. A study of modern astronomy and the physical principles involved. Topics to be studied include the properties and evolution of stars and galaxies. Problems illustrating the quantitative nature of modern astronomy will be solved. This course along with ASTR 101L may be used to fulfill the Natural Science component of the General Education Requirements. Prerequisite or concurrent registration: MATH 131 or 151 and PHYS 243. Students who have taken ASTR 101 need permission from the Department Chair to also take ASTR 252.

ASTR 390, Topics in Astronomy.
Cr. 1-4. The study of various topics of current interest in astronomy and space science. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the Department Chair for specific information.

ASTR 445, Senior Research in Astronomy.
0+3, Cr. 1-2. This course is identical to PHYS 445 but with a specific focus on problems in astronomy. See PHYS 445 for details. Prerequisites: ASTR 221 and 252.

ASTR 492, Research or Reading in Astronomy.
Cr. 0-3. Research or reading in astronomy, under the supervision of a faculty member. Prerequisite: consent of the Chair of the Department.

Physics

PHYS 109, Mechanics—Statics.
Cr. 3. (Also offered as GE 109) A course in the resolution and composition of forces and moments as applied to the free body diagram. Topics include principles of equilibrium, fluid and second moments of areas, study of trusses, frames and machines, friction. Prerequisite: MATH 131 or 151, and PHYS 141.

PHYS 111, Essentials of Physics.
3+0, Cr. 3. The development of basic concepts of physics emphasizes intuition, logic and experiment rather than complex mathematical analysis. Specific topics included are space, time, motion, energy, conservation laws, fluids, sound and heat. Not open to students who have taken PHYS 111 L. Prerequisite or concurrent registration: PHYS 111 L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite or concurrent registration: MATH 131 or 151.

PHYS 112, Essentials of Physics Laboratory.
0+3, Cr. 1. Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 112. Emphasis is placed on experimental learning and on the continued development of laboratory skills in physical science. Prerequisite: PHYS 111 L. Prerequisite or concurrent registration: PHYS 112. Not open to students who have taken PHYS 112 L.

PHYS 120, Musical Acoustics.
3+0, Cr. 4. A study of the physical nature of sound waves, the production and measurement of sound and the physical and psychological basis of hearing and music. Although this course is of general interest, it is also suitable for music or other arts majors in fulfillment of the Natural Science component of the General Education Requirements.

PHYS 141, Physics: Mechanics and Heat.
3+0, Cr. 3. A study of classical mechanics, including static and dynamic systems, and of thermal physics for students of physics, engineering, chemistry and meteorology. Applications of calculus are made as appropriate. Although this course along with PHYS 141 L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite or concurrent registration: MATH 131 or 151.

PHYS 141L, Experimental Physics I.
0+3, Cr. 1. Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 111. Emphasis is placed on the development of laboratory skills in physics. Prerequisite or concurrent registration: PHYS 111 L. Not open to students who have taken PHYS 111 L.

PHYS 142, Physics: Electricity, Magnetism and Waves.
3+0, Cr. 3. A continuation of PHYS 141 which treats electricity, magnetism, wave motion and optics. Prerequisite: PHYS 141 and 141 L or advanced placement by permission of the Chair of the Department, MATH 132 or 152 or concurrent registration. This course along with PHYS 142 L may be used in fulfillment of the Natural Science component of the General Education Requirements.
PHYS 142L. Experimental Physics II.
0+3, Cr. 1. Laboratory experiments test and illustrate fundamental physics concepts and laws closely related to those studied in PHYS 142. Emphasis is placed on the development of laboratory skills in physics. Prerequisite: PHYS 141L. Prerequisite or concurrent registration: PHYS 142. Not open to students who have taken PHYS 112L.

3+0, Cr. 3. A study of classical mechanics, including static and dynamic systems, and of thermal physics for students of physics, engineering, chemistry, and meteorology. The pace of this course and the subject matter will be similar to that in PHYS 141. However, students are assumed to be proficient in differential and integral calculus at the outset, and applications of calculus are made throughout the course. This course along with PHYS 141L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite: MATH 132 or 152 or concurrent registration, equivalent AP credit, or the permission of the instructor.

PHYS 152. Physics: Electricity, Magnetism and Waves - Honors.
3+0, Cr. 3. A continuation of PHYS 151 which treats electricity, magnetism, wave motion and optics. This course along with PHYS 142L may be used in fulfillment of the Natural Science component of the General Education Requirements. Prerequisite: PHYS 151 or consent of the instructor. Corequisite: MATH 132 or 152.

Cr. 3. (Also offered as CE 215.) Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic elastic action, and an introduction to statically indeterminate problems. Prerequisite: MATH 132 and PHYS 109.

Cr. 3. An introduction to the special theory of relativity, physics of the atom, the Schroedinger wave equation, physics of condensed matter, physics of the nucleus including radioactivity, and elementary particles. Prerequisites: PHYS 142 and MATH 132 or 152 (may be taken concurrently).

PHYS 245. Experimental Physics III.
0+3, Cr. 1. Selected experiments include both the measurement of fundamental constants such as the speed of light, Planck's constant, the gravitational coupling constant, as well as investigations of fundamental physical processes. The further development of laboratory skills and methods of data analysis are emphasized, using advanced computer analysis and data acquisition techniques. Prerequisite: PHYS 142 and 142L. Normally offered in spring semesters.

PHYS 250. Mechanics.
Cr. 3. The classical mechanics of particles, systems of particles and rigid bodies, utilizing analytical techniques of vectors and differential and integral calculus. Among the topics included are Newton's laws of motion in one and three dimensions, conservation laws, harmonic oscillation, central force motion, scattering and an introduction to rigid body motion. Prerequisites: PHYS 142 and MATH 253 (may be taken concurrently).

PHYS 252. Materials Science.
2.5+1.5, Cr. 3. (Also offered as ME 252.) A study of structure-property-processing relationships of engineering materials related to their selection in design and manufacturing processes. Based on an understanding of atomic and crystal structure, the methods of controlling structure and mechanical properties of materials are studied with an emphasis on strengthening mechanisms. Processes studied include solidification, phase transformation, and mechanical working of metals. A field trip to an industrial facility is arranged. Prerequisite: MATH 132 or 152.

PHYS 281. Electricity and Electronics.
2.5+1.5, Cr. 3. (Also offered as ECE 281.) A study of the fundamental methods of electric circuit analysis with emphasis on computer-aided analysis. AC and DC circuits, operational amplifiers. Laboratory measurement techniques and reinforce lecture material. Prerequisite: PHYS 142 and 142L.

PHYS 310. Data Reduction and Error Analysis.
Cr. 1. The study and application of various techniques employed in the reduction and analysis of laboratory data to include probability distributions, regressions, tests of goodness of fit, data smoothing and the methods for determining the errors of measured and fitted parameters. Extensive use of the computer is expected. Prerequisite: MATH 263, corequisite: PHYS 245.

PHYS 322. Embedded Microcontrollers.
2.5+1.5, Cr. 3. (Also offered as ECE 322.) The application of microcontrollers in embedded system design, emphasizing the interaction of hardware and software design. Use of assembly language programming to interface external hardware to a microcontroller. Prerequisite: ECE 221 with a minimum grade of C.

PHYS 333. Mechanical Measurements Laboratory.
3+0, Cr. 4. (Also offered as ME 333.) A study of fundamental concepts and physical principles involved in the science of measurement. Experiments involve calibration and testing (both static and dynamic) of primary elements, signal amplifiers, transducers and readout devices. Experimentation utilizes laboratory and industrial instruments. Extensive use is made of computer data acquisition and spreadsheets. Prerequisite: PHYS 142.

PHYS 342. Electronics.
3.5+1.5, Cr. 4. (Also offered as ECE 342.) An introduction to semiconductor theory and the design and analysis of electronic circuits. Topics include diodes, bipolar and field effect transistors, single-stage and multistage amplifiers, frequency response, and feedback. Computer simulation is included as an analysis and design tool. Laboratory experiments emphasize evaluation of circuit performance and measurement techniques. Prerequisite: ECE 263 or permission of the instructor.

PHYS 345. Experimental Physics IV.
0+3, Cr. 1. Experiments in radiation detection and analysis using modern modular electronics. Prerequisites: PHYS 243, 245, and 310 and MATH 253.

PHYS 360. Thermal Physics.
Cr. 3. A study of the basic principles of thermodynamics, kinetic theory and elementary statistical mechanics. Among the topics included are equations of state, laws of thermodynamics, reversibility, entropy, kinetic theory, transport phenomena and statistical description of systems of particles. Normally offered in the spring semester of odd numbered years. Prerequisite: PHYS 243.

PHYS 371. Electromagnetic Fields.
Cr. 3. A study of electric and magnetic fields, their sources and interactions in vacuum and in dielectric and magnetic media. Prerequisites: PHYS 250 and MATH 224 or 285 or 350.

PHYS 372. Electromagnetic Waves and Physics.
Cr. 3. Proceeding from Maxwell's equations, students investigate the wave aspect of electromagnetic fields including propagation, reflection, refraction, polarization, interference and diffraction. Other topics include radiating systems and wave guides. Normally offered in the spring semester of odd numbered years. Prerequisite: PHYS 371.

PHYS 381. Advanced Mechanics.
Cr. 3. The application of advanced mathematical methods to physical problems. Topics may include Lagrange's method, small oscillation theory including coupled oscillators, generalized rotation, the theory of special relativity, numerical methods and perturbation theory. Normally offered in the fall semester of even numbered years. Prerequisites: PHYS 250 and MATH 234 or 285 or 350 (may be taken concurrently).

PHYS 390. Topics in Physics.
Cr. 1-4. A study of various topics of current interest in physics. Prerequisites are dependent upon the topic. Interested students are urged to contact the instructor or Chair of the Department for specific information.

PHYS 421. Quantum Mechanics I.
Cr. 3. The fundamental concepts and principles of quantum physics are developed in a mathematically rigorous way and applied to atomic, nuclear and solid state physics. Topics include the fundamental postulates of quantum mechanics, the Schrödinger equation, and selected topics such as the harmonic oscillator, orbital and spin angular momentum, the hydrogen atom, identical particles, elementary matrix mechanics, multi-electron atoms, and collision theory. Normally offered in the fall semester of odd numbered years. Prerequisites: PHYS 243 and MATH 234 or 285 (both of which may be taken concurrently, or permission of the instructor.

PHYS 422. Quantum Mechanics II.
Cr. 3. A continuation of PHYS 421, with further development and application of quantum theory. Topics include time independent and time dependent perturbation theory with applications, scattering theory, multi-electron, atomic and molecular systems, elementary Hartree-Fock theory, superconductivity, and elementary relativistic quantum mechanics. Normally offered in the spring semester of even numbered years. Prerequisite: PHYS 421 or the permission of the instructor.

PHYS 430. Nuclear Physics.
Cr. 3. Nuclear physics for students with physics or engineering backgrounds. Topics include nuclear models, nuclear reactions, alpha, beta, and gamma radioactivity, and fission physics. Prerequisite: PHYS 243. Normally offered in the spring semester of even numbered years.

PHYS 430L. Nuclear Physics Laboratory.
0+3, Cr. 1. An advanced laboratory to study nuclear reactions, nuclear structure, radiactivity. Experiments may use the 300 keV particle accelerator and a neutron howitzer. Prerequisites: PHYS 310 and 345; corequisite: PHYS 430. Normally offered in the spring semester of even numbered years.

Cr. 3. A presentation of the basic concepts of the quantum theory of matter, with emphasis on physical models which provide a quantitative description of the solid state. Topics include
PHYS 489. The Teaching of Natural Sciences. Cr. 3. (See ED 489.) A study of the methods of teaching natural sciences in the secondary schools. This course may not be counted toward a major or a minor in Physics. Prerequisite: admission to Teacher Education.

PHYS 490. The Scientific Endeavor. Cr. 3. An exploration of the scientific enterprise involving a study of foundational principles and assumptions of the scientific endeavor, its various methodologies, and its scope and limitations. This will include illustrations from historical case studies and "scientific revolutions." Students will also study the ethical and moral connections between their personal and professional science lives. Prerequisite: junior or senior standing. This course may not be used to fulfill the minimum requirements of a physics major.

PHYS 492. Research or Reading in Physics. Cr. 0.5-3. Research or reading in physics, under the supervision of a faculty member. Prerequisite: consent of the Chair of the Department.


PHYS 499. Physics Colloquium. Cr. 0. All physics majors are expected to register for this course. S/U grade.

Political Science

Professors Baas (Chair), Trost; Associate Professors Kingsland, Lin; Adjunct Assistant Professors Old, Shearer.

Historically, political science has occupied a central position in liberal arts. The study of politics focuses on the values that humans should seek and the particular legal and structural organizations that allow us to realize our desired values. Contemporary political science combines this concern for normative issues with an emphasis on the development of scientific explanation of political matters. Hence, political science now stresses the use of sophisticated scientific procedures and empirical and quantitative methodology in seeking explanations as well as attempting a normative analysis.

A major in political science may lead to many careers including, but not limited to, law, criminal justice, business, education, government service at the state, national, local and international level, politics, policy analysis, campaign management, and work for private interest groups. Many political science graduates eventually go on to law school and other graduate programs.

The Department sponsors a series of informal events where a variety of topics are discussed. The Department also recognizes outstanding student achievement through membership in the Beta Nu Chapter of Pi Sigma Alpha, the national political science honor society.

Special Programs. For information concerning the Lutheran College Washington Consortium Semester and the Washington Semester see page 12. For information concerning the Semester on the United Nations see page 12.

Community Research and Service Center. The Department of Political Science has established the Community Research and Service Center. The primary goals of the Center are the following: first, to provide research assistance and other services to government, not-for-profit organization, and in some instances, business in Northwest Indiana; second, to provide students the opportunity to learn in an applied setting. Students become integral parts of the Center by taking certain courses and in the process learn basic research methods and gain practical experience in working for and dealing with government, business and other organizations.

Community Outreach Partnership Center. The department administers a Department of Housing and Urban Development grant that seeks to develop university-community partnerships to assist in the revitalization of local neighborhoods. Students are involved in this project as interns, paid assistants and volunteers, and assist in doing research and providing service.

Concentrations in Political Science. The department has developed a number of options for the major and the minor that allow students to pursue their own interests and vocational goals. Concentrations are defined for interest in international relations and comparative politics, legal studies, public policy and public administration, as well as general political science.

Major. A minimum of 30 credit hours in political science constitutes a major. The following are required of all majors: POLS 120, 130, 240, and 493. In addition, one of the following concentrations must be followed.

General Political Science. In addition to the 12 credit hours required of all majors, students take an additional 18 credit hours from any of the courses offered in the department.

International Relations and Comparative Politics Concentration. In addition to the 12 credit hours required of all majors, students are required to take POLS 230 and at least 12 of the remaining 15 credit hours needed for the major from the following: POLS 330, 335, and 380 and 490 when the topics are appropriate.

Legal Studies Concentration. In addition to the 12 credit hours required of all majors, students take at least 15 of the remaining 18 credit hours needed for the major from the following: POLS 140, 220, 340, 341, 345, and 380 and 490 when the topics are appropriate.

Public Policy and Public Administration Concentration. In
addition to the 12 credit hours required of all majors, students are required to take POLS 360, 361, and at least 9 of the remaining 12 credit hours needed for the major from the following: POLS 220, 260, 270, 320, 326, 327, 345, 360, 361, 386, and 490 when the topic is appropriate.

Minor. A minimum of 18 credit hours in political science constitutes a minor.

Political Science Minor. The following courses are required for this concentration: POLS 120 and 130 and at least 12 additional credit hours.

International Relations Concentration. The following courses are required for this concentration: POLS 120, 130, 230, and 12 additional hours from the following courses: POLS 330, 335, and 380 and 490 when the topics are appropriate.

Interaction Studies Concentration. The following courses are required for this concentration: POLS 120, 220, and 12 additional credit hours from the following: POLS 140, 340, 341, 345, and 380 and 490 when the topics are appropriate.

Public Policy and Administration Concentration. The following courses are required for this concentration: POLS 120, 220, 360, 361, and 9 additional credit hours from the following: POLS 220, 260, 270, 326, 327, and 345.

A Political Communication Minor is offered jointly with the Department of Communication. See page 232.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in Political Science leads to the Bachelor of Arts degree.

Credit by Examination. Credit for POLS 120 may be earned through the College Level Examination Program subject examination in American Government.

Approval of Schedules. Students taking a major or minor in political science must have their schedules approved by the appropriate advisor.

POLS 110. Introduction to Politics.
Cr. 3. An introduction to the theories, concepts and issues of politics with particular emphasis on how these apply to problems of ethnicity and diversity in the American political system. May be used to fulfill the U.S. Diversity requirement or for partial fulfillment of the Social Analysis component of the General Education Requirements.

POLS 120. The Government of the United States.
Cr. 3. An introduction to the American national government, with special emphasis on the basic structure, functions and policies of the system. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.

POLS 130. Comparative Politics.
Cr. 3. Comparative study of Western and non-Western political systems. Includes examination of conceptual frameworks for comparative analysis. May be used in partial fulfillment of the Social Analysis component or for the Global Cultures and Perspectives component of the General Education Requirements.

POLS 140. The Field of Law.
Cr. 1. A course designed to help students prepare for the professional study of law. Open to all students.

POLS 220. State and Local Politics in the United States.
Cr. 3. Comparative analysis of state and local political systems in the United States. Emphasis is placed on the contemporary role of states and localities in the development and implementation of public policies. May be used in partial fulfillment of the Social Analysis component of the General Education Requirements.

POLS 230. International Relations.
Cr. 3. The fundamentals of international politics and international organization, particularly the United Nations and its specialized agencies.

POLS 240. Political Theory.
Cr. 3. An examination of the meaning and utility of theory in contemporary political science. Normative/prescriptive theories as well as analytical and empirical theories are surveyed and examined.

POLS 250. Political Philosophy.
Cr. 3. (Also offered as PHIL 250). A survey of the major formulations and problems of Western political thought as developed by political philosophers from the Greeks through the modern era.

Cr. 3. An examination of the basic research methods, statistics and data analysis techniques used by social scientists. An emphasis is on the application of these methods in an applied setting and students are often involved in a community research project.

POLS 270. Political Behavior.
Cr. 3. An exploration of the sources and consequences of individual and group political behavior. The course will include an extensive consideration of the methods necessary to examine political behavior, including computer-aided analysis of survey data.

POLS 320/520. Politics of Urban and Metropolitan Areas.
Cr. 3. This course will examine the politics and policy making of urban and metropolitan governments, and will include special emphasis on issues such as the nature of local decision making, racial and ethnic politics, education, housing, law enforcement, economic development, and the prospects for regional government.

POLS 325/525. Problems in American Politics.
Cr. 3. An intensive study of topics in the process, policies and functions of the American political system (e.g., political parties). Prerequisite: POLS 120 or consent of the Chair of the Department.

POLS 326/526. The Presidency.
Cr. 3. An examination of the American Presidency with specific emphasis on the President's constitutional position, the process of nominating and electing a President, Presidential power and behavior, and the President's relations with the public and coordinate branches of government. Prerequisites: POLS 120 or consent of the Chair of the Department.

POLS 327/527. Congress.
Cr. 3. A study of the legislative processes in which emphasis is placed on the Congress of the United States and its policy-determining and directing roles. Prerequisite: POLS 120 or the consent of the Chair of the Department. (This course often includes a field trip.)

POLS 330/530. Politics of Industrialized States.
Cr. 3. A study of political systems in the Western industrialized world. Attention is directed primarily at Western and Eastern Europe, alternately. Prerequisite: POLS 130 or consent of the Chair of the Department.

POLS 335/535. Politics of Developing States.
Cr. 3. A study of the governments and political problems of selected newly independent, underdeveloped states. Areas given in a seminar vary across Africa, Latin America, the Middle East and the Far East. Prerequisite: POLS 130 or consent of the Chair of the Department. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

Cr. 3. An analysis of Supreme Court decisions relating to judicial review, the power of national and state governments, federalism, the separation of powers, Presidency and Congressional power and related topics. Prerequisite: POLS 120 or consent of the instructor.

POLS 341/541. Constitutional Law II.
Cr. 3. A continuation of POLS 340 focusing on Supreme Court decisions relating to the Bill of Rights, equality protection, due process and related topics. Prerequisite: POLS 120 or consent of the instructor.

Cr. 3. An examination of law and courts as part of the political process with specific emphasis on factors which influence judicial decisions and the impact of court decisions. Prerequisite: POLS 120 or consent of the Chair of the Department.

POLS 355/555. Problems in Political Philosophy.
Cr. 3. The study of one or more specific problems or philosophers in modern political philosophy. Prerequisites: POLS 250 or consent of the instructor.

POLS 360/560. Public Administration.
Cr. 3. An introduction to the basic principles of administrative organization and management in government. Prerequisites: POLS 120 and junior standing.

POLS 361/561. Public Policy.
Cr. 3. An introduction to the study of the public policy processes, focusing on the politics and science of policy formulation, execution and evaluation. Prerequisite: POLS 120.

POLS 380/580. Problems in International Relations.
Cr. 3. An intensive study of topics in international relations. Generally the course covers either American foreign policy or international law. Prerequisite: POLS 230 or consent of the Chair of the Department.

POLS 381. Cooperative Education in Political Science.
Cr. 0-5.3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisites: POLS 120 and approval of the Chair of the Department.

POLS 382/383. Cooperative Education in Political Science II-III.
Cr. 0-5.3. Continuation of POLS 381. Prerequisites: POLS 381 and approval of the Chair of the Department. SU grade. May be repeated beyond 383 for additional credit.

POLS 386. Internship in Political Science.
Cr. 1-4. Opportunities for students to have direct, supervised experience in governmental
Pre-Seminary Studies

Philosophy

One of the following:
PHIL 275 Ancient and Medieval Philosophy
PHIL 280 Early Modern Philosophy
PHIL 330 Philosophy of Religion

Greek

FLGK 101 First Semester Greek
FLGK 102 Second Semester Greek
FLGK 203 Intermediate Greek
FLGK 320 New Testament Greek

Hebrew

FLN 101 First Semester Hebrew
FLN 102 Second Semester Hebrew

Theology/Bible

THEO 311 Understanding the Old Testament
THEO 312 Understanding the New Testament

Theology/Doctrinal

THEO 332 Luther and Lutheran Confessional Theology

Theology/World Religions

One of the following:
THEO 260 Perspectives on the Religious Quest
THEO 361-368 An upper level course in non-Christian religions

Recommended Additional Elective Courses

MUS 473 Church Music
MUS 213 Basic Conducting
MUS 050 Kantorei
MUS 003 Lessons in piano/organ/vocal

Courses which are specified as required in the Pre-Seminary Studies Major and which are from the discipline of the student's first major may be counted toward both major concentrations.

Theology/Doctrinal

THEO 332 Luther and Lutheran Confessional Theology

Theology/World Religions

One of the following:
THEO 260 Perspectives on the Religious Quest
THEO 361-368 An upper level course in non-Christian religions

Recommended Additional Elective Courses

MUS 473 Church Music
MUS 213 Basic Conducting
MUS 050 Kantorei
MUS 003 Lessons in piano/organ/vocal

Courses which are specified as required in the Pre-Seminary Studies Major and which are from the discipline of the student's first major may be counted toward both major concentrations.

Psychology

Professors Arkkelin (Chair-spring), Rowland; Associate Professors Nelson, Winquist; Assistant Professors Carlson, Hughes, Jani, Simpson, Vernon (Acting Chair-fall)

Psychology is the scientific study of mental processes and behavior. The diversified interests of its faculty enable the Department to present a comprehensive view of the field. Courses in physiological, experimental, social, industrial, developmental and clinical-counseling psychology are offered. Opportunities for laboratory research in psychology and applications through field experiences are available.

A major in psychology may lead to careers in such fields as psychological counseling, recreational therapy, employment counseling, rehabilitation therapy, test consulting, demography, personnel, managing, marketing, behavior therapy, psychological research and teaching. In addition, psychology can be an excellent preparation for career in medicine and allied health professions when combined with appropriate courses in other sciences such as biology, chemistry, and physics.

Student Organizations. Psi Chi, the national honor society, was installed at Valparaiso University in 1990. Psychology majors and minors who have completed at least nine credit hours in psychology and at least three semesters of undergraduate study, and who have demonstrated superior scholastic achievement may be selected for membership.

Students interested in participating in social activities with the psychology students and faculty are invited to join the Psychology Club.

Major. A minimum of 27 credit hours in psychology constitutes a major for the Bachelor of Arts degree, provided that a second major or a minor is taken. A minimum of 40, but not more than 48, credit hours in psychology fulfills the requirements for a Bachelor of Arts degree without a second major or a minor. Courses must include PSY 110, 201, 202 and 493; one experimental psychology course (selected from PSY 240, 245, 250, 345, 350, 355), one course in personality/social psychology (selected from PSY 125, 265, 330, 332, 333, 335); and one course in clinical/app lied psychology (selected from PSY 235, 270, 445, 461, 465, 470). One additional experimental course with a laboratory (245/246, 250/251, 345/346, 350/351, or 355/356) must be taken. It is recommended that students also take a minimum of one course as a capstone experience to their program. Courses suitable for this experience include PSY 390, 485, 495, and 499.

A minimum of 32 credit hours in psychology fulfills the minimum requirement for a Bachelor of Science degree with a single science major plus one of the following: a non-science second major, a Liberal Arts Business minor, or a science minor (biology, chemistry, mathematics, or physics). Courses must include PSY 110, 201, 202, and 493; two experimental psychology courses with laboratory (selected from PSY 245/246, 250/251, 345/346, 350/351, and 355/356), one course in personality/social psychology (selected from PSY 125, 265, 330, 332, and 335), and one course in clinical/app lied psychology (selected from PSY 235, 270, 445, 461, 465, 470). In addition to the 32 credits in psychology, students must complete BIO 151 or higher and MATH 122 or higher.

A minimum of 27 credit hours in psychology fulfills the minimum requirement for a Bachelor of Science degree, provided that a second major is taken in another science (biology, chemistry, mathematics, or physics). Courses must include PSY 110, 201, 202, and 493; two experimental psychology courses with laboratory (selected from PSY 245/246, 250/251, 345/346, 350/351, and 355/356), one course in personality/social psychology (selected from PSY 125, 265, 330, 332, and 335), and one course in clinical/app lied psychology (selected from PSY 235, 270, 445, 461, 465, 470). In addition to the 27 credits in psychology, students must complete BIO 151 or higher and MATH 122 or higher.

A minimum of 40, but not more than 48, credit hours in psychology fulfills the requirements for a Bachelor of Science degree without a second major or a minor. Courses must include PSY 110, 201, 202, and 493; two experimental psychology courses with laboratory (selected from PSY 245/246, 250/251, 345/346, 350/351, and 355/356), one course in personality/social psychology (selected from PSY 125, 265, 330, 332, and 335), and one course in clinical/app lied psychology (selected from PSY 235, 270, 445, 461, 465, 470).
two experimental psychology courses with laboratory (selected from PSY 245/246, 250/251, 345/346, 350/351, and 355/356), one course in personality/social psychology (selected from PSY 125, 265, 330, 332, and 335), and one course in clinical/applied psychology (selected from PSY 235, 270, 445, 461, 465, 470). In addition to the 40 credits in psychology, students must complete BIO 151 or higher and MATH 122 or higher.

It is recommended that all students also take a minimum of one course as a capstone experience to their program. Courses suitable for this experience include PSY 485, 495, 496, and 499.

Special Topics in Psychology (PSY 390) may be used to fulfill requirements for either degree with the consent of the Chair of the Department.

Minor. A minimum of five courses with a total of at least 15 credit hours in psychology constitutes a minor. Courses for the minor must include PSY 110 (with or without 111), 201, and one course, with or without laboratory, chosen from 240, 245, 250, 254, 345, 350, 355, or 470.

Credit by Examination. Credit for PSY 110 may be earned through the College Level Examination Program subject examination in Introductory Psychology.

Approval of Schedules. All students taking a major or minor in psychology must have their schedules approved by the Chair of the Department or their assigned departmental advisor.

110. General Psychology. Cr. 3. An introduction to the field of psychology with strong emphasis upon the scientific study of behavior. Topics include nervous system functioning, sensation and perception, learning, memory, cognition, development, motivation, emotion, social behavior, psychological dysfunction and treatment. When taken concurrently with laboratory (PSY 111), may be used to fulfill the Natural Science component of the General Education Requirements.

111. Laboratory in General Experimental Psychology. 0+2.5, Cr. 1. Laboratory to be taken concurrently with PSY 110. Students study psychological phenomena and methods directly through various laboratory experiments. When taken with PSY 110, fulfills Natural Science component of the General Education Requirements. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

Note: PSY 110 (with or without 111) is a prerequisite for all other psychology courses. This prerequisite may be waived for non-psychology majors with the chair's permission. PSY 201 is a prerequisite for PSY 202. PSY 202 is a prerequisite for all laboratories in psychology (excluding PSY 111) and for PSY 495. PSY 245, 250, 345, 350, or 355, when taken with the corresponding laboratory, may be used in partial fulfillment of the Natural Science component of the General Education Requirements.

PSY 125. Social Psychology. Cr. 3. An interdisciplinary approach to the study of social influences on the psychological functioning and behavior of the individual.

PSY 201. Statistical Methods. Cr. 3. An introduction to the fundamentals of descriptive and inferential statistics for the behavioral sciences. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

PSY 202. Research Methods in Psychology. Cr. 3. The basic principles and methods of research, with emphasis on the experimental method and the skills necessary to design, carry out, interpret and write up a research project. Prerequisite: PSY 201.

PSY 235. Abnormal Psychology. Cr. 3. An analysis of psychopathology within the framework of theory and research.

PSY 240. Evolutionary Psychology. Cr. 3. Understanding of human and animal behavior and cognition based on evolutionary principles and the use of the comparative approach. Includes topics on aggression, strategies of mate selection and parenting, intelligence, and consciousness.

PSY 245. Physiological Psychology. Cr. 3. A study of the structure and function of the nervous system in relation to motivation, emotion and cognitive function.

PSY 246. Laboratory in Physiological Psychology. 0+2.5, Cr. 1. Optional laboratory to be taken in conjunction with PSY 245. Prerequisite: PSY 201 and 202 or consent of the instructor.

PSY 250. Principles and Applications of Learning. Cr. 3. Concepts of learning derived from research with human and nonhuman subjects with emphasis on the use of these concepts and techniques to help solve common behavioral problems.

PSY 251. Laboratory in Principles and Applications of Learning. 0+2.5, Cr. 1. Optional laboratory to be taken in conjunction with PSY 250. Prerequisite: PSY 201 and 202 or consent of the instructor.

PSY 270. Introduction to Industrial/Organizational Psychology. Cr. 3. Applications of psychological principles, techniques, and theories to the workplace environment. Topics include leadership, motivation, job satisfaction, performance appraisal, employee selection, and teamwork.

PSY 285. Behavioral Interventions in Developmental Disabilities. Cr. 3. A practicum giving first-hand experience in utilizing behavior modification techniques to facilitate acquisition of pre-acquired skills by autistic children. Open to majors and non-majors. Prerequisite: consent of the instructor. S/U grade only.

PSY 330/350. Child and Adolescent Development. Cr. 3. Study of the maturational, cognitive, social and behavioral changes associated with the development of the child through adolescence.

PSY 332/352. Psychology of Adulthood and Aging. Cr. 3. Examination of adult development from the end of adolescence to old age from a psychological perspective.

PSY 335/353. Psychology of Personality. Cr. 3. An introduction to a variety of theories of personality, with emphasis on their implications for current psychological applications and research.

PSY 345. Sensation and Perception. Cr. 3. An introduction to the study of sensory and perceptual processes and the physiological mechanisms that underlie them.

PSY 346. Laboratory in Sensation and Perception. 0+2.5, Cr. 1. Optional laboratory to be taken in conjunction with PSY 345. Prerequisite: PSY 201 and 202 or consent of the instructor.

PSY 350/355. Human Cognition. Cr. 3. The study of various aspects of human learning, memory, and thought, such as perception, attention, development of expertise, problem-solving, reasoning, and language.

PSY 351. Laboratory in Human Cognition. 0+2.5, Cr. 1. Laboratory to be taken in conjunction with PSY 350. Prerequisite: PSY 201 and 202 or consent of the instructor.

PSY 355. Environmental Psychology. Cr. 3. The study of relationships between the physical environment and human behavior, including environmental perception, psychological effects of pollution, personal space, crowding, urbanization, architectural design, and energy consumption.

PSY 356. Laboratory in Environmental Psychology. 0+2.5, Cr. 1. Optional laboratory to be taken in conjunction with PSY 355. Prerequisite: PSY 201 and 202 or consent of the instructor.

PSY 390/390. Special Topics in Psychology. Cr. 1-3. Selected topics based on the special interest areas of students and faculty. Recent topics have included cross-cultural psychology, psychology of women, industrial psychology, psychology of religion, and altered states of consciousness. Topics and descriptions are announced in advance.

Note: The following courses are restricted to junior and senior level students.

PSY 445/445. Community and Health Psychology. Cr. 3. An introduction to the theories and practice of both community psychology and health psychology with an emphasis on the relationship and synthesis of these two disciplines as well as their unique differences.

PSY 461. Introduction to Counseling. Cr. 3. A review of contemporary counseling theories and processes as they are applied to various problem areas.

PSY 465/465. Psychology and Law. Cr. 3. The application of psychological knowledge to the legal system. Topics will include eyewitness testimony, jury decision-making, the insanity defense, jury selection and lie detection.


PSY 485. Psychology Practicum; Field Experience. Cr. 1-3. Emphasis on, but not limited to, functions of social-service and mental-health agencies. Each student spends 4-10 hours each week in supervised work activity at an agency in Northwest Indiana and two hours every other week in a class-room discussion meeting. Written report is required. Prerequisites: psychology major, consent of the Chair of the Department, and depending on the practicum site, PSY 245 or other designated courses. May be repeated for credit to a maximum of nine credit hours; only three credit hours may be applied toward a major. S/U grade only.
PSY 493. Senior Seminar.  
Cr. 0. An integrative experience designed as a capstone for psychology majors. Prerequisite: senior standing. S/U grade.

PSY 495. Independent Research in Psychology.  
Cr. 1-3. Individual research projects under faculty supervision involving the design of the project, data collection and analysis. A written report is required. Prerequisites: major with junior/senior standing, a 3.00 grade point average, PSY 201 and 202, and consent of the Chair of the Department. No more than six credit hours of PSY 495 and/or 496 may be applied to major requirements.

PSY 497. Honors Work in Psychology.  
Cr. 3. See Honors Work, page 54.

PSY 498. Honors Candidacy in Psychology.  
Cr. 3. See Honors Work, page 54.

PSY 499. Psychology Colloquium.  
Cr. 1. Faculty and student presentations of research projects, professional interests, and current topics related to psychology. Student participation is expected. Prerequisite: junior or senior major. May be repeated once for credit. S/U grade.

Social Work

Assistant Professors Glass (Chair), Ringenberg.

Social work is the profession that serves individuals, families, and communities who seek preventative and rehabilitative interventions for an improved quality of life. Focused on social and emotional development within the social environment, the scope of social work is national and international. The profession is social justice and action oriented.

The primary function of this undergraduate program is to prepare the liberal arts student for entry level positions as generalist social workers. The secondary function is preparation for advanced standing in graduate social work education. The department and the professional community provide an educationally directed series of internships.

Students utilize the social work curriculum to prepare for child welfare, community mental health, aging, church, urban studies, or school social services. Joint academic studies exist between the Department, the Lutheran Deaconess Program Plan 2, several minors (Ethnic Studies, Gender Studies, Human Aging), and service learning components.

The Student Social Work Organization offers a unique opportunity to explore major social issues and to represent student interests at departmental meetings.

Faculty, full-time and part-time, are active in community services, the Council on Social Work Education, and the National Association of Social Workers. Field instructors are selected by the Department.

The Department is a member of Phi Alpha Honor Society, a national society for social work students who achieve a 3.25 grade point average in social work and a 3.0 grade point average in all required course work for the Bachelor of Social Work (BSW) degree.

Major. A minimum of 40 credit hours in social work constitutes a major. Courses must include SOCW 151, 210, 220, 240, 330, 340, 365, 410, 455, 456, and 493.

Also required are BIO 125, PSY 110 and 201, SOC 110 and 220, one course in political science and one of the following courses: ECON 136, 221, 222, 223 or GEO 201.

Field instruction is required for social work majors enrolled in SOCW 340, 455, and 456. Field assignments are concurrently arranged with coursework. This professional development sequence must meet with Department approval, under the Field Director, and consists of at least four hundred hours. Students are required to maintain an overall 2.50 grade point average in all required social work courses. Liability insurance for field practice is required.

Minor. A minimum of 15 credit hours in social work constitutes a minor. These credits may be selected from SOCW 151, 210, 220, 240, 330, and 390.

Admission. A student’s formal admission into the Department as a major requires approval by the Department following the successful completion of SOCW 151, the completion of admissions procedures, and a 2.5 grade point average in the major. Each social work major is assigned a faculty advisor. A manual is available to all majors as a guide to department standards.

Degree. The Department of Social Work is fully accredited by the Council on Social Work Education. The completion of all required social work courses and general education requirements of the College of Arts and Sciences leads to the Bachelor of Social Work degree.

Approval of Schedules. All students who major in social work must have their schedules approved by the Chair of the Department or an assigned advisor at the beginning of each semester.

SOCW 151. Introduction to the Profession of Social Work.  
Cr. 3. The major objective of this course is to inform the student of the basic issues, concepts and systems encountered by the social work practitioner in the helping process in the community. This course is required for all social work majors. It can be of great benefit to students pursuing careers in fields such as corrections, education, ministry, law, nursing, medicine and church work. Community volunteer work and observational experiences are required.

Cr. 3. The objectives of this course are historical overviews of the economics, social and political forces that shape the social welfare structure. Descriptive analyses of current social welfare programs, public and private, are examined. Professional values and ethics undergird the content that further examines macrosystem matters affecting human diversity and social
Sociology and Criminology

Associate Professor Venturelli, (Chair); Assistant Professor Johnson; Adjunct Assistant Professors D. Bartusch, Yogan.

The Department of Sociology encompasses the disciplines of sociology, criminology, and anthropology, and seeks to provide a broad-based understanding of the organization and dynamics of human society and culture. Its subject matter ranges from intimate family life to the broader issues of identity, race and gender, from crime to religion, from the divisions of social class to the shared beliefs of a common culture. Its primary focus is on social relationships in a wide variety of cultural and social settings.

The department's programs seek to help students achieve an awareness of the world in which they live, and of the causes and consequences of human social behavior. Its basic objective is to aid students to understand themselves, the groups in which they participate, as well as the dynamics of everyday life. By expanding their knowledge of the field, its theories, concepts and research methods, and by acquiring insights to their world from the study of different peoples and cultures, students develop skills in social analysis, enhance their capacity for self-evaluation, and grow in their ability to make informed judgments about key social issues in a multicultural society.

To achieve these objectives, the department has developed a curriculum grounded in the liberal arts tradition that is flexible and responsive to student needs. While all majors are required to enroll in a core of basic sociology courses, the curriculum provides for a range of intellectual, professional, and occupational interests by offering concentrations in sociology and criminology.

International Honor Societies. The department encourages qualifying students to join honor societies in sociology and the social sciences. Such organizations recognize outstanding scholarship and achievement. There are two international honor societies for which majors in the department may qualify. First, the department sponsors the NU Chapter of the international honor society in sociology, Alpha Kappa Delta. Second, the department, along with other social science disciplines at Valparaiso University, supports Pi Gamma Mu, the international honor society in social science.

The Common Core. (15 credit hours) All students who major in the department are required to enroll in the following courses which comprise the common core: SOC 110, 275, 310, 320, and 493.

The Concentration in Sociology. Intended for students interested in understanding society and social behavior. The sociology concentration can lead to careers in administration in a variety of community, government and social service agencies, market research, or other vocations that require an understanding of the dynamics of human relationships in a multicultural society. The concentration also prepares students for graduate study in sociology. This concentration requires a minimum of 30 credit hours. In addition to the core courses, students must take at least two (2) additional 200 level courses, two (2) additional 300 or 400 level courses and one (1) additional course at any level. Students who seek careers involving agency administration should consider the Liberal Arts Business Minor (page 230).

Students planning to enter careers directly upon graduation are advised to arrange internships or cooperative education courses. These are offered each semester (see Cooperative Education, College of Arts and Sciences, page 56).

The Concentration in Criminology. This concentration is intended for students who plan to prepare for a career in law or employment in the federal, state, or local justice system (e.g., law enforcement, courts, or corrections). The concentration consists of 33 credit hours in sociology. In addition to the core courses required of all majors, students in the criminology concentration are required to enroll in SOC 130, (265 or 270), 366, and one of 350, 360, 391, or 445. Those students who are completing the concentration in criminology must also take two other courses at the 200 level or beyond.

Students who plan to attend law school, or who are interested in justice agency
Sociology and Criminology

administration, are strongly encouraged to complete degree requirements by adding an individualized minor in Justice Administration or some other individualized minor relevant to one's course of study and career plans. It is recommended that students planning an individualized minor select courses from the following: PSY 110 or 111, 201 and 235, MGT 304, and POLS 120, 220, 340, 341, 345, and 360. Other programs which are suggested to complete degree requirements are the Liberal Arts Business Minor, and the Liberal Arts Business Minor.

SO 110. Introduction to Anthropology.

Cr. 3. An introduction to the methods and issues of contemporary anthropology, including social and cultural anthropology. Prerequisite: SOC 110 or consent of the chair of the department.

SO 120. The Family.

Cr. 3. A study of the family as a basic social unit and institution, with emphasis on the various social, cultural, and historical factors that influence the family structure and function. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. A survey of contemporary social problems, including social problems in American society and in selected world societies. Prerequisite: SOC 110 or consent of the chair of the department.

SO 220. Social Psychology.

Cr. 3. An introduction to social psychology, including the study of social behavior and social influence. Prerequisite: SOC 110 or consent of the chair of the department.

SO 245. Social Psychology.

Cr. 3. An introduction to social psychology, including the study of social behavior and social influence. Prerequisite: SOC 110 or consent of the chair of the department.

SO 270. Juvenile Delinquency.

Cr. 3. An introduction to juvenile delinquency, its causes, and its treatment. Prerequisite: SOC 110 or consent of the chair of the department.

SO 275. Social Stratification.

Cr. 3. An introduction to social stratification, including the study of social classes, social status, and social mobility. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. An introduction to the study of social/organizational behavior, including the study of organizational structure and function. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. An introduction to contemporary social problems, including social problems in American society and in selected world societies. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 220. The Family.

Cr. 3. A study of the family as a basic social unit and institution, with emphasis on the various social, cultural, and historical factors that influence the family structure and function. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 245. Social Psychology.

Cr. 3. An introduction to social psychology, including the study of social behavior and social influence. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 270. Juvenile Delinquency.

Cr. 3. An introduction to juvenile delinquency, its causes, and its treatment. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 275. Social Stratification.

Cr. 3. An introduction to social stratification, including the study of social classes, social status, and social mobility. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. An introduction to the study of social/organizational behavior, including the study of organizational structure and function. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. A survey of the development of sociological thought from ancient times to the present, including the major theorists and their contributions to the development of social theory. Prerequisite: SOC 110 or consent of the chair of the department.


Cr. 3. A survey of research methods used in both qualitative and quantitative sociological contexts. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 321/421. Data Analysis.

Cr. 3. A survey of research methods used in both qualitative and quantitative sociological contexts. Prerequisite: SOC 110 or consent of the chair of the department.

SOCI 325/425. Law Enforcement.

Cr. 3. A survey of the development of sociological thought from ancient times to the present, including the major theorists and their contributions to the development of social theory. Prerequisite: SOC 110 or consent of the chair of the department.
SOC 392JS92.1nuea In Anthropology.

Globalization and sociocultural development, feminist or Marxist criminology, new criminologists today. Issues may be repeated for credit if the issues are different. Prerequisite: SOC 110 or 130 or 160 or consent of the instructor.

SOC 386. Internship in Sociology/Criminal Justice/Anthropology.

Criminal justice: Students are organized to provide students with some measure of "hands on" experience in their field of interest. Students are required to develop a contract with the agency to which they are assigned and a supervising instructor outlining basic expectations. A minimum of 128 internship hours and a biweekly class are required. Students planning an internship in a spring semester must complete an application for placement with the Internship Coordinator by October 1. For those students planning an internship in a fall semester; the deadline is April 1. Experience and workload vary with both the field of study and the agency assignment. Required of all criminology students, recommended for others. Prerequisites: SOC 110 or 130 or 160, junior standing and consent of the internship coordinator.


C. 3. An exploration of some of the issues debated by sociologists today. Issues may include sexism, racism, ageism. May be repeated for credit if the issues are different. Prerequisite: SOC 110 or 130 or 160 or consent of the instructor.

SOC 391/391. Issues in Criminology.

C. 3. An exploration of some issues debated by criminologists today. Issues may include feminist or Marxist criminology, new left realism, criminality as peace making, victimology, and cross-cultural comparative crime. May be repeated for credit if the issues are different. Prerequisite: SOC 110 or 130 or 160 or consent of the instructor.

SOC 392/392. Issues in Anthropology.

C. 3. An exploration of some of the issues debated by anthropologists today. These include globalization and sociocultural development, sickness and health, nationalism, culture and identity, science and technology, global media, and ethnography and narrative. May be repeated for credit if the issues are different. Prerequisite: SOC 150 or consent of the instructor.


C. 3. The study of the place of law in society, the relationship between law and social change, law and other social institutions. Prerequisite: SOC 110 or 130 or 160 or consent of the instructor.

SOC 481. Cooperative Education in Sociology/Criminal Justice/Anthropology.

C. 1-3. Work experience in a cooperating public or private service agency. Written reports required. Prerequisites: Junior standing and approval of the Chair of the Department.

SOC 482-483. Cooperative Education in Sociology/Criminal Justice/Anthropology II-III.

C. 1-3. Continuation of SOC 481. Prerequisites: SOC 481 and approval of the Chair of the Department. May be repeated beyond 483 for additional credit.

SOC 486. Internship in Criminal Justice II.

C. 3. Continuation of SOC 386. Prerequisite: SOC 386.

SOC 493. Senior Seminar.

C. 3. An integrative reading, discussion, and research course that applies prior sociological knowledge to contemporary concerns and problems. Required of all concentrations. Prerequisite: senior standing or consent of the Chair of the Department. Normally offered every fall.

SOC 495. Independent Study in Sociology/Criminology.

C. 1-4. Independent investigation of a specialized topic in sociology. May be taken more than once for credit if the topics are different or if the topics are to be continued. Prerequisite: SOC 110 or 130 or 160 or consent of the instructor.

SOC 497. Honors Work in Sociology.


SOC 498. Honors Candidacy in Sociology.


SPECIALIZED MINORS

Acting Minor. The minor must include THTR 134, 136, 141, 230, (235 or 236), and 357. Toward the end of the completion of the course work, the student in Acting must do an independent project (THTR 390) for one credit hour, preparing scenes, and monologues for public performance.

Theatre

Professor Paul (Chair); Assistant Professors A. Kessler, White; Lecturer Stalmah.

The Theatre Department prepares students for service to a society in which knowledge of the speech and theatre arts is critical to success in a variety of professional vocations including communication, education, entertainment, the law and religion. The program is designed to engage students in studies of the rich heritage of theatre arts and dance in Western and non-Western cultures. The co-curriculum provides students with opportunities for disciplined creative expression.

The department serves: (1) majors and minors who are preparing for careers in theatre and allied industries or in industries where knowledge of theatre production is required: (2) students who take the academic courses to meet the General Education Requirements or who find courses in drama and dance to be attractive components of a liberal arts education; and (3) participants in faculty-supervised co-curricular theatre and dance productions as a way of enriching their life experiences.

The department offers students a wide range of studies including acting, dance, design, directing, production, technology, and writing. The study of dramatic literature is given special prominence in the curriculum. Major. A minimum of 34 credit hours in theatre. The theatre major must include THTR 129, 133 (taken 4 times), (134 or 136), 230, 231, 232, 235, 238, 239, (334 or 337), and one from (356, 431, and 435).

Minor. A minor in theatre consists of 16 credit hours in courses agreed upon by the student and the department chair. The minor may include a one-credit independent project.

Musical Theatre Minor. A minimum of 16 credits in theatre and dance. The minor must include THTR 136, 235, 290 (two different dance topics totaling 6 credits) and (335 or 337). Toward the end of the completion of course work, the student minoring in Musical Theatre must complete an independent project (THTR 390, 1 Cr.) culminating in a public performance.

Theatre Production Minor. The minor must include THTR 129, 230, 231, (431 or 433), and one course in theatre literature (238, 239, 334, or 337). Toward the end of the completion of the course work, the student in Theatre Production must do an independent project (THTR 390, 1 Cr.) directing a short play for public exhibition.

Theatre Design Minor. The minor must include THTR 230, 231, 356, and one course in theatre literature (238, 239, 334, or 337). Toward the end of the course work, the student in Theatre Design must do an independent project (THTR 390, 1 Cr.) preparing designs and working drawings for costumes, scenery and lighting for a selected play or dance production.

Teaching Programs. Students who plan to teach speech, theatre, or dance in secondary schools with a major or minor in Theatre should consult the Chair of the Department and the Education Department for specific requirements.

Cooperative Education. Qualifying students may participate in prearranged, approved professional work experiences. During their employment, students are financially compensated by the cooperating employer. Credits earned in this program apply toward the major and may substitute for other required courses with the consent of the Chair of the Department. For further information, refer to Cooperative Education, College of Arts and Sciences, page 56.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in theatre or drama leads to the Bachelor of Arts degree.

Approval of Schedules. All students pursuing a major or minor in Theatre must have their schedules approved by the Chair of the Department or a designated departmental advisor at the beginning of each semester.
The University Theatre. A co-curricular venue for the study and practice of theatre art, the University Theatre is also a community of thoughtful student and faculty artists and craftspeople serving the students and faculty of Valparaiso University. By bringing to the public stage productions of classic and contemporary plays, the University Theatre offers its campus, local, and regional audiences the opportunity to explore the human condition and to celebrate the richness of life itself. The University Theatre is dedicated to excellence in play production, to the development of the skills of understanding, analysis, preparation, and performance of plays in students who are committed to vocations in the theatre, and to the enrichment of the lives of all those who participate in its activities. The University Theatre's programs include a season of three major productions, experimental theatre, student-directed plays, Soul Purpose, a touring chancel drama troupe, and theatre outreach performances. Theatre work is focused in performance, production, and management. Advanced students regularly supervise in all areas. Majors in the department are expected to participate actively and frequently in the programs of the University Theatre.

THTR 101. Introduction to Theatre. 
Cr. 3. An introduction to the field of theatre, surveying the development of performance and design, technology and dramatic literature, especially during the past twenty-five years. Field trip to Chicago. May be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Offered each semester.

THTR 129. Basic Stagecraft. 
2+2, Cr. 3. An introduction to the technology, terminology and practices of modern stagecraft. This course prepares students for more advanced work in theatre technology, costume construction and design, scenery construction and design, lighting design and stage management. Offered fall semester.

THTR 133. Theatre Practice. 
O+O, Cr. 1, or O+4, Cr. 2. Creative work in the production of stage plays or dance productions. Students majoring in theatre must elect this course a minimum of four times (4 credits total) each time in a different production area: i) management, ii) scenery and lighting, iii) costume and makeup, and iv) performance. This course may be repeated up to a maximum of six credit hours.

THTR 134. Voice and Diction. 
Cr. 3. An introduction to voice and speech science. Emphasis on vocal exercises as well as the International Phonetic Alphabet to aid in articulation improvement, dialect correction and/or acquisition. Offered fall semester.

THTR 138. Movement for the Theatre. 
Cr. 3. A course in developing the physical skills required for live theatrical performance emphasizing skeletal alignment and correct body placement for the purpose of developing efficient, economical movement. The physical, emotional, and psychological motivations of movement are explored. Offered spring semester. May be repeated once for credit.

THTR 141. Oral Interpretation. 
Cr. 3. A basic course stressing the communication of thought and feeling from the printed page to the listener. Emphasis is on analysis, interpretation and reading of drama, verse and prose. Offered spring semester in even-numbered years.

THTR 230. Makeup and Costume. 
2+2, Cr. 3. An introduction to the design and practice of stage and studio makeup, with discussion of materials, equipment and historical background. Offered in the fall semester.

THTR 231. Scenery and Lighting. 
2+2, Cr. 3. An introduction to the design and practice of scenery building, lighting for the stage and studio, and production management. Offered each spring semester. Prerequisite: THTR 129.

THTR 232. Applied and Interactive Theatre. 
Cr. 3. Students will be introduced to the theories, methods, and performance practices of Applied Theatre and will explore theatre techniques used outside of traditional theatre professions, focusing especially on theatre's use in education, psychology, and sociology. Fieldwork for this course will include performances of plays, developed and rehearsed in class, in local schools. This interdisciplinary course will be useful for students preparing for a variety of professions. Offered in the spring semester of each year.

THTR 235. Acting I. 
2+2, Cr. 3. A first course in the theory and practice of acting through several American interpretations of the Stanislavski system as well as technique exercises for the body, voice, intellect and emotions using one open scene and one monologue. Offered spring semester. Prerequisite: sophomore standing.

THTR 238. World Theatre and Drama I. 
Cr. 3. An introduction to the history and literature of the theatre from the ancient Athenians to 1700. Development of theatrical performance is traced through films, slide projections, live performances, recordings and lectures. Prerequisite: sophomore standing or approval of the Chair of the Department. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Offered fall semester.

THTR 239. World Theatre and Drama II. 
Cr. 3. An introduction to the history and literature of the Western theatre from 1700 through the modern period. Development of theatrical performance is traced through films, slide projections, live performances, recordings and lectures. Prerequisite: sophomore standing or approval of the Chair of the Department. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the General Education Requirements. Offered spring semester.

THTR 252. Writing for Stage and Screen. 
Cr. 3. Devoted to the study of creative writing in dramatic form, giving special attention to the particular requirements of stage, film and television. Prerequisite: CORE 110 or consent of the instructor. Offered fall semester in alternate years.

THTR 290. Dance Topics. 
Cr. 1-3. Introductory courses in dance techniques offered on a rotating basis. Topics may include ballet, jazz, modern, and tap dance technique. May be repeated for credit when topics are different. Offered each semester.

THTR 330. Costume II. 
Cr. 3. A continuation of work in costume technology and design. Emphasis on flat-patterning, draping and costume management. Prerequisite: THTR 230. Offered spring semester of even-numbered years.

THTR 334. Theatre of the Non-Western World. 
Cr. 3. Survey of the traditional theatre and dance of Asia and Africa. Prerequisite: junior standing or approval of the Chair of the Department. Offered in the spring semester of even-numbered years. This course may be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

THTR 335. Acting II. 
2+2, Cr. 3. A continuation of work in acting theory and technique through scene study and monologues beginning with American realism and moving to Chekhov, ethnic drama, and poetic drama. Prerequisite: THTR 235. Offered fall semester.

Cr. 3. A survey of the American theatre and drama from the eighteenth through the twentieth centuries. The modern period, including playwrights such as O'Neill, Miller, Williams, Baraka, and Albee, and the musical theatre is given special emphasis. This course may be used to fulfill the Fine Arts/Literature component of the General Education Requirements. Prerequisite: junior standing or consent of the Chair of the Department. Offered spring semester of odd-numbered years.

THTR 366/566. Design for the Theatre. 
2+2, Cr. 3. The translation of written and verbal concepts into set design for production. Offered spring semesters, odd-numbered years. Prerequisites: THTR 129, 230 and 231 or consent of the instructor.

THTR 377. Acting for the Camera. 
2+2, Cr. 3. A practical course in relating acting and performance techniques to the special requirements of the studio and television camera. Work done on news and weather reporting, commercials, "soap operas," and situation comedy technique. Prerequisite: THTR 235. Offered in the spring semester, odd-numbered years.

THTR 381. Cooperative Education in Theatre I. 
Cr. 0.5-3. Professional work experience with a cooperating employer. Written report required. Prerequisite: approval of the Chair of the Department.

THTR 386. Internship. 
Cr. 3-1. Internships in which students may intensively study a particular area of theatre, television, or dance. May not be repeated for credit. Prerequisite: consent of the Chair of the Department.

THTR 390. Topics and Projects. 
Cr. 1-3. Individual or group. Specific projects based on special interests of students and faculty. Example topics: Drama and the Church, Television Drama, Theatre and Film, Commedia dell'Arte, Entertainment and the Law, Lighting for Stage and Studio.

THTR 399. Colloquium. 
Cr. 0. A required course for theatre majors which provides weekly opportunities to examine a variety of theatre and theatre-related vocations. Offered each semester.
Theatre

THTR 431. Play Directing.
Cr. 3. A study of the art of directing, the problems of choosing a play, methods of casting and rehearsal procedures. Prerequisites: THTR 230, 231, and 235 or consent of the Chair of the Department. Offered in the fall semester.

THTR 433/533. Directing the Young Actor.
Cr. 3. University students work with children in a laboratory context and survey the literature and theory of theatre for children. Prerequisites: THTR 431 or consent of the Chair of the Department. Offered in summer session only.

THTR 435. Acting III.
Cr. 3. A course in advanced acting techniques for performing classical and modern works. Students will concentrate on scene study with an emphasis on voice, movement, gesture, character, language, tempo, and special techniques for Shakespeare and classical Greek drama. For students majoring or minoring in Theatre. Prerequisite THTR 335. Offered spring semester, even-numbered years.

THTR 497. Honors Work in Theatre.
Cr. 3. See Honors Work, page 54.

THTR 498. Honors Candidacy in Theatre.
Cr. 3. See Honors Work, page 54.

Theology

Professors Albers, R. DeMaris, Grundmann, Harre, Helder (Visiting), Meilaender, J. Moore, Niedner (Chair), Wangerin; Associate Professors Becker (Visiting), van Doorm-Harder; Assistant Professors M. Bartusch, L. Driver; Lecturers Leeb, Weber.

The Theology Department of Valparaiso University has as its main purpose the study, transmission, and interpretation of the Christian tradition as a part of and in relation to the wider religious heritage of humankind. It is the goal of the department to enable all graduates of Valparaiso University to be knowledgeable of the Christian faith, sensitive to religious issues in our global society, and prepared for roles in which their understanding of religion may enhance their contribution to church and society. Since this is a theology department within a university, our work is founded upon the liberal arts tradition of inquiry; competing ideas meet and are freely debated in the search for truth. The Theology Department plays an essential part in expressing and defining the University's commitment to the Christian tradition, particularly to the Lutheran perspective. The department seeks to assist its students in becoming more aware of their own religious traditions, more critical and affirming in their appropriation of them, and more respectful of other traditions.

General Education. The Theology component of the General Education Requirement at Valparaiso University is the freshman core course and two courses of three credit hours each. These courses shall ordinarily be taken from each of the two levels indicated in the course listings below. A Foundational Course is ordinarily taken in the sophomore year. In either the junior or the senior year, each student must take at least one course from the Upper Level listings.

Major. A minimum of 28 credit hours in theology constitutes a major. Courses must include a course in biblical studies (210, 310-319), a course in the history of the Church and its thought (225, 320-326, 330-332), a course in contemporary Christian religion and ethics (240, 334, 337, 338, 340-346, 353 [when topic is appropriate]), a course in history of religions (260, 360-368), and seminar 493. Students shall also take five additional courses chosen in consultation with their departmental major advisor. Majors must take at least two courses (6 credits) in addition to 493 that are designated in the Schedule of Classes as courses primarily intended for theology majors (not fulfilling this stipulation are 451, 453, 480, 493).

Minor. A minimum of 18 credit hours in theology, chosen by the student in consultation with the Chair of the Department or the Chair's designated representative, constitutes a minor. At least four courses shall be taken at the Upper Level (300-400 courses).

Programs. The Department provides programs of study and advising for students who wish to prepare for professional careers in the Church:
1. Programs of study in preparation for Deaconess Ministry are structured by the Department in cooperation with the Lutheran Deaconess Association.
2. Students preparing for seminary should, with their first major, take the Complementary Major in Pre-Seminary Studies; see pages 159-160.
3. Students interested in service as Directors of Christian Education or Youth Ministers should, with their first major in theology, take the complementary major in Youth, Family, and Education Ministry (see page 179).

Degree. Completion of the requirements of the College of Arts and Sciences with a major in Theology leads to the Bachelor of Arts degree.

Approval of Schedules. All students taking a major in Theology must have their schedules approved by the Chair of the Department or by their assigned departmental advisors at the beginning of each semester.

Foundational Courses. Ordinarily sophomores year. Prerequisite for these courses is the freshman core program or consent of the department chair.

THEO 210. Understanding the Bible.
Cr. 3. A study of selected biblical writings in relation to the early Jewish and Christian communities, with attention to theological themes and literary types within these scriptures.
Cr. 3. A study of the historical foundations of Christian thought and its development in the life of the church.

Cr. 3. A study of norms for moral judgment and the dynamics for moral action in the light of Christian theology.

THEO 260. Perspectives on the Religious Quest.
Cr. 3. A study of the history, themes and structures of religious experience in various religions of the world. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

Upper Level. Prerequisite for courses in this level is one Foundational course or consent of the Chair of the Department. To fulfill General Education Requirements, students must take an Upper Level course in their junior or senior year.

BIBLICAL STUDIES

THEO 310/510. Topics in Biblical Studies
Cr. 3. A study of a specific topic such as archaeology and the religions of the ancient near East, psalms and prayers of ancient Israel, and issues in biblical interpretation. May be repeated for credit if topics are different.

THEO 311/511. Understanding the Old Testament.
Cr. 3. A study of the history and theology of the Old Testament with attention to its role in Christian faith.

Cr. 3. A study of the history and theology of the New Testament with attention to its role in the Old Testament.

Cr. 3. A study of the Pentateuch with emphasis on Israel’s understanding of the beginning, the history of the patriarchs, the exodus, the wilderness wanderings, and the preparation for entering the promised land.

THEO 315/516. The Prophets of Israel.
Cr. 3. A study of the role of the prophets in Israelite religion. Special attention is given to the historical origins of the prophetic movement, its impact on Israel’s political, social and religious life, and the continuing significance of the prophetic message in Jewish and Christian thought.

Cr. 3. A study of the New Testament church in its social, political, and religious environment that will focus on class, gender, race, and other key issues: Jewish-Gentile relations, anti-Semitism, slavery and master; wealth and poverty; the status and authority of women.

Cr. 3. A comparative study of the New Testament gospels with a focus on the uniqueness of each in its presentation of the story of Jesus.


FOUNDATIONS OF CHRISTIANITY

THEO 320/520. Topics in Christian History.
Cr. 3. A study of a specific topic such as representative Christian thinkers, comparative Christianity, Calvin and Calvinism, Lutherans in America, and Catholics in America. May be repeated for credit if topics are different.

THEO 322. Early and Medieval Christianity.
Cr. 3. A study of major developments in Christian thought from the apostolic era through the medieval period.

THEO 323/523. Christianity from the Reformation to the Present.
Cr. 3. A study of major developments in Christian history and thought from the Reformation period to the present.

THEO 324/524. Christianity in America.
Cr. 3. An investigation of the history of Christianity in America, with special emphasis on the interaction between religion and cultural developments.

THEO 326. History of Women in the Church.
Cr. 3. An investigation from biblical times to the present of theological understandings of women’s roles in Christian religious communities and of the cultural contexts that shape such attitudes and practices.

THEOLOGY, ETHICS, AND PRACTICE

THEO 330/530. Topics in Contemporary Theology.
Cr. 3. A study of selected topics, such as contemporary Lutheran theology, feminist theology, and liberation theology. May be repeated for credit if topics are different.

THEO 332/532. Luther and Lutheran Confessional Theology.
Cr. 3. Issues are studied against the background of the sixteenth century and with a view to ascertaining the value of the Confessions for the life and work of the church today.

THEO 334. Constructive Christian Theology.
Cr. 3. A study in the making and critiquing of an ordered and coherent structure of thought about the Christian faith, with special reference to the resources of biblical and Lutheran theology.

THEO 337/537. Black Theology and Black Church.
Cr. 3. A study of Black theological discourse in the United States and Africa. The course focuses on the themes of racial oppression and explores the relationship between black theology and "third world" peoples, women's struggles, black families, and, most importantly, the praxis of black church ministry. May be used to fulfill the U.S. Diversity component of the General Education Requirements.

THEO 338. Holocaust Theology.
Cr. 3. A systematic study of the many issues stemming from the events of the Nazi Holocaust and how those events have affected both Jews and Christians. The course constructs a possible religious and moral response to the evil of the Holocaust.

THEO 340. Topics in Religious Ethics.
Cr. 3. An examination of a selected thinker or theme in religious ethics. May be repeated for credit if topics are different.

THEO 341. Bioethics.
Cr. 3. (Also offered as PHIL 341). A study of the moral issues raised by modern advances in medicine and biological research (e.g., abortion, euthanasia, genetic engineering and health care). Attention is given both to general ethical theory and to the analysis of particular issues.

THEO 342. Theology of Marriage and Sexuality.
Cr. 3. A systematic study of the many issues stemming from contemporary views of marriage and sexuality; the course will be an opportunity to judge a variety of possible theological views, test views with concrete experiences and real issues, and begin the process of forming a personal viewpoint.

THEO 344. Theology and the Scientific World.
Cr. 3. A study of the relationship between religion and science, looking not only at controversial issues but also at the positive dialogue between theologians and scientists. The course will focus on topics like creation and evolution, cosmology and theology, genetics and human uniqueness.

Cr. 3. An examination of selected moral issues such as warfare, abortion, and care of the environment.

THEO 351. Studies in Theology and the Arts.
Cr. 3. An examination of a selected topic such as Christian faith and modern literature, theology and the visual arts, and religion in cinema. May be repeated for credit if topics are different.

THEO 353. Studies in Theology and Practice.
Cr. 3. An examination of selected topics such as Christian response to social victims, Christian faith and politics, ethics of cultural encounter, and Christian education. May be repeated for credit if topics are different.

THEO 355/555. Liturgical Theology and Practice.
Cr. 3. A study of the principles and language of worship with emphasis on the theology of worship, ritual, the role of tradition, and the relationship between worship and contemporary culture.

THEO 357/557. The Church in the World.
Cr. 3. A study of the life and mission of the church with emphasis on movements for renewal, reform and reunion. Special attention is given to developments in Latin America and/or Africa. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

Cr. 3. An examination of a selected topic such as death and dying, or spiritual needs and health care. May be repeated for credit if topics are different.

THEO 359/559. Theology of Aging.
Cr. 3. A study of the process of aging from the perspectives of biblical, historical, and practical theology. Attention is given to the spiritual needs of older persons and their potential contribution to church and society.

THEO 451/551. Theology of Diocesan Ministry.
Cr. 3. A study of the historical and theological foundations of diocesan ministry. Attention is given to the relationship of the diocesan in the church, the development of diocesan community, and the nurture of a spirituality of service. Prerequisite: junior or senior standing.

THEO 453/553. Clinical Education for Ministry.
Cr. 3. A carefully supervised practicum in ministry to the physically ill and the elderly. Designed principally for senior Deaconess and Pre-Seminary students, this course in practical theology engages student in disciplined reflection on their ministry. Usually 5/0 basis. Prerequisite: junior or senior standing.

HISTORY OF RELIGIONS

THEO 360/560. Topics in the History of Religions.
Cr. 3. A study of a selected topic, such as cultures of pre-Christian Europe, history of the study of religion. May be repeated for credit if the topics are different.

Cr. 3. Studies of selected topics in Judaism: biblical, rabbinic and contemporary. May be repeated for credit if the topics are different. These offerings are sometimes sponsored in part by the Jewish Chautauqua Society.
Theology

THEO 362/562. Understanding Islamic Religion and Culture.
Cr. 3. A study of the life of Muhammad, the teachings of the Quran, traditional practices and institutions in Islamic society, and significant contemporary developments in the Muslim world. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

THEO 363/563. Religions of China and Japan.
Cr. 3. A study of the religious worldview of China and Japan, seen both as the traditional popular religious practices and in the organized religions of Confucianism, Taoism, Buddhism and Shinto. Special attention is given to the expressions of religion in art and to the role of religion in modern China and Japan. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

THEO 364. The Buddhist Tradition.
Cr. 3. A study of the origins of Buddhism in India, its expansion into and influence on the cultures of Southeast Asia, its special adaptations in China and Japan, and the Buddhist presence in the United States today. Attention is given to the varieties of Buddhist teaching and practice. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

THEO 365. Religion in Africa.
Cr. 3. A study of religion in Sub-Saharan Africa. Attention is given to the nature and function of religion in the traditional societies and to the modern developments of Christianity and Islam in Africa. May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

Cr. 3. A study of religion in Japanese culture by focusing on Zen Buddhism and its influence in Japanese culture, especially in traditional arts like poetry, drama painting, calligraphy, architecture, flowers, and gardening, with special emphasis on chanoyu (the tea ceremony). May be used to fulfill the Global Cultures and Perspectives component of the General Education Requirements.

THEO 367. Religions in America.
Cr. 3. An examination of a selected topics, such as recent religious movements in America, history of religions in the United States, etc. May be repeated for credit if topics are different.

THEO 368. Native American Religions.
Cr. 3. A study of the most common religious features found in Native American societies north of Mexico. Attention is given both to the older traditions and to the more recent religious developments. May be used to fulfill the U.S. Diversity component of the General Education Requirements.

Specialized Courses

THEO 399. Church Vocations Symposium.
Cr. 0. Presentations and discussions of topics of special interest to students in pre-seminary studies or preparing for other church vocations. All students in these curricula are expected to register for this course each semester and to attend each session. S/U grade.

THEO 480. Practicum in Ministry.
Cr. 1-3. Field experience in various local agencies, together with reflection on the work being done. This course may not be used to fulfill the Theology component of the General Education Requirement. A maximum of three credit hours may be applied to the theology major. It may be repeated for a maximum of six credits, and is offered only on an S/U basis. Arranged with the Chair of the Department. Prerequisite: junior or senior standing.

THEO 481. Basic Homily Preparation.
Cr. 1. A basic introduction to methods of preparing and delivering biblical, liturgical homilies in a variety of worship settings. This course may not be counted toward the theology major or minor. It may be repeated for a maximum of two credits, and is offered on an S/U basis. Arranged with the Chair of the Department. Prerequisite: junior or senior standing.

THEO 490/690. Topics in Theology.
Cr. 1-3. A study of a selected topic in theology, intended primarily for majors, minors, and advanced students. May be repeated for credit if topics are different.

THEO 493. Theology Seminar.
Cr. 3. Advanced study of selected areas or issues in the discipline of theology. Varied listings are announced. Prerequisites: senior standing and consent of the Chair of the Department.

THEO 495. Supervised Reading and Research.
Cr. 1-3. An opportunity for students to read a number of significant works on a given topic in theology, or to do research on a topic which is not covered in any scheduled course offerings of the Department and to write a major paper. Prerequisites: junior standing, 9 credit hours in theology, and consent of the Chair of the Department.

THEO 497. Honors Work in Theology.
Cr. 3. See Honors Work, page 54.

THEO 498. Honors Candidacy in Theology.
Cr. 3. See Honors Work, page 54.

Youth, Family, and Education Ministry

This program of study is administered by the Department of Theology through its Center for Church Vocations.

Objectives.
The program in Youth, Family, and Education Ministry offers a bachelor’s-level training program for students who seek to serve Lutheran and other Christian congregations as a staff member responsible for ministry to young people, to families, and/or for the parish program in religious education. This program seeks to provide specific courses and practical learning experiences for students planning to work with children and adolescents and their families. The program offers a great degree of flexibility, though it builds on the University’s program of General Education and on its major in theology. In order to focus their preparation in accordance with their particular interests and career plans, students will work out their plan of study with their academic advisor in the Department of Theology and with the Program Director for Youth, Family, and Education Ministry.

Program Requirements.
The General Education requirements for the Bachelor of Arts degree (see page 44) must be fulfilled. Careful selection of courses will meet the General Education program in Theology (6 credits), in Social Analysis (3 to 6 credits), U.S. Diversity (3 credits), and Global Diversity (3 credits). A total of 64 credits constitute this dual-major program of study. Students should consult with the Chair of the Department of Theology or with the Program Director of the Center for Church Vocations for academic and para-curricular advising.

Students entering this program will fulfill the requirements for a first major in Theology by taking these courses:

Bible
Two courses (THEO 210, 310/319)

Doctrine, Christian Thought
One course (THEO 330 when topics are appropriate), THEO 332, THEO 334 (other courses may be substituted in the case of students from other church bodies)

Theological Ethics
One course (THEO 240, 340/349)

Church Life and Work
Two courses (normally THEO 353 Theology of Religious Education and/or THEO 353 Theology for Ministry to Youth and Families, or others numbered THEO 350-359)

History of Religions
One course (THEO 260, 360-369)

Seminar
Theology Seminar (THEO 493)

Take an additional 300 or 500 level theology course.

A complementary major in Youth, Family, and Christian Education will be completed with additional nine courses chosen in consultation with the Program Director for Youth, Family, and Education Ministry, among the following:

Communication
COMM 115 Interpersonal Communication 3Cr.
COMM 243 Public Communication 3Cr.

Education
ED 204 Educational Psychology 3Cr.

Psychology
PSY 261 Human Behavior in Organizations 3Cr.
PSY 330 Child and Adolescent Development 3Cr.
PSY 331 Psychodynamics of Personality 3Cr.
PSY 355 Environmental Psychology 3Cr.
PSY 360 The Exceptional Child 3Cr.
PSY 445 Community Health Psychology 3Cr.
PSY 461 Introduction to Counseling 3Cr.

Note: PSY 110 or 110/111 is a prerequisite for all Psychology courses, but may not be counted among the courses for this complementary major.

Social Work
SOCW 151 Introduction to the Profession of Social Work 3Cr.
SOCW 210 Social Welfare Policy and Services 3Cr.
SOCW 220 Human Behavior and Social Environment 3Cr.

SOGW 330 Vulnerable Populations: Color, Gender, and Orientation 3Cr.

Sociology
SOC 220 The Family 3Cr.
SOC 245 Social Psychology 3Cr.
SOC 250 Principles of Social Organization 3Cr.
SOC 270 Juvenile Delinquency 3Cr.
SOC 325 Urban Sociology 3Cr.
SOC 327 Aging in American Society 3Cr.
SOC 340 Gender 3Cr.
SOC 347 Race and Ethnic Relations 3Cr.

SOGW 110 is a prerequisite for all 300 level sociology courses, but may not be counted among the courses for this complementary major.
Symposium and Para-Curricular Activities. Working in consultation with the academic advisor and Program Director of the Center for Church Vocations, students will arrange each semester to participate in the Church Vocations Symposium (THEO 399), as well as in the Center for Church Vocation's program of formation for ministry, including retreats, a mentoring program, and/or a specially-arranged internship or Practicum in Ministry (THEO 480). A year-long full-time internship may also be arranged through the Program Director of the Center for Church Vocations, in a parish or church-related service agency; such an internship would usually be scheduled between the student's junior and senior years.

Candidacy and Rostering. Students should consult their Center for Church Vocations advisor as early as possible in their program of study in order to begin the process of candidacy and discernment of vocation with the appropriate church body office.
ADMISSION AND MEMBERSHIP IN CHRIST COLLEGE

Freshman Admission. To be considered for membership in Christ College beginning in the freshman year, students must first be admitted to Valparaiso University. Admitted students with superior academic records, strong SAT or ACT scores, proven leadership in extracurricular activities, and a measure of curiosity and creativity are invited by the Dean of Christ College to apply for the honors program. Between 75 and 85 freshmen are accepted into the Christ College Freshman Program each fall.

The Christ College Freshman Program (CC 110: Texts and Contexts I and CC 115: Texts and Contexts II) includes a two-semester course in the great traditions of humankind, with readings in history, literature, philosophy, and religion from the earliest recorded thought to the present day. Coursework emphasizes close reading, thoughtful discussion, and critical writing. Special Freshman Program activities include mock debates.

Upperclass Admission. Students with superior records of academic achievement may be invited to join Christ College later than the start of the freshman year at the Dean's discretion. For example, some sophomores are admitted to Christ College each fall. These students enroll in sophomore-level Christ College courses and begin the pursuit of Christ College Associate and Christ College Scholar graduation distinctions.

Still other students enroll in one or more courses offered by the College, but do not pursue honors program designations. Such enrollment is subject to approval of the Dean and limited only by class size.

Any Valparaiso University student—whether or not he or she is a member of Christ College—may pursue a complementary major or a minor in humanities through Christ College coursework.

Membership in Christ College. A student formally admitted to Christ College, either as a freshman or upperclass student, in order to pursue a Scholar or Associate distinction, is designated a member of Christ College. Once admitted to membership, a student's status is regularly reviewed by the Dean and faculty to determine if the student is satisfying the standards appropriate to membership in the Honors College. These requirements include contribution to the common life of the College, satisfactory academic progress toward a degree in one of the undergraduate colleges, and continuing academic achievement consonant with the mission and standards of Christ College. Even when students are not directly registered in Christ College courses during a given semester, they are expected to contribute to the College's common life. This includes attendance at the Christ College Symposium and regular consultation with a Christ College advisor.

Continuing academic achievement at the honors level includes a) a cumulative grade point average of 3.30 in all coursework completed at the University and b) a cumulative grade point average of 3.30 in all coursework completed in Christ College. Students who fail to meet these standards at the end of a semester or academic year will be notified by the Dean and reminded that Christ College Associate and Scholar distinctions require a 3.30 cumulative average for work in both Christ College and Valparaiso University. In some cases students will be asked to meet with their advisor and/or the Dean to discuss their status, and may be counseled not to continue in Christ College.

However, membership in Christ College is never terminated by the mechanical application of particular criteria such as cumulative grade point average or the student's academic record for a particular semester or year. The Dean and faculty consider the circumstances and direction of each student's total academic career, and retain the right to maintain a student's membership in Christ College in light of these considerations. The final approval for those who graduate with the designations of Christ College Associate and Christ College Scholar is made by the faculty.

The Dean and faculty take an interest in the total program of every member of Christ College, and seek to enhance the quality of educational experience for each individual student. Accordingly, the Dean may authorize certain variations in the normal academic requirements of a student if such variations seem desirable in the best interests of the student. For example, the Dean may permit a student to carry extra credit hours and to waive certain University requirements if such waivers are justified. Members of the College are normally expected to meet all University requirements for graduation except where such modifications have been explicitly authorized by the Dean. In general, the faculty may tailor a program to meet a student's interests and needs within the general framework and spirit of the University's requirements.

ACADEMIC ADVISING AND APPROVAL OF COURSE SCHEDULES

Advising of students pursuing programs in Christ College is under the general direction of the Associate Dean. Christ College freshmen are usually advised by a member of the Christ College faculty. Sophomores, juniors, and seniors are advised by the Associate Dean, with faculty members available to consult at any time.

Students are encouraged to confer regularly with their Christ College advisors to select courses, to meet University and College graduation requirements, to assure orderly progress in their chosen programs, and to assist in career planning and related matters.

In addition to a Christ College advisor, students may have an advisor in the other college in which they are simultaneously enrolled, and are expected to confer regularly with that advisor as well.

It is each student's responsibility to know curriculum requirements, academic policies, deadlines for academic actions, and Christ College membership criteria.

PROGRAMS OF STUDY

Completion of the degree requirements of the college in which the Christ College student is concurrently enrolled leads to the bachelor's degree appropriate to that college. In addition, a member of Christ College, by meeting the appropriate requirements, may graduate as a Christ College Scholar or Christ College Associate. The transcript carries the notation along with an explanation of its meaning.

Christ College students as well as students who are not members of Christ College may pursue a complementary major in humanities or a minor in humanities through the College.

Christ College Scholar. The requirements for this designation are:

1. Membership in Christ College for a minimum of three semesters.

2. A cumulative grade point average of 3.30 in all coursework completed at the University and all coursework completed in Christ College for the Scholar designation.

3. A minimum of 22 credit hours beyond the Christ College Freshman Program coursework. The College grants the equivalent of CC 110 (Valparaiso University course) to CC 115. A student who enters the College after the freshman year and who has not taken CC 110 and CC 115 is required to take one additional 3 credit seminar (CC 300 or CC 325). Students may not choose the S/U grading option for coursework beyond CC 110 and CC 115 unless special permission is granted to fulfill the requirements for the Scholar designation.

Required coursework includes:

- CC 110 Texts and Contexts I 8 Cr.
- CC 115 Texts and Contexts II 8 Cr.
- CC 208 Word and Image 4 Cr.
- CC 315 The Christian Tradition 3 Cr.
- CC 325 Seminar 4 Cr.
- CC 499 Senior Colloquium 1 Cr.

One course selected from:

- CC 255 Interpretation: Self, Culture, and Society 4 Cr.
- CC 270 Interpretation in the Natural Sciences 4 Cr.

Two courses selected from:

- CC 300 or CC 325 Seminar 3 Cr.
- CC 455 Inquiry in the Liberal Arts 3 Cr.

An approved off-campus study program.
A course used to fulfill the requirements of a complementary major in humanities may not be used to fulfill the minimum requirements of any other major or minor. **Minor in Humanities.** The minor in humanities is ordinarily pursued in conjunction with the Christ College Scholar program of studies, but may be pursued independently from the Scholar requirements. Any student, whether or not a member of Christ College, may earn a minor in humanities. The minor in humanities requires a minimum of 17 credit hours in Christ College courses. Required coursework includes:

**CC 255 Interpretation: Self, Culture, and Society.**

One course selected from:
- **CC 300 or 325 Seminar**
- **CC 485 Inquiry in the Liberal Arts**

Two seminars taken on campus
- **CC 300 or 325 Seminar**
- **CC 325 Seminar**

A course used to fulfill the requirements of a minor in humanities may not be used to fulfill the requirements of any other major or minor.

**Course Offerings**

**The Freshman Program**

**CC 110. Texts and Contexts I: Traditions of Human Thought.**

Cr. 8. Intensive study of great works in religious, philosophical, and literary traditions. The close reading of primary texts is accompanied by a survey of the wider aspects of the historical epoch or milieu appropriate to each text. The course is graded S/U only, though advisory grades (A-F) are given throughout the semester. Prerequisite: membership in Christ College or consent of the Dean.

**CC 115. Texts and Contexts II: Traditions of Human Thought.**

Cr. 8. The first seven weeks of this course continue CC 110. In the second seven weeks students choose from seminars on topics relevant to the larger themes of the course. Each student conducts a major investigation of a problem formulated within the seminar. The course is graded A-F only. Prerequisite: membership in Christ College or consent of the Dean.

**Sophomore-Junior-Senior Curriculum**

**CC 201. Christ College Symposium.**

Cr. 0. Presentations and discussions of items and topics of special interest to members of the Christ College community. Christ College sophomores, juniors, and seniors are expected to register for the course and to attend each gathering except in cases of irrecoverable conflicts. Only Christ College members register for the course, but all students are welcome to attend. S/U grade.

**CC 205. Word and Image.**

Cr. 4. A study of selected literary, philosophical, and religious texts, with special emphasis on the relationship of these texts to works of art. These classic texts are read, analyzed, and discussed in seminar settings, supplemented by plenary session devoted to lectures and discussions of visual images. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the Dean.

**CC 215. The Christian Tradition: Doubt, Belief and Disbelief.**

Cr. 3. A study of one or more major topics in the history of Christian thought, with attention to the ways that these topics have been addressed by the Scriptures, classics in theological discourse, and other significant writings. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the Dean.

**CC 255. Interpretation: Self, Culture, and Society.**

Cr. 4. A study of principles of interpretation in the social sciences and relevant classic texts and theories. The course examines some basic interpretive problems using selected areas such as psychology, social theory, literature, anthropology, and history. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the Dean.

**CC 270. Interpretation in the Natural Sciences.**

Cr. 4. A survey of methodology and the philosophical underpinnings of the natural sciences to achieve better understandings of the scientific enterprise. Scientific projects and oral presentations complement readings, lectures, and discussions. Prerequisites: CC 115 or CORE 115 and membership in Christ College or consent of the Dean.

**CC 300. Seminar.**

Cr. 3. Each semester Christ College offers seminars dealing with themes of social, intellectual, cultural, spiritual, or artistic importance. These courses are often interdisciplinary in nature. Seminars may be cross-listed with academic departments in other colleges of the University. Seminars may be focused on topics, historical periods, or persons, but are not limited to these designations. Recent seminar titles include: African Politics and Literature; Inventing the Body; Drama and the Church; Medical Missions; Justice; Children, the Family, and Faith; Poe and Baudelaire; Freedom; Dostoevsky's World; The American Home; Women in Ancient China and Greece; The Scholar in Society. CC 300 may be repeated with different seminar topics. Prerequisite: membership in Christ College or consent of the Dean.

**CC 325. Seminar.**

Cr. 3.4. Same as CC 300, except the course may be intensified to 4 credits with the consent of the instructor. A student who takes the course for 4 credits will prepare an honors thesis on some aspect of the seminar topic in place of one of the regularly assigned papers and the final examination. As a general rule only students with junior or senior standing will be permitted to intensify this course. Prerequisite: membership in Christ College or consent of the Dean.

**CC 455. Inquiry in the Liberal Arts.**

Cr. 3. A course in the theory and practice of the liberal arts. Students in this course collaborate with instructors as tutorial assistants in CC 110. Prerequisites: CC 110 or CC 115, membership in Christ College, and consent of the Dean.

**CC 495. Independent Study Project.**

Cr. 1.4. A special independent study project arranged with a member of the faculty. Approval of this project must be obtained from the faculty prior to registration. Forms for this project are available from the Dean's Office. Prerequisite: membership in Christ College and consent of the Dean.

**CC 499. Senior Colloquium.**

Cr. 1. A capstone, integrative experience for seniors under the direction of Christ College faculty in which students give shape to the substance of their lives through autobiographical narrative, and reflect upon the character and meaning of their future work. Prerequisite: senior standing, membership in Christ College, and consent of the Dean.
to be proactive, goal oriented, optimistic, credible, and professionally competent.

3. "Conscientious stewards" means that the College of Business Administration strives to provide students with a strong ethical foundation that is grounded in the Lutheran Christian tradition. Stewards are leaders who know they have been entrusted with valuable resources (human, natural and financial), act as responsible global citizens, are accountable to the well-being of the whole organization and operate in service to others.

4. "Challenges of a dynamic and complex environment" means that the College of Business Administration strives, through a faculty engaged in professional development activities, to prepare students to be life-long learners who are flexible, creative problem solvers capable of dealing with a complex and changing world.

The general education curriculum exposes each student to a broad range of disciplines, problem solving techniques and methods of inquiry. The business curriculum introduces students to concepts, tools of analysis, and techniques of evaluation which further develop skills in problem solving and decision making. These serve as a foundation for their growth into competent and ethically responsible business persons prepared for work in the global environment. The undergraduate education in business is concerned not only with preparation for business careers but with preparation for life in general. As the shared values indicate "We view students as whole persons and strive to prepare them for personal, as well as professional success."

**The Major Field.** The business core provides background in the production and marketing of goods and/or services and the financing of the business enterprise; it builds on the knowledge gained in the general education component. The student becomes familiar with accounting and quantitative methods that have application to the solution of business problems. Attention is given to ethical and social issues that confront modern organizations within an integrative, capstone, policy-determination course. In addition to taking certain prescribed courses in the core, the student must complete the requirements for the degree in accounting or the major in accounting, finance, information and decision sciences, international business, management, or marketing for the degree in business administration. The requirements for each major are set forth in the curricula described on pages 191-193.

Each of the two undergraduate degrees requires that the students devote at least one-half of their time to required and elective courses outside the College of Business Administration. Students often select non-business elective courses in those areas which provide support to their professional program.

**Minor in Business Administration.** The College offers this minor for non-business students who desire a more advanced preparation in business than is provided by the Liberal Arts Business Minor. For more information and the requirements of these two minors, see page 226 for the Minor in Business Administration and page 230 for the Liberal Arts Business Minor.

**Credit by Examination.** Credit for ACC 205 may be earned through the College Level Examination Program subject examination in Introductory Accounting.

For non-business majors only, credit for MGT 304 may be earned through the College Level Examination Program subject examination in Principles of Management.

For non-business majors only, credit for MKT 304 may be earned through the College Level Examination Program subject examination in Principles of Marketing.

**Minors for Business Students.** In addition to minors in programs outside the College of Business Administration, business students may complete the requirements for an interdisciplinary minor either in International Business and Global Studies (available to business students only, see page 193), or in Manufacturing Management (see page 230), or in Applied Statistics (see page 226).

A business student may declare a minor in the College of Arts and Sciences. No more than two courses of specified non-business courses required for a College of Business Administration degree may be used in fulfilling the requirements of a minor except for interdisciplinary minors, the minor in mathematics and the minor in computer science where three courses may be used to simultaneously satisfy the requirements of the major and the minor. Students must
earn a 2.00 grade point average in a minor for it to be noted on the student's official academic record.

Honors College. The College of Business Administration encourages those students who are qualified to participate in the Christ College Honors program. Business students enrolled in Christ College also have an advisor in Christ College. A College of Business Administration student in Christ College may graduate either as a Christ College Scholar or as a Christ College Associate (see pages 183-184).

Double Major in the College of Business Administration. Students may earn a double major by completing all the requirements for two majors. No course used to fulfill the requirements for one major (including major field requirements) may be used to fulfill requirements for a second major, unless the course is required for both majors or the course fulfills the international business requirement for each major. There cannot, however, be any more than a seven credit overlap between the two majors.

Double Degree. Students may earn double degrees by earning 30 credits and 60 quality points in excess of the total number of semester credits required for the first degree and, in addition, must fulfill all the specific course requirements for the second degree. None of the additional 30 credits for the second degree may be used to fulfill requirements for the first degree.

Assessment Center. The CBA Assessment Center evaluates student performance on realistic business tasks. Assessors observe students in simulations such as role playing, presentations, small group decision making, and offer immediate feedback to the students. Skills assessed might focus on the student's problem solving, communication, leadership, teamwork, and interpersonal abilities. Students may use their assessment results to evaluate their strengths and to identify areas for improvement. The College may use the assessment results to evaluate and improve its curriculum. The increased importance of behavioral skills in the workplace emphasizes the necessity of being able to assess these skills in our students. The College of Business Administration offers the Assessment Center each academic year and requires all students to participate in the Assessment Center activities during each of their Sophomore and Junior years.

Students who transfer in 56 or more credit hours from other universities receive a waiver for the Sophomore Assessment Center (MG300), but are still required to participate in the Junior Assessment Center (MG300).

Cooperative Education. Cooperative Education in the College of Business Administration is a program in which students combine full-time professional, paid work experience with academic coursework. Employment may occur in a business, not-for-profit, or government setting. Each student is required to complete a Cooperative Education (co-op) internship. Students should meet with the Coordinator early in their academic careers.

Internships may be paid or unpaid work experiences.

1. A student may participate in Cooperative Education after achieving junior standing with a minimum cumulative grade point average of 2.00.
2. A student works under the advisement of the CBA's Internship and Assessment Center Coordinator, in consultation with a faculty member (usually the student's faculty advisor), who monitors the work experience, evaluates the written journal and oral presentation, and assigns the course grade taking into account the employer's evaluation of the intern student.
3. Placements require the prior approval of the CBA Internship and Assessment Center Coordinator. Students should meet with the Coordinator early in their academic careers.
4. Internships may be paid or unpaid work experiences.
5. A minimum of 100 hours of work experience during each internship placement is required to receive academic credit for the internship. A student registers for a total of two credits for each internship placement.
6. Internship credit will not be granted.
7. MGT 395 must be completed within four terms (including summer terms) of the cumulative average.
8. MGT 396 must be completed no later than the term following completion of MGT 395.

Admission. The general requirements for admission to the University and to the College are found on pages 243-244 of this catalog. These requirements are those identified with the prefix ACC, BLAW, FIN, IDS, MGT, or MKT. Courses to be included in the major degree point average are those specifically identified under the Major.

1. A student should receive a Letter of Academic Deficiency at the end of the first semester in which he or she has a grade point average of less than 2.00. In a semester in which he or she has a grade point average of less than 2.00 in either overall cumulative, business cumulative, or major cumulative.
2. A student should be placed on College probation if he or she had a grade point average of less than 2.00 in either overall cumulative, business cumulative, or major cumulative and the student has received a Letter of Academic Deficiency within the last two regular semesters.
3. A student should be suspended from the College for at least one semester if he or she has a grade point average of less than 2.00 in cumulative, business cumulative, or major cumulative and the student has been placed on probation within the last two regular semesters.
4. A suspended student will not be allowed to enroll in courses within the College except courses required to raise the business and/or major grade point average(s), provided he or she meets the course prerequisites. A suspended student must wait a minimum of one semester to apply for readmission to the College of Business Administration. In order to be readmitted to the College after suspension, the student must have a minimum University cumulative grade point average of 2.00, a minimum business cumulative grade point average of 2.00, and a minimum major cumulative grade point average of 2.00. A student suspended from the College of Business Administration may apply for admission to another college within the University. A copy of all deficiency
to know curriculum requirements, advisement. for an orderly progression toward a degree. freshmen and sophomores in selecting prerequisites for courses, academic policies more of the following College of Business credit. The general procedures for filing for above may enhance one course in the major students for both course selection and junior or senior student in good standing with complete explanation of the S/U grading option. In addition, faculty members assist business requirements stated above and must meet all additional requirements for graduation established by the University (see pages 254-255 in this catalog).

S/U Grading Option. Business students may not take business courses using the S/U grade option, unless the course is only graded on the S/U basis. This option is permitted in all nonbusiness courses except MATH 122 and 124, ECON 221, 222, and 223, PSY 110 and 111, and any nonbusiness course used in the International Business and Global Studies, Manufacturing Management, or Applied Statistics. See page 251 for a complete explanation of the S/U grading option.

Course Intensification Option. Any junior or senior student in good standing with a business grade point average of 2.70 or above may enhance one course in the major or a major field requirement for 1 additional credit. The only filing for course intensification are found on page 251.

Advisement. Advisement of students admitted to the College is under the direction of the Coordinator of Advising, who assists freshmen and sophomores in selecting courses and interpreting the requirements for an orderly progression toward a degree. In addition, faculty members assist business students for both course selection and advisement. It is each student’s responsibility to know curriculum requirements, prerequisites for courses, academic policies and procedures, and deadline dates.

STUDENT ORGANIZATIONS
Students are encouraged to join one or more of the following College of Business Administration organizations.

Kappa Phi Chapter of Delta Sigma Pi. This selective professional business fraternity of men and women worldwide has been organized to promote professional business in universities, encourage scholarship and social activity and to promote closer affiliation between the commercial world and students of business.

Delta Epsilon Chi. This international membership organization is for college students preparing for a variety of career areas. The local chapters on college campuses are a division of DECA Inc., an association of marketing students. The organization provides a natural outlet for leadership, competition, career development, and community service. The activities promoted by the organization are designed in integrating and enhancing the student’s classroom instruction, as well as provide close ties with the business community leading to networking opportunities and an appreciation for free enterprise.

Accounting Society. The Society’s objectives are to promote professional excellence in the field of accounting, to inform and educate members about career options, to provide opportunities for association between members of the Society and practicing accountants, and to encourage the development of ethical, social and professional standards in the Society open to all students interested in pursuing careers in accounting.

HONOR SOCIETIES
Beta Gamma Sigma. National honor society which recognizes outstanding academic achievement. The honors are offered in AACSB accredited business programs. The upper 10 percent of the senior class and the upper seven percent of the junior class are invited into its membership. Members are entitled to wear blue and gold honor cords at the College of Business Administration.

Accounting Honor Society. Recognizes members of the Accounting Society who have excelled in the study of accounting.

Decision Sciences and Information Systems Honor Society—Alpha Iota Delta. Sponsored by the Decision Science Institute to recognize academic excellence in the field of decision sciences and information systems.

COURSES COMMON TO BOTH DEGREE PROGRAMS IN THE COLLEGE OF BUSINESS ADMINISTRATION
The College of Business Administration offers two undergraduate degrees—the Bachelor of Science in Accounting and the Bachelor of Science in Business Administration. In addition, the College offers several graduate programs including the Master of Business Administration (MBA) and a Management Certificate Program; a dual JD/MBA degree program is offered with the Valparaiso University School of Law and a Management Certificate for Nursing is offered in cooperation with the Valparaiso University College of Nursing. All of these programs are described in the Valparaiso University Graduate Catalog.

The following courses are common requirements for the two undergraduate degrees—the B.S. in Accounting and the B.S. in Business Administration. Courses specifically required for each of these two undergraduate degree programs are listed under the respective degree descriptions following the General Education and Business Core requirements.

GENERAL EDUCATION

Freshman Core Program

CORE 110 The Human Experience 5 Cr.

CORE 115 The Human Experience 5 Cr.

Total 10 Cr.

Academic Core

THEO Foundational Level Course 3 Cr.

THEO Upper Level Course 3 Cr.

ENGL 200 Literary Studies 3 Cr.

MATH 122 Intuitive Calculus 1 Cr.

MATH 124 Finite Mathematics 4 Cr.

ECON 221 Economics—Micro 3 Cr.

ECON 222 Economics—Macro or ECON 223 Economics—International 3 Cr.

Global Cultures and Perspectives 3 Cr.

Social Analysis (Note 1) 3 Cr.

Natural Science (with lab, see Note 2) 4 Cr.

PSY 110 General Psychology 3 Cr.

PSY 111 General Experimental Psychology Lab 1 Cr.

PE 101-105 1-3 Cr.

Total 48 Cr.

Nonbusiness Electives (Note 1) 0-15 Cr.

Total General Education 46-63 Cr.

BUSINESS CORE

Freshman/Sophomore Core Courses

BLAW 104 Legal Environment of Business 3 Cr.

MGT 300 Assessment Center 0 Cr.

ACC 205 Financial Accounting 3 Cr.

ACC 206 Managerial Accounting 3 Cr.

IDS 205 Business Statistics 3 Cr.

Total 12 Cr.

Junior/Senior Core Courses

MGT 300 Assessment Center 0 Cr.

FIN 304 Financial Management 3 Cr.
College of Business Administration

BACHELOR OF SCIENCE IN ACCOUNTING

The 150-hour Bachelor of Science in Accounting degree prepares students for professional careers in public accounting and satisfies the CPA examination requirements for many of the states that have such a requirement or are adding one, including Indiana, Illinois, and Wisconsin. The degree incorporates a substantial number of elective courses which make it possible for a student to enrich and broaden their business studies by taking advantage of other degree and program opportunities.

MAJOR REQUIREMENTS

Communication Requirements

English 300 Introduction to Professional Communication 3 Cr.

Major Field Requirement

An international study semester is required unless the student has had a minimum of six consecutive months of non-U.S./Canada residency after fourteen years of age.

Management Major

Marketing

3 Cr.

MGT 310 Managing Human Resources

3 Cr.

MKT 315 Leadership and Interpersonal Skills

3 Cr.

MGT 425 Managing Technology and Change

3 Cr.

International Business Requirement

3 Cr.

MGT 440 Cross-Cultural Management

3 Cr.

Economics

3 Cr.

FIN 430 International Finance

3 Cr.

FIN 420 Investment Management

3 Cr.

MGT 430 International Marketing

3 Cr.

Finance

3 Cr.

MKT 460 Ethics in Business

3 Cr.

MKT 470 High Performance Organizations

3 Cr.

International Business Requirement

3 Cr.

MKT 440 Cross-Cultural Management

3 Cr.

International Business Requirement

3 Cr.

MKT 440 Cross-Cultural Management

3 Cr.

Economics or International Business

3 Cr.

MGT 471 International Business Environment and Global Strategy

3 Cr.

Free electives (Notes 2, 3 and 4) 12 Cr.

Grand Total 125 Cr.

An international study semester is required unless the student has had a minimum of six consecutive months of non-U.S./Canada residency after fourteen years of age.
College of Business Administration

International Elective Tracks

One track is required.

East Asian Region
Choose two of the following courses: GEO 301: Asia regional course, HIST 240, 341, 342, THEO 363.

European Region
Choose two of the following courses: GEO 301: Europe regional course, HIST 313, 315.

Latin American Region
Choose two of the following courses: GEO 301: Latin American regional course, HIST 232, 331.

General International Track
Choose one course from two different groups:
1. GEO 101 or 102
2. HIST 210
3. POLS 130 or 230
4. POLS 330 or 335

International Study Abroad Track
Attendance at an approved Valparaiso University international study program, or an alternative international study program approved by the Administrative Committee.

COURSE DESCRIPTIONS

In order to enroll in CBA courses numbered above 304, a student must have junior standing.

ACCOUNTING

Cr. 3. A study of basic accounting theory and practice, the nature of assets and equity, income measurement, and financial statement preparation. Prerequisites: MATH 110 or placement higher than MATH 110 on the math placement examination, and sophomore standing or permission of the area coordinator for accounting majors.

ACC 206. Managerial Accounting.
Cr. 3. A study of the analysis and use of accounting data to manage enterprises. Topics include cost-volume-profit relationships, decision analysis, budgeting, standard costing, segment reporting, and product costing methods. Prerequisite: ACC 205.

ACC 210. Introductory Accounting Lab.
Cr. 1. Computer-aided instruction of the procedural accounting skills required for professional accountants. Prerequisite: ACC 205 or permission of the instructor. S/U grade.

ACC 290/390/490. Topics in Accounting.
Cr. 1-3. A detailed examination of selected topics pertinent to the field of accounting to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

ACC 301. Seminar in the Accounting Profession I.
Cr. 0.5. An exploration of important professional accounting issues that are not covered in traditional accounting courses. The course relies on case studies, presentations and discussions conducted by practicing professional accountants as well as various faculty members. Prerequisite: ACC 205. S/U grade.

ACC 302. Seminar in the Accounting Profession II.
Cr. 0.5. Continuation of ACC 301. Prerequisite: ACC 301. S/U grade.

Cr. 3. A study of the theoretical foundations underlying financial reporting, revenue recognition, the matching of expenses, and financial statement presentation, with a focus on asset measurement and income determination. Prerequisites: BLAW 104, ECON 221, ECON 222 or 223, IDS 205, ACC 206, and completion or concurrent enrollment in ACC 210, IDS 110, and FIN 304.

ACC 311. Intermediate Financial Accounting II.
Cr. 3. A study of the theoretical foundations underlying financial reporting, revenue recognition, the matching of expenses, and financial statement presentation, with a focus on liability valuation, stockholders' equity, and selected financial reporting topics. Prerequisite: ACC 310.

Cr. 3. A study of the use, evaluation, and design of accounting information systems. Prerequisites: BLAW 104, ECON 221, ECON 222 or 223, IDS 205, ACC 206, and completion of or concurrent enrollment in ACC 210 and IDS 110.

ACC 316/MBA 716 (formerly ACC 340). Governmental and Not-For-Profit Accounting.
Cr. 3. This course provides a focus on accounting systems and processes unique to noncommercial enterprises. Emphasis is placed on accounting, reporting, and analysis of organizations whose primary purpose is to provide services. The courses addresses the changing financial reporting environment in the non-for-profit sector of business as well as in government. Attention is given to issues both in external financial reporting and in managerial accounting analysis. Prerequisite: ACC 310.

ACC 320. Cost Accounting.
Cr. 3. A study of the techniques used to accumulate, measure, plan, and control the costs of an organization's products and services. Prerequisites: BLAW 104, ECON 221, ECON 222 or 223, IDS 205, ACC 206, and completion of or concurrent enrollment in ACC 210 and IDS 110.

Cr. 3. A study of various taxation bases, methods of taxation, and the purpose of taxation. The goal of the course is to provide the student with concepts of taxation so that the effect on management decisions may be understood. Primary emphasis will focus on business entities at the federal level. Prerequisite: ACC 205.

ACC 411/MBA 711. Advanced Accounting.
Cr. 3. A study of generally accepted accounting principles as applied to partnerships, corporate consolidations, and international operations. Prerequisite: ACC 311.

ACC 412/MBA 712. Tax Research.
Cr. 3. An exploration of the concepts of taxation by providing opportunities to investigate the effects of taxation on the various entities (corporations, partnerships, trusts, and individuals). The emphasis will center on the concepts of gross profit, partial tax accounting, and the long-term and short-term effects of management decisions. Prerequisite: ACC 350.

ACC 413/MBA 713. Auditing and Assurance Services.
Cr. 3. A study of the independent accountant's assurance, attestation, and audit services. Topics include planning, evidence, standards, control, reports, liability, ethics, and the effect of regulation. Prerequisites: ACC 311 and ACC 330.

ACC 495. Independent Study in Accounting.
Cr. 1-3. An independent research effort. It requires approval of a research proposal by a member of the College of Business Administration. May not be used as a substitute for a course which covers the proposed research area. Prerequisite: approved research proposal and permission of the Dean.

BUSINESS LAW

BLAW 104. Legal Environment of Business.
Cr. 3. A study of the legal and regulatory climate that has a major impact on the operation of business entities. Emphasis is directed not only to legal but also to ethical issues confronting the manager in today's global economy. Prerequisite: completion of 12 credit hours.

Cr. 3. A study of various areas of the law that affect the commercial community. The scope of this course includes the law of contracts, sales, agency, business associations, and issues related to corporate social responsibility. Prerequisites: junior standing and BLAW 104.

FINANCE

FIN 282. Personal Finance.
Cr. 3. An overview of personal and family financial management with an emphasis on budgeting, tax management, credit management, insurance selection, retirement planning, and estate planning. Business majors may take this course only as a free elective. Prerequisite: sophomore standing.

FIN 290/390/490. Topics in Finance.
Cr. 1-3. A detailed examination of selected topics pertinent to the field of finance to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

FIN 304. Financial Management.
Cr. 3. A survey of the field of financial management. Major topics include the financial environment, financial statement analysis and forecasting, leverage, working capital management, assessment of risk, the time value of money, valuation of securities, and capital budgeting. Consideration is given to these topics as well as to ethical relationships among the firm's stockholders. Prerequisites: ACC 206, ECON 221 and completion of at least 48 credit hours.

Cr. 3. A study of management techniques of financial institutions in the context of their role in the US financial system. The primary objective of this course is learning to measure and manage risk within financial institutions. Prerequisites: FIN 304, and IDS 110 or CS 157.

FIN 410. Theory of Corporate Finance.
Cr. 3. A study of the theory of corporate finance with emphasis on analytical and quantitative problem solving. Topics covered include risk measurement and management, the cost of capital, capital budgeting, credit structure and dividend policy, and valuation theory. Spreadsheets will be employed where applicable. Prerequisites: FIN 304, either IDS 110 or CS 157, and completion of or concurrent enrollment in IDS/MATH 340.

FIN 420. Investment Management.
Cr. 3. A study of security markets and investment types emphasizing methods of analysis for selection of investments. Primary focus is given to the stock and bond markets. Sources of data, portfolio theory, and management of portfolios are discussed. Prerequisites: FIN 304, and IDS 110 or CS 157.

Cr. 3. This course develops an understanding of the use of options, futures, swaps and other derivative financial instruments. In addition to a discussion of the mechanics of these derivative instruments, the use of derivatives in risk reduction strategies is extensively developed. Prerequisite: FIN 420.

FIN 430. International Finance.
Cr. 3. An introduction to the functioning and management of the firm in international markets. An emphasis is placed on the multinational firm but increasingly globalizes makes international finance of concern to virtually every business operation. Coverage includes the international financial environment, and the measurement and management of foreign exchange exposure, arising during international operations and trade. In addition, financing and investing decisions are considered in the international context. Prerequisite: FIN 304.
IDS 305. Production-Operations Management.
Cr. 3. An analysis of the financial strategy of the firm with regard to investment and financing decisions. Evaluation of the risk and return of various financial strategies is emphasized. Students will have the opportunity to develop and enhance their financial skills through reading articles drawn from the literature and through the analysis of case studies allowing students to integrate skills and knowledge developed in earlier business courses.
Prerequisites: FIN 410 and IDS/MATH 340.

FIN 495. Independent Study in Finance.
Cr. 1-3. An independent research effort. It requires approval of a research proposal by a member of the college faculty and the Dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the Dean.

INFORMATION AND DECISION SCIENCES

IDS 110. Business Spreadsheet Applications.
Cr. 1. An introduction to using spreadsheets as decision support system generators in order to create specific applications such as templates and what-if scenarios. Emphasis is on user interface, macro development, and forms coupled with business functions. Prerequisite: MATH 110 or placement higher than MATH 110 on the math placement exam.

IDS 111. Business Applications Programming.
Cr. 1. An introduction to programming business applications using spreadsheets and application development languages. Emphasis is upon structured programming using sequence, selection, and iteration constructs in an object-oriented environment. Prerequisite: IDS 110 or CS 157.

Cr. 3. A course in the elements of statistical inference and the application of statistical methods to business problems. Content includes probability theory, probability distributions, descriptive statistics, sampling distributions, parameter estimation, and tests of hypotheses. Prerequisite: MATH 122 or 124 or 131 or 151.

IDS 290/390/490. Topics in Information and Decision Sciences.
Cr. 1-3. A detailed examination of selected topics pertinent to the field of information and decision sciences to be offered when sufficient interest and staffing are available. Prerequisites will vary depending on topics being covered.

Cr. 3. A study of operations of manufacturing and service organizations corresponding to the requirements placed upon management. Content includes forecasting, regression, inventory management, MRPII, capacity planning, transportation, facility location and layout, quality, reliability, project management, and scheduling. It includes the use of management science techniques and computer applications in the decision-making process. Prerequisites: one of MATH 122, 131, 151 and one of MATH 124, 132, 162, and completion of or concurrent enrollment in IDS 205 or MATH 234 or MATH 264.

IDS 310. E-Commerce and E-Business Technology.
Cr. 3. (Also offered as CS 210 and LS 570.) This course offers an overview of potentialities, policies, politics, possibilities, and pitfalls of the e-business technologies of intranets, extranets, enterprise resource planning, electronic commerce (conducting business on-line) and electronic business (using information technology to manage the supply-chain), including hardware and software applications required for both. Prerequisite: junior standing.

Cr. 3. A study of fundamentals of management science techniques in decision-making process. The emphasis is on model building, problem formulation and solution using linear programming, transportation, multi-criteria and network flow models, queueing theory, simulation, dynamic programming, and Markov processes. Prerequisites: MATH 122 or 131 or 151, and IDS 205 or MATH 234 or 240 or 264.

Cr. 3. (Also offered as IDS 340.) A study of statistical concepts and methods to facilitate decision making. Content includes analysis of variance, simple and multiple regression, correlation, time-series analysis, and nonparametric methods. Prerequisite: IDS 205 or MATH 240 or CE 202 or completion of or concurrent enrollment in ECE 465.

Cr. 3. Study of the concepts and application of information systems in decision making. It includes topics such as systems theory, data base concepts, data analysis and management, managerial interfaces and control. Prerequisites: IDS 205 and completion of or concurrent enrollment in FIN 304, IDS 305, MGT 304, MKT 304.

Cr. 3. Study of computer-based information systems that offer data, decision, and executive support for management decision making. It includes topics such as developing and building database management systems, decision support systems, and expert systems; various methods of knowledge acquisition and representation; methods of inference, including forward and backward chaining, as they relate to business oriented systems; and the user interface. Prerequisites: IDS 205 or MATH 240, 245, 264.

Cr. 3. This course examines issues and methods for effectively managing global operations and supply chain. Topics include the role of operations in the global business strategy, supply chain optimization, advantages and disadvantages of different types of operations around the world. The course also covers location and behavior of international facilities, developing and maintaining an effective global supply chain, the role of e-commerce, outsourcing, data mining, transportation, ERP and ISO in a global environment. Prerequisites: IDS 205 or MATH 234 or MATH 240 and completion of or concurrent enrollment in IDS 305.

Cr. 3. (Also offered as ECON 493 and MATH 493.) An intensive study of selected topics, methods, techniques, and problems in applied statistics. Prerequisite: IDS 340 or ECON 325.

IDS 495. Independent Study in Information and Decision Sciences.
Cr. 1-3. An independent research effort that requires approval of a research proposal by a member of the college faculty and the Dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the Dean.

MGT 100. Introduction to Contemporary Business.
Cr. 3. An overview of the dynamic world of global business, its basic functions and management tools. This interactive course introduces students to business decision-making in an integrative context and discusses the contemporary issues facing business people. This course is not open to College of Business Administration students who have completed 48 or more credit hours.

MGT 200. Sophomore Assessment Center.
Cr. 0. This course involves approximately one-half day of assessment activities. During the Assessment Center, students complete a series of exercises, aimed at evaluating their skill level on a variety of behavioral dimensions (e.g., communication, teamwork, problem-solving skills). During most exercises, trained assessors from the business community observe the students. The assessors provide immediate verbal feedback and complete written evaluation forms, which the students receive subsequent to the completion of the assessment center. Prerequisite: sophomore standing. SU grade.

MGT 290/390/490. Topics in Business.
Cr. 1-3. A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Prerequisites will vary, depending on topics being covered.

MGT 300. Junior Assessment Center.
Cr. 0. This course involves approximately one-half day of assessment activities building on the exercises in MGT 200. During this Assessment Center, students complete a series of exercises, aimed at evaluating skill level on a variety of behavioral dimensions (e.g., communication, teamwork, problem-solving skills). During most exercises, trained assessors from the business community observe the students. The assessors provide immediate verbal feedback and complete written evaluation forms, which the students receive subsequent to the completion of the assessment center. Prerequisite: junior standing. SU grade.

MGT 304. Management and Organizational Behavior.
Cr. 3. Includes an overview of traditional functions of management but builds on elements of organizational theory and the behavioral sciences. Emphasis on developing interpersonal communication skills and leadership for the improvement of individual and group performance in the total organizational environment. Prerequisites: ACC 205, ECON 221, and completion of at least 48 credit hours.

MGT 310. Managing Human Resources.
Cr. 3. An introduction to the activities common to the field of human resource management, including human resource planning, job analysis, recruitment, placement, selection, training and development, compensation and benefits, health and safety, performance appraisal and discipline, and labor-management relations. Prerequisite: completion of or concurrent enrollment in MGT 304.

MGT 315. Leadership and Interpersonal Skills.
Cr. 3. Describes the nature of leadership and parameters of various leadership approaches, with emphasis being placed on contemporary models of leadership. Also examines the role of interpersonal skills in leader effectiveness. This course should assist future managers in developing the interpersonal skills they will need in different leadership roles. Prerequisite: MGT 304.

Cr. 3. The study and the applications of the essential management factors of various types of small business, including organizational, environmental and personal factors. It includes exposure to sources of information and assistance for the small business person. Prerequisites: MGT 304, FIN 304 and MKT 304.

MGT 381. Cooperative Education in Business Administration.
Cr. 2. The first of two sequential full-time paid
MGT 382. Cooperative Education in College of Business Administration

Cr. 2. The second of two sequential full-time, paid work experiences in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires a satisfactory supervisor evaluation and submission of a final written report in approved form. Prerequisites: junior standing and approval of both the CBA Internship and Assessment Center Coordinator and the Director of the Career Center. S/U grade.

MGT 398. Internship in Business Administration III

Cr. 2. Third work experience in which students apply their business knowledge, skills, and abilities in an actual organizational setting. This course requires an approved job description, an evaluation from the employer and the internship coordinator, and a final written report. Registration is in the semester of the actual work experience. Prerequisite: completion of MGT 397. S/U grade.


Cr. 3. Focuses on managing change in today's highly dynamic organizational environments. The course explores approaches for managing technology, structure, work teams, and organizational culture within a sociotechnical systems theory framework. Prerequisites: MGT 304 and senior standing.

MKT 290/390/490. Topics in Marketing

Cr. 1-3. An introductory level course taught from a managerial perspective. The areas of marketing analysis, campaign planning and strategy, media selection and design of advertisements are emphasized. The emphasis will be placed on the relationship between marketing strategy, market structure, and environment. Prerequisite: junior standing and MKT 304.

MKT 320. Sales Management

Cr. 3. A study of the managerial functions of professional selling to the industrial or organizational buyer. An overview of organizational, economic, and psychological influences on the organization's buying decisions. Emphasis on field and territorial management, recruitment and training of the sales force, sales forecasting techniques, routing, and personal selling principles. Prerequisites: MKT 304 and completion or concurrent enrollment in IDS 340.

MKT 330. Buyer Behavior

Cr. 3. An analysis of the psychological, social, and economic influences which affect attitude formation and decision-making processes of consumers. An overview of the research methods used for determining characteristics of buyers is included. Prerequisite: MKT 304.

MKT 361. Retailing

Cr. 3. A study of the contemporary environment of the retailing industry with emphasis on techniques utilized in store location, merchandising, promotion and control. Prerequisites: junior standing and MKT 304.

MKT 362. Advertising

Cr. 3. An introductory level course taught from a marketing perspective. The areas of market analysis, campaign planning and strategy, media selection and design of advertisements are emphasized. The emphasis will be placed on the relationship between advertising and the role of the different service institutions, such as advertising agencies, also are covered. Prerequisites: junior standing and MKT 304.

MKT 430. International Marketing

Cr. 3. A study of managerial marketing policies and practices of organizations marketing their products and services in foreign countries. Specific stress will be placed on the relationship between marketing strategy, market structure, and environment. Prerequisite: MKT 304.

MKT 470. Marketing Strategy and Policy

Cr. 3. Capstone marketing course primarily for students with a concentration in Marketing. It is taught from a marketing management perspective involving case analysis of product policy, pricing, distribution and promotional mix. Prerequisites: senior standing, MKT 304 and two of the following: IDS 340, MKT 310, MKT 320, MKT 330, MKT 430.

MKT 495. Independent Study in Marketing

Cr. 1-3. An independent research effort. It requires approval of a research proposal by a member of the college faculty and the Dean. May not be used as a substitute for a course which covers the proposed research area. Prerequisites: approved research proposal and permission of the Dean.
COLLEGE OF ENGINEERING

Kraig J. Olejniczak, Ph.D., P.E., Dean

Mission. The mission of the College of Engineering is to educate qualified and motivated individuals in a strong undergraduate environment who, upon graduation, are prepared for lifelong learning and the pursuit of professional excellence by ethically and creatively applying scientific knowledge to benefit society.

Vision. The vision of the College of Engineering is to be the finest undergraduate engineering college at a comprehensive university developing the leaders for tomorrow.

Objectives. Engineering is the art of applying scientific and practical knowledge to the solution of problems for the benefit of society. The curriculum integrates scientific and engineering principles, practical laboratory and computer experiences, engineering design experiences culminating in a major design project, and liberal learning in the tradition of Christian church-related colleges and universities. Special emphasis is given to communication skills, the humanities, and the social sciences. Students are enriched by participation in the academic, social, cultural, and spiritual life that is central to the Christian academic tradition at Valparaiso University. Graduates are prepared both for direct entry into the practice of engineering and for graduate school.

The Academic Program. Bachelor of Science degrees may be earned in civil, computer, electrical, and mechanical engineering. The goals of each of these programs are to build a strong foundation in mathematics, the natural and engineering sciences, and to provide an introduction to engineering design during the early portion of the program. This is followed by courses with increased emphasis on engineering applications, design, teamwork, and interdisciplinary activity. Instruction in engineering design is integrated throughout the curriculum so that students advance toward higher levels of competence culminating in a senior design project which emphasizes formulation of problem statements and criteria, consideration of alternatives, and communication of results. The laboratory program provides for first-hand observation of physical phenomena, experience in data collection and analysis, verification of designs, written and oral communication, and teamwork. The use of computers in both the classroom and laboratory is fully integrated into the curriculum starting in the first semester.

History. Civil engineering courses were taught at Valparaiso University beginning in 1859. Sisters Ethel and Merle McCall were the first women engineering graduates each receiving civil engineering degrees in 1915. Full four-year programs were established in 1920, with offerings in Civil, Electrical and Mechanical Engineering. During World War II, with the shortage of male students, the program was temporarily reduced to two years at Valparaiso University followed by two years at Purdue University.

After the war, four-year engineering programs were reinstated on campus through the initiative of students who raised funds and then designed and built a new engineering laboratory building. The first post-World War II degrees were offered in 1951 in Civil, Electrical and Mechanical Engineering. The Indiana Delta Chapter of Tau Beta Pi, the national engineering honor society, was chartered in 1963.

In 1968 the College of Engineering moved to the newly-constructed Gellersen Engineering and Mathematics Center. This facility was provided through the generosity of the late William A. Gellersen of Oakland, California. The building, located on the eastern edge of the campus, contains faculty offices, classrooms and laboratories of the College of Engineering and the Department of Mathematics and Computer Science.

The optional cooperative education program was initiated in 1983 and the first group of cooperative education students graduated in 1986.

College Organization. Administratively, the College is an instructional unit under the direction of the Dean of Engineering. The individual programs in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are directed by the faculties of the three engineering departments under the leadership of Department Chairs. The Freshman Engineering Coordinator reports to the Dean.

Accreditation. Bachelor of Science degree programs in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Admission Requirements. The requirements for admission of first-year students to the College are listed on pages 243-244 of this catalog. Students who do not meet the mathematics and science requirements for admission to the College of Engineering may be admitted to the Pre-Engineering Program in the College of Arts and Sciences as described on page 53. Upon satisfactory completion of the required mathematics and science courses, they may request admission to the College of Engineering.

Transfer Students. Academic work taken at other institutions is evaluated for advanced standing by the Registrar. The appropriate department chair then determines which credits apply toward the major and a Statement of Equivalence form is completed. Transfer students are urged to communicate with the chair of the department in which they hope to major prior to formally applying for admission to obtain a preliminary assessment of the duration of their course of study.

Computers. Computers are very important tools for the professional practice of engineering. For engineering students, having their own computer is as important as having their own textbooks and calculator. All engineering students are required to have an approved personal computer available for use in their residence.

In addition to their own computer, students have direct access to a wide variety of computing environments, e-mail, and the Internet on the campus computer network. Network-connected computers for general student use are located in Gellersen Center, Schnabel Hall, the Christopher Center and most residence halls. In addition, work stations and personal computers containing software for engineering design, analysis, and simulation are located in various engineering laboratories. Residence halls have network access from individual rooms. ISP or dial-up access is available from off-campus locations.

The Freshman Program. First year engineering students begin their program of study with a schedule of courses that is...
consistent for all engineering majors. Work in a selected major begins in the second semester. The Freshman Engineering Coordinator serves as the academic advisor for all first-year engineering students.

The GE 100 Fundamentals of Engineering course is an integral part of the first-year program. The course focuses on the fundamental concepts of engineering, drawing on topics from each discipline and showing the interdisciplinary nature of the profession.

A typical class will begin with lecture, move on to a case study, and end with a hands-on project or demonstration. Student mentors (i.e., upper-division engineering students) will aid in guiding the projects.

Freshmen will also participate in an Engineering Seminar, which features alumni and campus speakers to help the freshmen better understand the possibilities available in engineering and other sessions to improve student survival skills.

Student Advisement. The Freshman Engineering Coordinator is the academic advisor for first-year students. When a major is declared, the student is assigned to an academic advisor from that department's faculty. Majors are declared in the second semester of the freshman year.

Herman and Helen Hesse Learning Resource and Assessment Center. The Hesse Learning Resource and Assessment Center is an academic support program for students in the College of Engineering. Using peer tutors, it provides free one-on-one tutoring and group study sessions in math, science, and engineering courses for all engineering students. In conjunction with other campus-wide services, it also provides academic counseling, study-skills advising, assistance with technical writing, and group help sessions. The center also assists in assessing outcomes of the College of Engineering's educational programs. Located in Gellersen Center, it is open on all days when classes are in session.

Senior Project. All students in their senior year are required to complete a major design project. Students are organized into teams to plan, organize, execute, present, and document multidisciplinary design projects under the supervision of a faculty advisor.

Placement. The Career Center arranges on-campus interviews with a variety of employers who are interested in hiring graduates. Comprehensive services are also available to assist students seeking employment opportunities with organizations which do not interview on campus. Assistance is also available within and outside the College of Engineering for students wishing to find graduate study opportunities, cooperative education positions, summer employment, or part-time employment during the school year.

Resource libraries provide information on employment and graduate school opportunities throughout the United States.

Professional Registration. Registration of those who wish to practice professional engineering is required by law in each of the states and the District of Columbia. The purpose of the law is to assure the general public that those professing to practice engineering have been examined and accepted by a State Board of Examiners. Graduates engineers will be able to more fully practice engineering if they are licensed as a Professional Engineer (PE). 

Licensing requires passing the Fundamentals of Engineering (FE) Examination typically followed by four years of engineering experience, after which they can sit for the PE Examination. Senior engineering students are provided with information about the licensing process and an invitation, which they are urged to accept, to take the FE Examination during their senior year.

Student Professional and Service Organizations. To foster interest in the profession of engineering and in activities of the College of Engineering student body, the College provides general interest programs for all engineering students and sponsors social and recreational activities. Upon selecting a major, students are encouraged to join the student chapter of the related professional society. The American Society of Civil Engineers (ASCE), the Institute of Electrical and Electronics Engineers (IEEE), the American Society of Mechanical Engineers (ASME), and the Society of Women Engineers (SWE) all have active student chapters on campus. In addition, there is a club of the Society of Automotive Engineers (SAE). Junior and senior students who have distinguished themselves by high scholarship, exemplary character, unselfish activity, and breadth of interest in their profession may be elected to membership in Tau Beta Pi, the national engineering honor society.

In alignment with the University's and College of Engineering's mission statements, the Engineers Without Borders (EWB)-Valparaiso Chapter was formed in the spring of 2002. EWB is a non-profit organization that was established to help developing areas worldwide with their engineering needs, while involving and training globally responsible engineering students.

As stated on the EWB-USA web site, "EWB projects involve the design and construction of water, wastewater, sanitation, energy, and shelter systems. These projects are initiated by, and completed with, contributions from the host community, which is trained to operate the systems without external assistance. In this way, EWB-USA ensures that its projects are appropriate and self-sustaining. The projects are conducted by groups of students under the supervision of faculty and professional engineers from partnering engineering firms. By involving students in every step of the EWB-USA process, the program maximizes their learning and awareness of the social, economic, environmental, political, ethical, and cultural impacts of engineering projects."

SPECIAL PROGRAMS OF THE COLLEGE OF ENGINEERING

Cooperative Education. The Cooperative Education Program provides a special five-year program for personal and career development which integrates classroom theory with career-related work experience. Employment in a salaried position allows students to gain valuable experience, to test career interests and to apply classroom knowledge in an environment related to their professional degree areas. The cooperative education student acquires engineering experience through a planned and supervised program which provides alternating periods of full-time campus study and full-time off-campus employment with one of over 100 co-op partners throughout the United States. The initial work assignment normally starts during the summer after the sophomore year. Academic credit is earned for each work period. Students typically complete four or five summer and semester work sessions with the same employer. The Cooperative Education Program enhances the graduating engineer's placement and some employers count the time served as a cooperative education student toward fringe benefits provided to employees.

Internships. The engineering internship program is an optional program in which all engineering students in good standing except those participating in the Cooperative Education Program, may participate in during their summer breaks. Participation is limited to the summer between the freshman and sophomore years through the summer between the junior and senior years. Students interested in this program can earn up to three credit hours of academic credit for their participation in the program.

Interdisciplinary Studies. Programs can be arranged to meet special needs or interests of students studying engineering at Valparaiso University. Students interested in career fields such as electromechanical, biomedical or chemical engineering or medicine can enrich their engineering programs by careful selection of electives. These programs involve replacing technical and free electives with courses from other disciplines. Each student plans a program of study in consultation with faculty advisors, and must secure approval of the Dean of Engineering. Upon graduation the student receives a Bachelor of Science degree in Civil, Computer, Electrical, or Mechanical Engineering.

Double Degree Program. Some students wish to obtain a Bachelor of Arts or Bachelor of Science degree in the College of Arts and Sciences or the College of Business Administration in addition to their degree in engineering. In general, this will require an additional year or more of study. To earn two degrees, students must earn 162 credit hours and attain a grade point average of at least 2.00 as well as complete all other graduation requirements for each degree. Students desiring double degrees must have their schedules approved by the Deans of both colleges involved. Further information may be obtained from the Dean of the College.

 Majors and Minors. An engineering student may earn a major or minor in other colleges of the university by satisfying catalog course and credit requirements for the major or minor. Each major or minor will
require at least one course of at least three credits above any and all course work presented for the engineering degree. The use of engineering courses that are cross-listed or have equivalent course content with courses required for the major or minor is established by official action of the other college. The major or minor will be noted on the student’s official academic record.

**Departmental Minors.** An engineering student seeking further breadth in their plan of study may earn one or more minors within the College of Engineering. The following minors are available: civil engineering, digital systems design, electrical engineering, and mechanical engineering. See the requirements for these in their respective departmental listing.

**Engineering Minor.** The engineering minor offers non-engineering students an introduction to areas of engineering. This minor is especially appropriate for students with an interest in pursuing a career in an engineering-related field. The Freshman Engineering Coordinator will serve as advisor. This minor would be of interest to students who need an approved minor to graduate (see page 48).

A minimum of 18 credit hours of engineering courses is required for this minor. Of these, at least 9 credits must be from 200-level or higher courses. GE 100 may not be included, and credit will not be given for both CE 334 and ME 373, for both ECE 261 and ECE 281, and for both CE 212 and ME 252. Students must satisfy course prerequisites. The course of study must be approved by the advisor.

**Manufacturing Management Minor.**

A interdisciplinary minor in Manufacturing Management is offered jointly by the College of Engineering and the College of Business Administration (see page 230 for requirements).

**Honors College.** Students invited to participate in the program of Christ College take all required engineering courses as well as courses required in the honors program. Because Christ College courses replace certain non-engineering courses, the College of Engineering-Christ College combination normally requires only four years for completion. Christ College courses provide an enriched program in the humanities and satisfy General Education Requirements for the engineering program. Academic advisors are assigned for both the College of Engineering and Christ College. Engineering students invited to join Christ College are strongly urged to accept the invitation. Additional information is available from the Dean of Engineering.

**International Experiences.** Various optional programs are available through which engineering students may obtain improved understanding of and appreciation for the history, geography, language, culture, and engineering practices of other nations. In addition to the study opportunities described on pages 12-13 and 20-25 of this catalog, engineering students are permitted to arrange an international cooperative education requirement for these purposes.

**Valparaiso International Engineering Program (VIEP-German).**

VIEP-German is a five-year program that combines a major in one of the four engineering fields with a major or minor in German. The program allows students to gain multi-cultural experience and German language proficiency along with technical engineering skills and prepares them for careers with one of many German research and manufacturing firms located in the United States. Students are required to fulfill all requirements for one of the four engineering majors; take one German course per semester beginning, at the latest, in the third semester; participate in Valparaiso University’s Study Abroad Program in Reutlingen, Germany in the seventh semester; enroll in at least one German-language engineering, science, or mathematics course while in Reutlingen; work in a cooperative education placement in Germany during the eighth semester and the ensuing summer; and reside in the Kade-Duesenberg German House and Cultural Center for at least two semesters. VIEP-German is coordinated jointly by the College of Engineering and the Department of Foreign Languages and Literature. Students who wish to enroll in VIEP-German should see their engineering advisor and a German instructor as early in the freshman year as possible.

**ACADEMIC POLICIES**

**Graduation Requirements.** Students must complete one of the prescribed engineering curricula as described in the departmental listings. These prescribed courses satisfy the curriculum requirements of the Accreditation Board for Engineering and Technology. The evaluation of advanced standing of transfer students is based on meeting these requirements. The Department Chair or Freshman Engineering Coordinator may waive the requirement for GE 100 and/or GE 199. The requirement will be replaced with a free elective.

In addition to other requirements set forth on pages 254-256 of this catalog, the student’s grade point average must meet the following minimums for all work taken at Valparaiso University:

1. A cumulative GPA of 2.00 in all work.
2. A cumulative GPA of 2.00 in General Education courses applicable to the desired degree.
3. A cumulative GPA of 2.00 in mathematics, science, general engineering, and other engineering courses outside the major that are applicable to the desired degree.
4. A cumulative GPA of 2.00 in the engineering major.

Courses to be included are those identified with the department prefix (i.e., CE, ECE, ME) corresponding to the major.

**Academic Integrity.**

Students whose cumulative resident grade point average in any of the four categories listed above under Graduation Requirements falls below 2.00 are considered academically deficient. Such students may be denied the privilege of continuing their studies by being suspended from the College of Engineering unless they succeed in improving the quality of their work to the satisfaction of the faculty during the following semester. These students are considered to be on probation and may be required by their department to take certain prescribed courses and meet specific standards in order to continue their enrollment in the college. It is the policy of the College of Engineering that suspended students may not request reinstatement for one calendar year.

**Guest Policy.**

A student not pursuing an engineering major or minor may take one engineering course per semester or summer session on the written recommendation of the Freshman Engineering Coordinator or a Department Chair and with the approval of the Dean of Engineering. Students who have been suspended from the College of Engineering and are presently enrolled in one of the other colleges may not enroll in an engineering course unless they have completed the course at an earlier date with an unsatisfactory grade (C- or lower). Courses that are cross-listed with departments in the other colleges and taken while on academic suspension may not be used to satisfy College of Engineering degree requirements.

**Admission to Courses on a Satisfactory/Unsatisfactory Basis.**

The general policies for admission to courses on an S/U basis are found on page 251. Except for courses that are graded only on an S/U basis, the S/U graded courses that may be used to satisfy specific degree requirements are academic area studies electives, physical education, and free electives. Courses that are not used to satisfy degree requirements may be taken on an S/U basis.

**General Engineering**

**Barbara Engerer, Freshman Engineering Coordinator**

See page 50 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

GE 100. Fundamentals of Engineering.

2+/2+. Cr. 3. This is an introductory studio-lab course that focuses on the fundamental concepts of engineering. Topics are drawn from principles of civil, computer, electrical, and mechanical engineering and show the interdisciplinary nature of the profession. Foundational skills such as problem solving, engineering communication, and teamwork are included. Students will participate in hands-on activities during most class periods.


Cr. 3. A course in the resolution and composition of forces and moments as applied to the free body diagram. Topics include principles of equilibrium, first and second moments of area, study of stresses, friction and machines, friction. Prerequisites: MATH 131 and PHYS 141.

GE 199. Engineering Seminar.

Cr. 0. This seminar includes topics in engineering opportunities, student success skills, and career planning.


Cr. 3. Introduction to problem solving, decision making and risk assessment as they relate to the technical decision-making process. Engineering
GE 495. College of Engineering

measurements will be explored in the laboratory using conventional and computer-based data acquisition systems. Utilizing case studies, the relevant technical and nontechnical decisions associated with issues and projects will be explored. Not open to engineering majors.

GE 301. Principles of Engineering Practice. Cr. 3. A discussion of engineering practice, including topics such as engineering economics, management, professional ethics, and safety. Student will participate in multidisciplinary teams. Prerequisite: junior standing.

GE 386. Internship in Engineering. Cr. 1. A summer engineering work experience with a pre-selected and approved employer. Requires satisfactory work performance and submission of a final report in approved format. Students may repeat for a maximum of three work sessions. Grading will be on an S/U basis. Prerequisites: student must be in good standing in the College of Engineering and have approval of the respective Department Cooperative Education Coordinator.

GE 481. Cooperative Education I. Cr. 2. The application of theoretical and experimental engineering concepts in a business, consulting, industrial or government setting. Emphasis is placed on involvement in real-world engineering projects requiring analysis, design and investigative skills. Requires satisfactory work performance at a pre-selected employer and the submission of reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. Prerequisite: approval of the respective Department Cooperative Education Coordinator.

GE 482. Cooperative Education II. Cr. 2. A continuation of GE 481. This course requires a satisfactory employer evaluation and reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. Prerequisite: GE 481.

GE 483. Cooperative Education III. Cr. 1. Application of the concepts of engineering in a business, consulting, industrial or government setting. It requires reports in a format approved by each department. This course is graded S/U only for civil and mechanical engineering majors. May be repeated for up to three credit hours. Prerequisite: approval of the respective Department Cooperative Education Coordinator.

GE 495. Special Problem. Cr. 1-3. Selected students are permitted to work on a special problem under the supervision of a member of the faculty. Each student is required to keep a progress notebook and to turn in a final report in an approved format. Open only to students with permission of the faculty and approval of the Dean of Engineering.

GE 497. Senior Design Project I. Cr. 3. The application of theoretical and experimental engineering concepts in the analysis and design of an engineering system. Students form teams to plan and organize a multidisciplinary project. Prerequisite: junior standing. Corequisite: GE 301.

GE 498. Senior Design Project II. Cr. 2. A continuation of GE 497. Projects are built, tested, documented and reported. Prerequisite: GE 497.

Civil Engineering

Associate Professors Aljohb, Weiss (Chair); Assistant Professors Hagenberger, Leitch, Polito.

Mission. The mission of the Civil Engineering Department is to provide the highest quality of technical education which is grounded in the arts and sciences by faculty dedicated to challenging teaching and extraordinary care for individual students. The department will strive to develop graduates who will be effective members of engineering teams, managers of engineering projects, and serve as leaders in the civil engineering discipline and within the broader community of church and society.

Program Educational Objectives.

The educational objectives of the Civil Engineering Program include the following:

1. Graduates shall possess a sound understanding of civil engineering concepts and the interrelation of these concepts with technical and nontechnical issues in business and society.
2. Graduates shall possess a desire for and an appreciation of the importance of a commitment to lifelong learning as a means of professional development.
3. Graduates shall possess effective written and oral communication skills.
4. Graduates shall possess the ability to function effectively as team members.
5. Graduates shall have the desire and the ability to actively contribute to the discipline of civil engineering and/or society as a whole.

"Civil engineering is the profession in which a knowledge of the mathematical and physical sciences gained by study, experience and practice is applied with judgment to develop ways to utilize, economically, the materials and forces of nature for the progressive well-being of mankind in creating, improving and protecting the environment, in providing facilities for community living, industry, transportation, and in providing structures for the use of mankind."

—American Society of Civil Engineers

The Civil Engineering Program is designed to prepare the graduate to enter the practice of engineering or to pursue graduate study. The program is broad in scope requiring students to complete course work in five major branches of civil engineering (i.e., environmental, geotechnical, structural, transportation, and water resources engineering). Additional depth in one or several branches can be obtained through appropriate electives. The program emphasizes the importance of effective communication (written and oral); the ability to work in teams; the importance of ethical and professional responsibility; the need to be lifelong learners; and the need to hold paramount the safety, health, and welfare of the public.

Design is an important component of the Civil Engineering Program. This includes distinguishing between analysis and design, exposing students to various design methodologies, and requiring students to develop and evaluate (e.g., using economical, social, safety, and engineering criteria) alternative solutions to realistic engineering problems. The design experience (i.e., individually and in teams) is spread throughout the program and is incorporated into both classroom and laboratory exercises. In the sophomore year, students are introduced to fundamental aspects of the design process in the mechanics of materials and transportation courses. In the junior year, additional aspects of the design process and use of building codes are introduced in courses in structural design, soil and foundation engineering, and the sequence in environmental engineering. In the senior year, students are exposed to the design process in structural courses and electives. The design experience culminates with a major comprehensive design project in which students, working in teams, bring together their accumulated knowledge of design and analysis to solve a realistic engineering problem.

Laboratory work is designed to develop written communication skills, ability to analyze and interpret experimental data, self-confidence, and to aid in the interpretation and application of theory. The majority of introductory courses in the five branches of civil engineering require a laboratory component. In addition, field exercises in surveying are an essential component of a student's education. The civil engineering department has modern, well-equipped laboratories in materials engineering, fluid mechanics, soil mechanics, and environmental engineering.

Graduation Requirements. The following courses and electives are required to earn the Bachelor of Science in Civil Engineering degree. A typical plan of study for each semester is published in the Student Guide to University Life.

- CORE 110 The Human Experience 5 Cr.
- CORE 115 The Human Experience 5 Cr.
- CHEM 111 Applications of Chemistry 4 Cr.
- CHEM 115 Chemistry 4 Cr.
- COMM 140 Public Speaking 3 Cr.
- ENGL 200 Literary Studies 3 Cr.
- ENGL 300 Introduction to Professional Writing 3 Cr.
- MATH 132 Analytic Geometry and Calculus I 4 Cr.
- MATH 132 Analytic Geometry and Calculus II 4 Cr.
- MATH 234 Differential Equations and Linear Algebra 4 Cr.
- PE 101-106 Physical Education 3 Cr.
- PHYS 141 Mechanics and Heat 3 Cr.
- PHYS 141L Experimental Physics I 1 Cr.
- Academic Area Studies Elective 3 Cr.
- Mathematics/Science Elective 4 Cr.
- Social Analysis Elective 3 Cr.
- Foundation Level Theology Elective 3 Cr.
- Career Enhancement Elective 3 Cr.
- Engineering Science Elective 3 Cr.
- GE 100 Fundamentals of Engineering 3 Cr.
- GE 109 Mechanics-Statics 3 Cr.
- GE 199 Engineering Seminar 3 Cr.
- GE 301 Principles of Engineering Practice 3 Cr.
- CE 151 Construction Surveying 4 Cr.
- CE 202 Statistical Applications in Civil Engineering 3 Cr.
- CE 212 Materials Engineering 3 Cr.
- CE 215 Mechanics of Materials 3 Cr.
- CE 230 Transportation 3 Cr.
- CE 310 Structural Analysis I 3 Cr.
- CE 316 Structural Design 3 Cr.
- CE 320 Soil Mechanics 4 Cr.
- CE 322 Soil and Foundation Engineering 3 Cr.
- CE 332 Hydrology 3 Cr.
- CE 334 Fluid Mechanics 4 Cr.
CIVIL ENGINEERING

See page 50 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

CE 151. Construction Surveying.
3-3, Cr. 4. A study of the science and art of relative spatial measurements for engineering purposes. Special emphasis is placed on the theory, practice, and uses of surveying instruments, and field practice in transit-tape traversing, leveling, and route surveying. In addition, engineering graphing techniques and CAD software are introduced.

CE 202. Statistical Applications in Civil Engineering.
3-3, Cr. 3. An introduction to the primary statistical and probabilistic models used in the collection and interpretation of civil engineering data. The focus is on summary techniques, regression models, application of the Central Limit Theorem, confidence intervals, and recurrence intervals. Monte Carlo simulation techniques are used to estimate the failure likelihood of a civil engineering system. Prerequisite: MATH 132 or MATH 152.

CE 212. Materials Engineering.
2-3, Cr. 3. Study of the mechanical and physical properties of construction materials. Introduction to concrete mix design. Laboratory experiments include the measurement of concrete properties, deflections using mechanical and electrical gages; behavior and failure of ductile and brittle materials subjected to axial or bending forces; introduction to creep, impact and stability of columns. A project is required, as well as written reports. Prerequisite or corequisite: CE 215.

3-3, Cr. 3. (Also offered as ME 315 and PHYS 215.) Concepts of stress and strain, stress-strain relationships, states of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic elastic action, and an introduction to statically indeterminate problems. Prerequisite: GE 109.

CE 283. Transportation.
3-3, Cr. 3. Introduction to transportation engineering with emphasis on highway design. Topics include transportation demand and planning, parking and speed studies, human and vehicle design factors, environmental impact statements, horizontal and vertical alignment, earthwork, design of flexible and rigid pavements. Prerequisite: CE 151 or consent of the instructor.

CE 290. Topics in Civil Engineering.
2-4. Seven weeks or semester. The investigation of civil engineering topics of special interest. Prerequisites depend on topics offered. Offered upon sufficient demand.

CE 299. Sophomore Honor Studies in Civil Engineering.
1-3. Independent study of an advanced topic in civil engineering. Available by invitation only. Prerequisite: approval by the Civil Engineering Department.

CE 316. Structural Analysis I.
3. Cr. Application of fundamental analysis concepts to the behavior of civil engineering structures and structural components. Analysis of statically determinate and indeterminate structures using classical methods such as Slope Deflection, conjugate beam, and flexibility methods. Introduction to a typical structural analysis software program. Prerequisite: CE 215.

CE 316. Structural Design I.
3. Cr. Principles of the design of steel structures. Design includes axial tension and compression members, flexural members, beam-columns, connections, and composite design. LRFD methods are used. Prerequisite: CE 315.

CE 320. Soil Mechanics.
3-3, Cr. 4. The study of index, mechanical and hydraulic properties of soils. Soil identification, compaction, shear strength, consolidation, vertical stress distribution, and flow through porous media. Principles of laboratory identification and testing of soils. Site investigation and in situ testing. Prerequisite: CE 215.

CE 322. Soil and Foundation Engineering.

CE 332. Hydrology.
3. Cr. Introduction to surface and ground water hydrology: hydrologic cycle, precipitation, evaporation, infiltration, ground water flow, well hydraulics, run-off, rainfall-run-off relationships, uniform flow in open channels, stream flow measurements, hydrologic routing, hydrologic modeling, hydrologic probability, and applications. Prerequisite: MATH 131.

3-3, Cr. 4. An examination of fluid properties, fluids at rest, and fluids in motion. Conservation of mass, and the energy and momentum principles are utilized along with dimensional analysis and simulation. Applications include pumps, flow in conduits, lift and drag, pipe networks, and hydraulic model studies. Integrated with the fluid mechanics per se are principles of mechanics-dynamics. Prerequisites: MATH 132 and CE 215.

CE 364. Environmental Engineering I.
3-3, Cr. 4. Introductory study of water treatment and supply, wastewater collection and treatment common to rural and metropolitan areas. Laboratory principles and methods related to safety, sampling, data analysis, and measurement of selected physical, chemical, and biological characteristics of water and wastewater are introduced. Field trips are required. Prerequisites: CE 334 and CHEM 116.

CE 399. Junior Honor Studies in Civil Engineering.
1-3. Independent study of an advanced topic in civil engineering. Available by invitation only. Prerequisite: approval by the Civil Engineering Department.

CE 415. Structural Analysis II.
3. Cr. Analysis of statically indeterminate structures using energy and matrix methods. Direct stiffness and flexibility methods are discussed as are a variety of applications in structural analysis software including response to time-dependent loading such as blasts, earthquakes, etc. Prerequisite: CE 315.

CE 417. Structural Design II.

CE 418. Structural Design III.
3. Cr. Analysis and design of masonry structural system components. The use of appropriate specifications in design. Design projects may be required. Taught in alternate years. Prerequisite: CE 315.

3. Cr. Application of the principles of fluid mechanics to analysis and design of water resources projects. Topics include open-channel hydraulics, hydroelectric power, economic analysis, dams, spillways, river navigation, flood control, and water law. Prerequisite: CE 334 or ME 373.

CE 457. Traffic Engineering.
3. Cr. Fundamental traits and behavior of road users and their vehicles. Characteristics of a free-flowing traffic - capacity and level of service of urban and rural highways, signals and signalized intersection capacity; traffic speeds, volumes, signing and marking; accidents and safety. Taught in alternate years. Prerequisite: CE 263 or consent of instructor.
Electrical and Computer Engineering

Professors Hart, Kraft, Olejniczak; Associate Professors D. Goodman, E. Johnson, D. Tougaw (Chair); Assistant Professors Freeman, Will; Adjunct Assistant Professor Kempf.

The Department of Electrical and Computer Engineering offers two degree programs: Electrical Engineering and Computer Engineering. These two degrees share a fundamental theoretical background that is reflected by many common courses and shared laboratory facilities.

Digital design courses introduce the formulation of design problems and the use of computer-aided design tools. During the junior year, students refine these design elements while studying digital filter design, electronics, and the design of hardware to interface with embedded microprocessors. Students also participate in modest group design projects. During the senior year, students begin a systematic study of the design process and apply the design skills developed in earlier courses to an interdisciplinary capstone project which requires the consideration of realistic constraints, formal project management, the building and testing of a design prototype, and thorough documentation.

The department supports a diverse set of laboratory facilities. The electronics laboratory supports work in digital and analog systems. This large facility also includes equipment for power electronics. The digital systems laboratory is used to study digital filtering systems and advanced digital logic design. This laboratory also houses a hardware-in-the-loop simulator used for power systems studies. The computer laboratories contain a network of work stations, PCs, peripherals, and embedded microcontroller software and hardware development systems. Design teams use the project laboratory to build and test their prototypes.

Electrical Engineering

Electrical Engineering Mission. The purpose of the Electrical Engineering Program is to educate qualified and motivated individuals in an exclusively undergraduate environment who, upon graduation, are prepared for lifelong learning and the pursuit of professional excellence in the field of electrical engineering, and who base their professional and personal decisions on the ethical, moral and social values which are central to Valparaiso University.

Electrical Engineering Program Educational Objectives. The educational objectives of the electrical engineering program are to:
1. Prepare students to practice electrical engineering in such areas as digital systems design, electronics, embedded microcontrollers, software development, power systems, communication systems, or signal processing.
2. Prepare students to communicate effectively in a wide variety of situations using appropriate tools.
3. Prepare students to work effectively on teams in a variety of roles.
4. Prepare students to design electrical engineering systems using creativity, technical competence, and problem-solving skills.
5. Prepare students to appreciate their ethical and professional responsibilities to meet the needs of society.
6. Prepare students to function in a competitive business environment by understanding necessary economic and business practices.
7. Prepare students to appreciate the need for and to engage in continuous independent learning activities.

Graduation Requirements. The following courses and electives are required to earn the Bachelor of Science in Electrical Engineering degree. A typical plan of study for each semester is published in the Student Guide to University Life.

- CORE 110 The Human Experience 5 Cr.
- CORE 115 The Human Experience 5 Cr.
- ENGL 200 Literary Studies 3 Cr.
- MATH 131 Analytic Geometry and Calculus I 4 Cr.
- MATH 132 Analytic Geometry and Calculus II 4 Cr.
- MATH 234 Differential Equations and Linear Algebra 4 Cr.
- PHYS 141 (or 151) Mechanics and Heat 3 Cr.
- PHYS 141L Experimental Physics I 1 Cr.
- PHYS 142L Electromagnetism Waves 3 Cr.
- Fundational Level Theology Elective 3 Cr.
- Academic Area Studies Elective 3 Cr.
- Social Analysis Elective 3 Cr.
- Free Elective 3 Cr.
- GE 102 Fundamentals of Engineering 3 Cr.
- GE 199 Engineering Seminar 0 Cr.
- GE 301 Principles of Engineering 3 Cr.
- GE 497 Senior Design Project I 3 Cr.
- GE 498 Senior Design Project II 2 Cr.
- ECE 1101 Exploring Electrical and Computer Engineering 2 Cr.
- ECE 111 Exploring Electrical and Computer Engineering Laboratory 1 Cr.
- ECE 201 Digital Logic Design 3 Cr.
- ECE 222 Advanced Logic Design 3 Cr.
- ECE 251 Synthesis and Programming 3 Cr.
- ECE 261 Linear Circuit Theory I 3 Cr.
- ECE 262 Linear Circuit Theory II 3 Cr.
- ECE 322 Embedded Microcontrollers 3 Cr.
- ECE 340 Digital Systems 3 Cr.
- ECE 341 Electronics II 3 Cr.
- ECE 360 Sampled Linear Systems 3 Cr.
- ECE 365 Probability and Statistics for Electrical and Computer Engineers 3 Cr.
- ECE 430 Electromagnetic Field Theory 3 Cr.
- ECE 453 Communication Systems 3 Cr.
- Mathematics/Science Electives 6 Cr.
- Professional Electives 6 Cr.
- Electrical Engineering Electives 12 Cr.

Total required for graduation: 130 Cr.

Academic Area Studies Elective

One course of at least three credits from either the list of Academic Area Studies 2.a. through 2.g. (see pages 44-45,) an upper-level Christ College or International Studies Program course. Other courses not included in this list may be proposed for approval by the Dean of Engineering.

Cooperative Education. Up to six credits of GE 481 through GE 483 may be used to satisfy the professional elective requirement if a minimum of six credits of cooperative education have been completed.

Electives. Specific recommendations regarding the selection of electives are available from the department and should be made in consultation with a departmental academic advisor.

Electrical Engineering Electives

Twelve credits must be taken by choosing four of the following eight courses: ECE 258, 372, 424, 429, 450, 452, 460, and 471. At least two of these courses must be chosen.
from the following core electrical engineering electives: ECE 273, 452, 460, and 471. Other courses may be used to satisfy this elective with the approval of the department faculty.

**Minor Requirements.** The mathematics/science elective requirement may be met by taking one of the following courses: ASTR 252, BIO 151, 152, 171, 172, 210, 250, or 270, CHEM 116, 122, 221, or 230, MATH 340, 366, 430 or 434, ECE 357, PHYS 250, 360, 381, 421, 430, or 440. Other choices may be made available by petition to the ECE department. An updated list of approved mathematics/science electives may be found on the College of Engineering web site.

**Professional Electives.** These courses are selected, in consultation with the advisor, to support the student's specific career goals. See the College of Engineering web site.

**Social Analysis Elective.** One course from the list of Academic Area Studies 2.g. (see page 45).

**Electrical Engineering Minor.** A minor in electrical engineering is available for students majoring in civil or mechanical engineering. A minimum of 19 credit hours is required. Courses must include ECE 110, 111, 200, 221, and 261. The remaining credits must be taken from the following courses: ECE 201, 222, 262, 322, 340, 341, 360, 372, 429, and 471.

**COMPUTER ENGINEERING**

**Computer Engineering Mission.** The purpose of the Computer Engineering Program is to educate qualified and motivated individuals in an exclusively undergraduate environment who, upon graduation, are prepared for lifelong learning and the pursuit of professional excellence in the field of computer engineering, and who base their professional and personal decisions on the ethical, moral and social values which are central to Valparaiso University.

**Computer Engineering Program Educational Objectives.** The educational objectives of the computer engineering program are to:

1. Prepare students to practice computer engineering in such areas as digital design, embedded systems, computer architecture, and software development.
2. Prepare students to communicate effectively in a wide variety of situations using appropriate tools.
3. Prepare students to work effectively on teams in a variety of roles.
4. Prepare students to function computer engineering systems using creativity, technical competence, and problem-solving skills.
5. Prepare students to assume their ethical and professional responsibilities to meet the needs of society.
6. Prepare students to function in a competitive business environment by understanding necessary economic and business practices.
7. Prepare students to appreciate the need for and to engage in continuous independent learning activities.

**Graduation Requirements.** The following courses and electives are required to earn the Bachelor of Science in Computer Engineering degree. A typical plan of study for each semester is published in the Student Guide to University Life.

- **CORE 110 The Human Experience** [...]
- **CORE 115 The Human Experience** [...]
- **ENGL 200 Literary Studies** [...]
- **MATH 131 Analytic Geometry and Calculus I** [...]
- **MATH 132 Analytic Geometry and Calculus II** [...]
- **MATH 234 Differential Equations and Linear Algebra** [...]
- **MATH 235 Calculus III** [...]
- **PE 101-105 Physical Education** [...]
- **PHYS 141 or 151 Machine Design** [...]
- **PHYS 141L Experimental Physics I** [...]
- **PHYS 142 (or 152) Electricity, Magnetism, Waves** [...]
- **Foundational Level Theology Elective** [...]
- **Academic Area Studies Elective** [...]
- **Social Analysis Elective** [...]
- **GE 100 Fundamentals of Engineering** [...]
- **GE 188 Engineering Seminar** [...]
- **GE 301 Principles of Engineering Practice** [...]
- **GE 497 Senior Design Project I** [...]
- **GE 498 Senior Design Project II** [...]
- **ECE 110 Exploring Electrical and Computer Engineering** [...]
- **ECE 111 Exploring Electrical and Computer Engineering Laboratory** [...]
- **ECE 200 Computational Techniques for Electrical and Computer Engineers I** [...]
- **ECE 201 Computational Techniques for Electrical and Computer Engineers II** [...]
- **ECE 221 Digital Logic Design** [...]
- **ECE 222 Advanced Logic Design** [...]
- **ECE 251 Algorithms and Programming** [...]
- **ECE 252 Algorithms and Abstract Data Types** [...]
- **ECE 261 Linear Circuit Theory I** [...]
- **ECE 262 Linear Circuit Theory II** [...]
- **ECE 322 Embedded Microcontrollers** [...]
- **ECE 340 Electronics I** [...]
- **ECE 341 Electronics II** [...]
- **ECE 357 Algebraic and Discrete Structures I** [...]
- **ECE 360 Sampled Linear Systems** [...]
- **ECE 366 Probability and Statistics for Electrical and Computer Engineers** [...]
- **ECE 424 Computer Architecture** [...]
- **ECE 430 Electromagnetic Field Theory** [...]
- **CS 257 Data Structures and Programming Languages** [...]
- **CS 347 Operating Systems and Networking** [...]
- **CS 358 Software Design and Development** [...]
- **Mathematics/Science Elective** [...]

**Total required for graduation 130 Cr.**

**Academic Area Studies Elective.** One course of at least three credits from either the list of Academic Area Studies 2.g. through 2.i. (see pages 44-45), an upper-level Christ College course, or an International Studies Program course. Other courses not included in this list may be proposed for approval by the Dean of Engineering.

**Computer Engineering Elective.** Three credits must be taken by choosing one of the following courses: ECE 429, 450, and 462.

**Cooperative Education.** Up to six credits of GE 481 through GE 483 may be used to satisfy the professional electives requirement if a minimum of six credits of cooperative education have been completed.

**Electives.** Specific recommendations regarding the selection of electives are available from the department and should be made in consultation with a departmental academic advisor.

**Mathematics/Science Electives.** The mathematics/science elective requirement may be met by taking one of the following courses: ASTR 252, BIO 151, 152, 171, 172, 210, 250, or 270, CHEM 116, 122, 221, or 230, MATH 340, 366, 430, or 434, PHYS 250, 360, 381, 421, 430, or 440. Other choices may be made available by petition to the ECE department. An updated list of approved mathematics/science electives may be found on the College of Engineering web site.

**Professional Electives.** These courses are selected, in consultation with the advisor, to support the student's specific career goals. See the College of Engineering web site.

**Social Analysis Elective.** One course from the list of Academic Area Studies 2.g. (see page 45).

**Electrical and Computer Engineering Courses See page 60 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.**

**ECE 110. Exploring Electrical and Computer Engineering.** Cr. 2. An introductory course emphasizing basic circuit analysis, characteristics of common electrical devices, computer tools including simulations, and problem-solving techniques. Prerequisite: MATH 131 or concurrent registration.

**ECE 210. Exploring Electrical and Computer Engineering Laboratory.** 0-3 Cr. Cr. 1. A continuation of ECE 110, with emphasis on laboratory technique and the characteristics of electrical devices. Corequisite: ECE 110.

**ECE 200 (formerly ECE 202). Computational Techniques for Electrical and Computer Engineers I.** Cr. 2. Introduction to the solution of electrical and computer engineering problems using computers. Important software packages such as LabVIEW, MATLAB and PSpice are used. The course is designed to complement ECE 281.

**ECE 201. Computational Techniques for Electrical and Computer Engineers II.** Cr. 2. A continuation of ECE 200. Topics include the solution of electrical and computer engineering problems using computers. The course is designed to complement ECE 282. Prerequisite: ECE 200.

**ECE 221. Digital Logic Design.** 2.5+1.5, Cr. 3. (Also offered as CS 220.) An introduction to digital logic concepts, including the analysis and design of combinational and sequential digital circuits.

**ECE 222. Digital Logic Design.** 2.5+1.5, Cr. 3. A continuation of ECE 221 that includes the design of MSI and LSI digital circuits using a hardware description language (VHDL). Designs are also implemented in programmable logic devices (PALs, CPLDs). Prerequisite: ECE 221 with a minimum grade of C.
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Cr. 3. Introduction to the design of sequential and concurrent algorithms. Software engineering principles and practices relating to program design and implementation. Concurrency issues and practices for parallel algorithm design. Students cannot receive credit for both CS 157 and ECE 251.

ECE 252 (formerly ECE 258). Algorithms and Abstract Data Types.
2+2, Cr. 3. A continuation of ECE 251 with emphasis on developing more complex in computer program development and data structures. Topics include stacks, queues and linked lists. Prerequisite: ECE 251 or CS 157.

ECE 261 (formerly ECE 263). Linear Circuit Theory I.
2.5+1.5, Cr. 3. A study of the fundamental methods and theorems of electric circuit analysis. Topics include steady-state and transient analysis of DC and AC circuits containing resistors, capacitors, inductors, and operational amplifiers. Prerequisite: ECE 251 with a minimum grade of C. Corequisite: ECE 200.

ECE 262 (formerly ECE 264). Linear Circuit Theory II.
2.5+1.5, Cr. 3. A continuation of ECE 261. Topics include power computations, transformers, frequency response, filters, Laplace transforms, and Fourier series. Prerequisite: ECE 261 with a minimum grade of C. Corequisite: ECE 201.

2.5+1.5, Cr. 3. (Also offered as PHYS 281.) A study of the fundamental methods of electrical circuit analysis with emphasis on computer-aided analysis. AC and DC circuits, operational amplifiers. Laboratory exercises emphasize measurement techniques and reinforce lecture material. Not applicable to a degree in electrical or computer engineering. Prerequisite: MATH 131.

ECE 290. Sophomore Project.
Cr. 1-3, An independent research, development, or design project done under the supervision of a faculty member. Prerequisite: sophomore standing.

ECE 299. Sophomore Honor Studies in Electrical and Computer Engineering.
Cr. 1-3, Independent study of an advanced topic in electrical engineering. Available by invitation only. Prerequisite: approval by the Electrical and Computer Engineering Department.

ECE 322. Embedded Microcontrollers. 2.5+1.5, Cr. 3. (also offered as CS 223.) The application of microcontrollers in embedded system design, emphasizing the interaction of hardware and software design. Use of assembly language programming to interface external hardware to a microcontroller. Prerequisite: ECE 222 with a minimum grade of C.

ECE 340 (formerly ECE 342). Electronics I.
2.5+1.5, Cr. 3. An introduction to semiconductor theory and the design and analysis of electronic circuits. Topics include diodes, field-effect and bipolar transistors, CMOS logic circuits, single-state discrete transistor amplifiers and multistage integrated-circuit amplifiers. Prerequisite: ECE 261 with a minimum grade of C.

ECE 341. Electronics II.
2.5+1.5, Cr. 3. Topics include power amplifiers, DC power supplies, data converters, feedback, oscillators, switched-capacitor circuits, and transistor memory units. Prerequisite: ECE 340.

Cr. 3. An introduction to the fundamental principles of CMOS digital integrated circuit design. Extensive use of CAD tools for layout and simulation. Techniques for speed and size trade-off are studied. Prerequisites: ECE 221 and 262 with minimum grades of C in both.

ECE 430. Electromagnetic Field Theory.
Cr. 3. The study of fundamental laws of static and dynamic electric and magnetic fields using vector methods. Topics include transmission lines, Maxwell's equations and electromagnetic radiation. Prerequisite: MATH 253.

Cr. 3. Theory of interconnected digital systems including information flow control by packet and circuit-switching techniques and standards for communication between network nodes. Prerequisites: ECE 251 and ECE 262.

ECE 452. Digital Signal Processing.
2.7+1, Cr. 3. This course is an overview of the theory and techniques of the basic concepts of digital signal processing. Topics covered include design of FIR and IIR filters, construction of algorithms for real-time and off-line signal processing, relationships between analog and digital realizations, and real-time hardware considerations. Prerequisite: ECE 360.

Cr. 3. Methods of transmission of information by electrical signals through channels limited by bandwidth and additive noise. The characteristics of standard analog and digital modulation schemes such as AM, FM, PAM, PCM are investigated and related to their channel requirements. Prerequisites: ECE 360 and ECE 365.

ECE 460. Control System Design.
Cr. 3. A study of the application of feedback analysis and design in the frequency and time domains. Classical design is considered using root-locus and frequency response methods. Models derived from frequency response data are introduced. Introduction to modern control state-space representation and pole placements and Luenberger observers. Prerequisite: ECE 300.

ECE 471. Power Electronics.
2.7+1, Cr. 3. A course in the application and design of power semiconductor circuits. Topics include rectifiers, AC controllers, inverters and switched-mode power supplies. Prerequisite: ECE 262.

ECE 490. Topics in Electrical and Computer Engineering.
Cr. 1-3, Investigation of electrical engineering or computer engineering topics of special interest. Prerequisite: consent of the Chair of the Department.

ECE 499. Senior Honor Studies in Electrical and Computer Engineering.
Cr. 1-3, Independent study of an advanced topic in electrical engineering. Available by invitation only. Prerequisite: approval by the Electrical and Computer Engineering Department.

Mechanical Engineering

Professors Palumbo (Chair), Schoeck, Steffen; Associate Professor Doria; Assistant Professors P. Johnson, Sevener.

Mission. The Mechanical Engineering Department provides a program of professional studies grounded in engineering fundamentals and arts and sciences augmented by the development of interpersonal skills, experiential learning, and an appreciation of lifelong learning. Graduates are prepared to apply their knowledge to society's needs and help shape the future.

Program Educational Objectives. The educational objectives of the Mechanical Engineering Program are to:
1. Prepare graduates for the practice of mechanical engineering in such areas as mechanical design, systems, manufacturing, experimentation, and energy conversion;
2. Prepare graduates to communicate in a wide variety of settings using appropriate methods;
3. Prepare graduates to work effectively in teams in a variety of roles;
4. Prepare graduates who have an understanding of and concern for ethical, safety, environmental, social,
economic, global and lifelong learning issues faced by practicing engineers. Graduates will be committed to fairness, integrity and honesty, respect for human dignity, serving others, excellence, and growth;
5. Prepare graduates to be proficient in a laboratory setting. They will have good hands-on skills with mechanical, electrical hardware and data-acquisition software. They will be able to design experiments and use uncertainty analysis tools;
6. Prepare graduates with a broad based education, which includes a strong liberal arts component to frame and focus their technical skills and enhance their quality of life.

Program Overview. The practice of mechanical engineering includes a wide variety of technical activities in the areas of energy conversion, automatic control of engineering processes, and the design, development and manufacture of mechanical components and systems. Mechanical engineering contributes to almost every aspect of our society.

The Mechanical Engineering Program prepares the individual for leadership roles on multidisciplinary teams that will tackle technical and social issues. The curriculum, solidly comprised of fundamental engineering course work and the humanities and social sciences is an essential element in the preparation process. Courses are sequenced to build upon a firm foundation in mathematics, basic sciences, and engineering sciences. Courses progressively build in engineering design activities and culminate in a major interdisciplinary design experience during the final year of study. Alongside technical issues, design activities address economic, safety, environmental, sustainability, product development, and social factors.

Graduates of the Mechanical Engineering Program at Valparaiso University are qualified to enter industry as practicing engineers or to pursue advanced degrees.

Mechanical Engineering Laboratories. The Mechanical Engineering Program contains a well equipped laboratory component which is closely correlated with lecture courses. There are eight primary laboratory facilities within the department. Additional laboratory facilities support senior design projects. Personal computers with appropriate hardware and software are available in the laboratories for mechanical design, to acquire, analyze data, test control hardware, and to report results in graphic and tabular form.

The Mechanical Measurements and Mechatronics Laboratory complements instruction in the use of standard measurement equipment, calibration techniques, computer data acquisition and the study of mechanical and electrical systems. The Energy Systems Laboratory provides the opportunity to study the laws governing work, heat, and energy conversion. This facility includes laboratory equipment such as an internal combustion engine, a super sonic nozzle, a calorimeter collector, a heat pump, and a wind tunnel.

The Automatic Control Laboratory is used to conduct experiments with simulated process systems and the associated instrumentation to control these processes. The Manufacturing Process and Systems Laboratory supports instruction in methods and theory of metal working, automation, product design and development, and the design, operation, and control of production systems. In addition to metal cutting, forming, welding, grinding and inspection equipment, this laboratory contains the Integrated Manufacturing Facility with Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) software, Computer Numerical Control (CNC) machine tools, robots, and vision systems. The Materials Science Laboratory contains equipment for conducting a variety of materials experiments including impact, tension, creep, cold working, hardness and nondestructive testing. Special emphasis is placed upon modification of material properties by heat treatment. Metallurgical specimens are prepared and examined.

The Experimental Stress Laboratory provides primary equipment for strain/stress analysis including electrical resistance strain gages and photoelasticity. The Vibrations Laboratory contains mechanical and electrical vibration excitation and measuring devices along with equipment to perform modal analysis and sound measurement.

Graduation Requirements. The following courses and electives are required to earn the Bachelor of Science in Mechanical Engineering degree. A typical plan of study for each semester is published in the Student Guide to University Life.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 110 The Human Experience</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>CORE 115 The Human Experience</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>CHEM 116 Essentials of Chemistry</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ENGL 200 Literacy Studies</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MATH 131 Analytic Geometry and Calculus</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>MATH 132 Analytic Geometry and Calculus II</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>MATH 234 Differential Equations and Linear Algebra</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>MATH 252 Analytic Geometry and Calculus III</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>PHYS 201-202 General Physics II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 203-204 General Physics III</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 210 Electricity, Magnetism and Waves</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 211 Heat, Thermodynamics and Radiation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 212 Electricity, Magnetism and Waves</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 213 Heat, Thermodynamics and Radiation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 214 Electricity, Magnetism and Waves</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 215 Heat, Thermodynamics and Radiation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 216 Electricity, Magnetism and Waves</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 217 Heat, Thermodynamics and Radiation</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 218 Electricity, Magnetism and Waves</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PHYS 219 Heat, Thermodynamics and Radiation</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

Total required for graduation ...... 130 Cr.

Academic Area Studies Elective. One course of at least three credits is selected from either the list of Academic Area Studies 2 a. through 2 g. (see pages 44-45), an upper-level Christ College course, or an International Studies Program course. Other courses not included in this list may be proposed for approval by the Dean of Engineering.

Cooperative Education. GE 481 through GE 483 credits may be used to satisfy the Free Elective requirement.

Free Elective. Students are encouraged to select a course aligned with enhancing their life goals. A public speaking course is recommended for individuals who have not had a formal course in this subject. A speech course may be selected from COMM 140, 145, or 245.

Mathematics/Science Elective. This elective requirement may be met with a course from Biology, Chemistry, Mathematics, Computer Science, Physics, or IDS 205. A list of courses that fulfill the requirement is available from the Chair's Office.

Social Analysis Elective. One course is selected from the list of Academic Area Studies 2 g. (see page 45). Other social analysis courses not included in this list may be proposed for approval by the Dean of Engineering.

Mechanical Engineering Electives. Twelve credits of mechanical engineering courses are to be selected to provide areas of individual study emphasis. Up to three credits may be substituted for students taking an approved technical concentration outside the College of Engineering. Only three hours of ME 499 course credits may be applied as an ME elective.

Courses which fulfill mechanical engineering elective requirements are indicated with a superscript *.
ME 252. Materials Science.
2.5+1.5, Cr. 3. (Also offered as PHYS 252.)
A study of structure-property-processing relationships of engineering materials related to their selection in design and manufacturing processes. Methods of controlling structure and mechanical properties of materials are studied with an emphasis on the strengthening mechanisms. Processes studied include solidification, phase transformation, and mechanical working of metals. Prerequisite: MATH 132 or MATH 152; corequisite: CHEM 115.

ME 253. Manufacturing Processes.
3+3, Cr. 4. (Also offered as ME 253.) A study of manufacturing emphasizing metal cutting and forming, operation planning, fabrication techniques and inspection. Statistical Process Control (SPC), application of machine tools and Computer Numerical Control (CNC) are introduced. Field trips to industrial facilities are arranged. Prerequisite: ME 104.

ME 270. Thermodynamics I.
Cr. 3. A study of the first and second laws of thermodynamics. Extensive use of these laws is made in analyzing processes and cycles. Additional topics covered are ideal gases, non-reactive gas and gas-liquid mixtures as well as other simple compressible substances. Prerequisites: MATH 132 and PHYS 141.

Cr. 3. (Also offered as CE 215 and PHYS 215.) Concepts of stress and strain, stress-strain relationships, strength of plane stress and strain at a point; elementary analysis of stress distributions and deformations for axial loading of prismatic members, torsional loading of circular shafts and bending of beams, combined loading; plastic elastic action, and an introduction to statically determinate problems. Prerequisite: GE 109.

ME 332. Mechatronics.
2.5+1.5, Cr. 3. A study of digital logic design, actuators, sensors and controllers applied to the design of mechanical systems. Emphasis is placed on digital logic design, pneumatic components and systems, programmable logic controllers, systems-level modeling and systems engineering principles. Prerequisite: ECE 281.

ME 333. Mechanical Measurements Laboratory.
3+3, Cr. 4. (Also offered as PHYS 333.) A study of fundamental concepts and physical principles involved in the science of measurement and design of experiments. Experiments involve calibration and testing (both static and dynamic) of primary elements, signal amplifiers, transducers and readout devices. Experimentation utilizes laboratory and industrial instruments. Extensive use is made of computer data acquisition and analysis. Corequisite: ME 225 or ECE 261; prerequisites: CORE 110, PHYS 142 and ME 270.

ME 345. Manufacturing Processes.
3+3, Cr. 4. (Also offered as ME 253.) See course description for ME 253. Open only to non-mechanical engineering majors in the Manufacturing Management Minor program. Prerequisite: MATH 122 or MATH 131.

ME 362. Mechanisms.
Cr. 3. Graphical and analytical approaches to kinematic analysis and synthesis of linkages, gears and cams. Linkage topics include displacement, velocity and acceleration analysis along with type, number and dimensional synthesis. Fundamentals of gears and gear trains are investigated. Cam sizing and application of motion programs to cam design are considered. Prerequisites: ME 209 and ME 225; corequisite: MATH 253.

ME 373. Fluid Mechanics.
Cr. 3. The basic conservation equations in control volume form are developed and used in engineering applications of fluid motion. Topics include fluid statics and the dynamics of both compressible and incompressible flows. Prerequisite: ME 209.

ME 374. Heat Power Laboratory.
0+3, Cr. 1. Experimental studies designed to reinforce theory presented in the areas of heat transfer, thermodynamics and fluid mechanics. Experiments deal with topics such as flow and heat transfer mechanisms, refrigeration and internal combustion engines. Prerequisites: ME 270, ME 333, and ME 373; corequisite: ME 378.

ME 376. Heat Transfer.
Cr. 3. The fundamentals of heat transfer by conduction, radiation and forced and free convection are developed and applied to engineering problems. Prerequisite: ME 270.

ME 444. Automatic Control.
2.5+1.5, Cr. 3. Fundamentals of instrumentation and control with particular application to the process industries. System dynamics are analyzed using step, ramp and frequency response techniques. Laboratory experiments involve system stability, controller selection and adjustment, numerical analysis techniques and system sequencing to achieve specific control objectives. Prerequisites: ME 333 and MATH 234.

Cr. 3. A study of the application of Computer-Aided Design (Computer-Aided Manufacturing (CAD/CAM), robots, machine vision, Computer Numerical Control (CNC) machine tools, and computers to the design of automation systems. These systems are applied to automation, manufacturing, and assembly for both mechanical and electronic systems. Prerequisites: ME 253 or senior standing in ECE.

2.5+1.5, Cr. 3. (Also offered as ME 458) Product design/development and production system design are the focus of lectures and a semester-long laboratory experience in which a simple product and its production system are designed and produced. Financial, operational, and control of production systems are studied with emphasis on manned and robot cellular manufacturing systems. Open only to non-mechanical engineering majors in the Manufacturing Management Minor program. Prerequisite: ME 253 or ME 354.

2.5+1.5, Cr. 3. (Also offered as ME 457) See course description above. Prerequisite: ME 253.

ME 462. Vibrations.
2.5+1.5, Cr. 3. Single and multiple degree of freedom systems and continuous media are analyzed with regard to natural frequencies, free, forced and damped vibrations. Practical aspects of vibration isolation, absorption, damping and noise measurement and reduction are considered. Analytical and experimental modal analysis techniques and finite-element analysis are presented. Prerequisites: MATH 234, ME 225, and ME 209.

ME 463. Machine Design I.
2.75+7.5, Cr. 3. The application of specialized topics in materials science to the design and analysis of machine elements. Topics considered include combined stress, contact stress, stress concentration, fatigue, deflection and theories of failure. Stress principles are applied to springs, bolts, joints and general mechanical elements. Prerequisite: ME 315.

ME 464. Machine Design II.
2.75+7.5, Cr. 3. A comprehensive study in the design and analysis of belt and chain drives, gearing, gear train analysis and journal bearings. Shaft critical speeds, dynamic balancing and machine dynamics are considered. Prerequisite: senior standing in mechanical engineering.

ME 468. Experimental Stress Analysis.
2.5+1.5, Cr. 3. An introduction to experimental, theoretical, and computational methods for determining stress distributions in structures and machine components. Topics include photomechanics techniques, electrical resistance strain gages, finite-element analysis with a review of stress and strain at a point, and biaxial stress-strain relations. Prerequisite: ME 315.

ME 470. Thermodynamics II.
Cr. 3. Continuation of ME 270. Topics include combustion principles and cycle optimization using the second law of thermodynamics. Prerequisites: ME 270 and CHEM 115.

ME 475. Advanced Thermodynamics.
Cr. 3. The study of advanced topical matter in the thermal sciences. Topics to be determined by instructor prior to course offering. Topics may include compressible flow, computational fluid dynamics, gas turbines, or propulsion. Prerequisites: ME 270, ME 373, and ME 376.

2+3, Cr. 3. A design-oriented course using a team approach. Open-ended problems are assigned which involve the synthesis of heat transfer, flow, and energy conversion components. Presentation of oral and written reports is an important part of the course. Prerequisites: ME 270, ME 373 and ME 376.

ME 490. Topics in Mechanical Engineering.
Cr. 1-3. Seven weeks or semester. The investigation of mechanical engineering topics of special interest. Prerequisite: consent of the Chair of the Department. Offered upon sufficient demand.

ME 499. Undergraduate Research in Mechanical Engineering.
Cr. 1-3. Independent study of an advanced topic in mechanical engineering. This course may be repeated for additional credit. Available by invitation only. Prerequisite: approval by the Mechanical Engineering Department.
### College of Nursing

**Janet M. Brown, Ph.D., Dean**

Professors Brown, T. Kessler; Associate Professors Mauk, Pepa, Schmidt; Assistant Professor Brandly; Lecturers Alverson, Ehrman; Adjunct Assistant Professors Cory, Koch, Kurtz, Zentz.

The College offers a four-year curriculum leading to the Bachelor of Science in Nursing degree. The College also admits transfer students and registered nurses who want to earn a baccalaureate degree. Registered nurses, accelerated, and transfer students may complete the requirements for the Bachelor of Science in Nursing degree in less than four years. RN students enrolled in the RN-MSN option may complete the BSN and MSN degree in less than three years. Acceptable transfer credit hours from another college or university and credit by examination may be applied toward required and elective credit hours. The transitional course, NUR 275, is required for registered nurses. The BSN, accelerated BSN, RN-BSN, and RN-MSN plans of study are in Valparaiso University's Academic Guide.

**Mission.** The College prepares critically inquiring, competent professional nurses who embrace truth and learning and who respect Christian values while promoting health for persons in various health care environments.

**Purpose and Objectives.** The purpose of the College of Nursing is to prepare beginning and advanced professionals of nursing and to provide an educational base for graduate study based on professional standards. The BSN graduate will:

1. Enter the profession as a critically inquiring competent professional nurse who uses the processes of critical thinking, communication, change, and lifelong learning.
2. Engage in the role components of provider of care, teacher, manager, and research consumer wherever persons live, work, play, and/or worship.
3. Appreciate how the environmental influences of culture, economics, ethics, law, politics, and technology impact a person's health.

In accordance with the philosophy of Valparaiso University, the faculty of the College believes its responsibility is to foster intellectual, emotional and spiritual growth of the student as an educated person and as a competent professional nurse. The curriculum, therefore, includes a wide variety of foundation courses in the natural and social sciences and the liberal arts as well as courses related to the principles and practice of nursing. Permeating the curriculum is cultivation of the spirit of the University's Christian tradition in the student's quest for excellence in all areas of personal and professional life.

**Graduation Requirements.** In order to realize its objectives, the College holds the student to the following requirements:

**A. Nursing.** A minimum of 63 credit hours in nursing. Courses in which the student is required to earn a grade of C (2.0) or better are:

- NUR 201 Professional Role in Nursing
- NUR 203 Health Assessment
- NUR 210 Therapeutic Interventions for the Professional Nurse
- NUR 212 Introduction to Community-Based Nursing and Health Promotion
- NUR 318 Global Health Issues
- NUR 325 Nursing Care of the Childbearing Family
- NUR 341 Psychiatric Mental Health Nursing
- NUR 351 The Aging Process
- NUR 354 Nursing Care of Adults I
- NUR 356 Nursing Care of Adults II
- NUR 415 Introduction to Nursing Research
- NUR 425 Nursing Care of the Childbearing Family
- NUR 458 Complex Health Care Needs of Adults
- NUR 460 Public Health Nursing
- NUR 470 Management and Leadership Strategies for the Professional Nurse
- NUR 480 Professional Role Practicum

**B. Arts and Sciences.** A minimum of 51 credit hours from the College of Arts and Sciences is required. Courses in which the student is required to earn a grade of C (2.0) or better are marked with an asterisk (*). The specific requirements are:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111, 121, or 131</td>
<td>General Chemistry*</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>BIO 151 and 152</td>
<td>Human Biology*</td>
<td>8 Cr.</td>
</tr>
<tr>
<td>BIO 210 Microbiology*</td>
<td>4 Cr.</td>
<td></td>
</tr>
<tr>
<td>BIO 250 Human Nutrition*</td>
<td>3 Cr.</td>
<td></td>
</tr>
<tr>
<td>CHEM 111</td>
<td>General Chemistry</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ENGL 200</td>
<td>Literary Studies</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>THEO 101, 102</td>
<td>Theological Studies*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ENGL 200</td>
<td>Academic Area Studies Elective</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Statistical Methods*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>PSY 330</td>
<td>Child and Adolescent Development*</td>
<td>3 Cr.</td>
</tr>
</tbody>
</table>

**Total.** 51 Cr.

The Academic Area Studies requirement must be met through one of the areas listed below (see pages 44-45):

- Fine Arts or Fine Arts-Literature
- Foreign Language 102 or 103
- Global Cultures and Perspectives (in addition to NUR 318)

**C. Electives.** In addition to meeting the requirements in Nursing and Arts and Sciences listed previously, the student must present for graduation a sufficient number of electives to bring the total number of credit hours to 126. No more than 8 credit hours may be baccalaureate nursing credits.

**Note:** No more than four credit hours in applied music, including ensemble, and no more than four credit hours of PSY 101-149 may be applied toward a Bachelor of Science in Nursing degree.

**D. Requirements for Admission to the College of Nursing.** Freshman students who have declared nursing as a major will be admitted directly into the nursing program. The minimum criteria for admission into the Accelerated Bachelor of Science in Nursing option is a cumulative 3.0 grade point average in previous college coursework, completion of all science prerequisite courses, and a minimum of 60 transfer credits.

Associate degree and diploma graduates are eligible for admission to the RN-BSN degree option if they are licensed as a registered nurse in Indiana. Registered nurses are eligible for admission to the RN-MSN option if they have a 3.0 grade point average in at least 51 credits of prerequisite course work.

**E. Progression.** Students are required to present annually, beginning in NUR 203, evidence of a recent (within the year) physical examination, current immunization (rubeola and HBV included), rubella titer, Mantoux test and current CPR certification or recertification. The College of Nursing does not make exceptions to these requirements.

Students must maintain a minimum cumulative grade point average of 2.50 in all course work and 2.50 in the required nursing
courses in the nursing major to remain in the College of Nursing. Students must earn a grade of C (2.0) or better in courses designated in sections A and B (*) of Graduation Requirements.

Dismissal from the College of Nursing occurs when a student earns a grade of less than 2.0 in any two of the following courses: required courses with a nursing number, BIO 151, BIO 152, BIO 210, and CHEM 111. No nursing course may be repeated more than once. All nursing students are required to take a series of evaluative achievement tests throughout their nursing coursework. The fee is currently $375 payable when registered for NUR 201, but is subject to change.

Minor. A nursing student may declare a minor in another college provided that no more than six credit hours of courses required for the nursing major are used in fulfilling requirements of the minor. The minor is noted on the student's academic record.

Course Intensification. A College of Nursing student may propose a special project for earning one extra credit in one nursing course in which they are enrolled in a given semester. College of Nursing students may use only 6 credit of nursing courses toward the required elective credits for the Bachelor of Science in Nursing degree.

The following regulations pertain to this option for a student:

1. Student must have a nursing GPA of 2.7 or above.
2. The course must be offered in the College of Nursing for 3 or more credits.
3. Student must meet with the academic advisor to determine if course intensification is appropriate. The initiative and responsibility for developing a satisfactory proposal lie with the student.
4. Student must obtain the advisor's signature on the Petition to Intensify a Course.
5. Student must submit a one-page proposal for the intensification project and the Petition to the instructor of the course for approval.
6. Student must submit the approved proposal for the intensification project and the Petition to the Dean for approval.

Student Nurses Association. All student nurses are invited to join the Student Nurses Association.

Sigma Theta Tau International. Students who have completed at least one-half of the required nursing courses and who have demonstrated superior scholastic achievement and evidence of professional leadership potential may be elected to membership in this international honor society of nursing. The Zeta Epsilon Chapter was installed at Valparaiso University in 1982.

Commission on Collegiate Nursing Education (CCNE). The College of Nursing is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC, 20036-1120; phone 202.887.6791; <www.aacn.nche.edu>.

Note: Students are responsible for transportation to and from all clinical and community agencies and for transportation associated with home visits. The College of Nursing uses a variety of accredited health facilities to provide broad clinical experience for students; consequently, access to a car is necessary in most clinical courses.

Note: Prerequisites for the following courses are at least sophomore standing, completion of BIO 151, BIO 152, and CHEM 111, and a cumulative grade point average of 2.5 or above.

NUR 201. Professional Role in Nursing. Cr. 3. An overview of professional nursing practice, analyzing the concepts of person, health, nursing, and environment. Explores the expanding role of the professional nurse including provider of care, teacher, manager, and research consumer. Students develop communication skills used in professional nursing.

NUR 203. Health Assessment. 2+1, Cr. 3. Clinical practice in assessment skills of persons across the life-span. Emphasis is placed on those communication and psychomotor techniques that are fundamental for an organized and comprehensive health assessment relating to the nursing process.

NUR 210. Therapeutic Interventions for the Professional Nurse. 2+2, Cr. 4. An introduction to the concepts and principles of therapeutic and pharmacological interventions applied by the professional nurse in a dynamic health care environment. Prerequisites: NUR 201 and 203.
The University encourages cooperation among the various branches of learning and is pleased to announce these programs which are designed to enhance the student's major area of study.

**Interdisciplinary Minors.** The interdisciplinary minors in this section may be presented in partial fulfillment of the Major Field Requirements for the Bachelor of Arts degree (see page 45).

**Restrictions for Interdisciplinary Minors.** No more than two courses for these minors may overlap with other requirements whether within general education or within courses in any majors or other minors. This restriction does not apply to majors or minors in the College of Engineering and the College of Business Administration.

**Interdisciplinary Majors.** The interdisciplinary majors offered in the College of Arts and Sciences lead to the Bachelor of Arts or Bachelor of Science degree. These include Actuarial Science (page 58), American Studies (page 59), Chinese and Japanese Studies (page 72), Environmental Science (page 98), International Economics and Cultural Affairs (page 122), International Service (page 124), Modern European Studies (complementary major only - page 134), Pre-Seminary Studies (complementary major only - page 159), Youth, Family, and Education Ministry (complementary major only - page 179).

**Restrictions for Interdisciplinary Majors.** A student may combine an additional major or minor with an interdisciplinary major. If there are overlapping courses, the following restrictions apply. An additional major requires at least four courses of at least three credits each beyond those courses in the interdisciplinary major. An additional minor requires at least two courses of at least three credits each beyond those courses in the interdisciplinary major.

An administrative committee for an interdisciplinary major or minor may set further restrictions for their major or minor if desired.
Applied Statistics Minor

Administrative Committee: Professor Ozgur (Information and Decision Sciences), Strasser (Information and Decision Sciences); Associate Professors Hull (Mathematics and Computer Science, Chair), Shingleton (Economics).

Objectives. The applied statistics minor utilizes an interdisciplinary perspective to develop the student's ability to perform statistical analysis. The impact of statistics profoundly affects society today. Statistical tables, survey results, and the language of probability are used with increasing frequency by the media. Statistics also has a strong influence on physical sciences, social sciences, engineering, business, and industry. The improvements in computer technology make it easier than ever to use statistical methods and to manipulate massive amounts of data. This minor will prepare students to analyze data in their professional work. In addition, it will also provide background for those students who intend to pursue work in applied disciplines.

Administration. This minor is jointly administered by the College of Arts and Sciences and the College of Business Administration.

Requirements. A minimum of 15 credit hours is required to complete this minor.

Students who intend to complete this minor are strongly encouraged to consult their academic advisor before they begin their junior year. Depending on their major, students are advised to include specific courses as electives in their plans of study. Students should consult their academic advisors to determine which requirements these other courses fulfill. There may not be more than a total of two course overlaps with other requirements whether within general education or within a major or a minor.

Students in the minor must complete the requirements for a degree program and the following courses:

- **IDS 205** Business Statistics or MATH 240 Statistical Analysis ........ 3 or 4 Cr.
- **IDS/MATH 340** Statistics for Decision Making or ECON 325 Econometrics ....... 3 Cr.
- **CS 325** Simulation and Modeling or IDS 320 Management Science .......... 3 Cr.
- **MATH 344** Applied Probability and Statistical Decision Theory ............... 3 Cr.
- **ECON/IDS/MATH 493** Seminar in Applied Statistics ....................... 3 Cr.

Information and Decision Sciences majors may not use IDS 320 or MATH 340 to fulfill the minor requirements.

The Applied Statistics minor is not available to Actuarial Science majors.

Environmental Studies Minor

Administrative Committee: Professors Arkkelin (Psychology), Caristi (Mathematics and Computer Science), Janke (Geography and Meteorology), and Aljohob (Civil Engineering), Eberhardt (Biology), Luther (Mathematics and Computer Science, Chair), Shingleton (Economics); Assistant Professor Schoer (Chemistry).

Objectives. This minor will broaden the experiences of students with traditional majors in the College of Arts and Sciences by exposing them to approaches used by various disciplines and sectors of society that are attempting to solve complex environmental problems.

Requirements. A minimum of 20 credit hours is required to complete this minor.

**Required Courses**

- One of the following ................................................. 4 Cr.
  - BIO 172 Diversity of Life (No prerequisite)
  - CHEM 111 Introduction to Chemistry
  - GEO 104 Geomorphology
  - BIO 260 Human Environmental Biology or GEO 260 Ecology, Local Conservation .... 3 Cr.
  - ECON 210 Environmental Economics and Policy ........................................... 3 Cr.
  - PHIL 230 Environmental Ethics 3 Cr.
  - ENGL 265 Topics: Environmental Literature or ENV 240 Water Resources Science and Management .............................. 3 Cr.
  - GEO 204 National Parks
  - PSY 265 Environmental Psychology or THEO 240 Ecology, Justice and Faith

One Field Studies Course ...................................... 3-4 Cr.

- BIO 350 Field Biology (3 Cr.)
- BIO 440 Ecology (4 Cr.)
- GEO 385 Field Study (Biogeography or Environmental-3 Cr.)
- ENVS 250 Water History

- IDS 498 Colloquium on Environmental Science and Management .............. 1 Cr.

Total program requirement .................................. 20-21 Cr.

Note: No more than two courses for this minor may overlap with other requirements whether within general education or within any majors or other minors. Other appropriate topics courses may be substituted for requirements with the approval of the Chair.

Elective Courses

- ECON 233 Economics of Race and Gender ............................................. 3 Cr.
- ENGL 365 Fiction by American Women (designated sections) ............... 3 Cr.
- GEO 200 American Ethnic Geography ......................................................... 3 Cr.
- GEO 274 North American Indian Film ......................................................... 3 Cr.
- HIST 322 Slavery, Abolitionism, and Sectionalism ................................. 3 Cr.
- HIST 323 Civil War and Reconstruction ..................................................... 3 Cr.
- MUS 101 Introduction to Music ................................................................. 3 Cr.
- SOCW 210 Social Welfare: Policy and Services ...................................... 3 Cr.
- SOCW 330 Vulnerable Populations: Color, Gender, and Orientation ......... 3 Cr.
Film Studies Minor

Administrative Committee:
Professors Byrne (English), Janeja (English), Kennedy (Philosophy), Morgan (Christ College), Sponberg (English), Trotz (Political Science, Chair).

Objectives. The film studies minor offers an opportunity to discover the place and significance of an important twentieth century art which has also been a social force. Film can be studied for its artistry, its historical development, its influence on human perceptions of the world and its relation to such subjects as national cultures, technology, politics, mass media, theater and religion. The minor in Film Studies allows the small scale but concentrated study of one important art, and through it, modern times.

Requirements. At least 15 credit hours in film studies courses constitute a minor. The requirements include:

- ENGL 231 Film Aesthetics ........................................ 3 Cr.
- At least one course from each of the following areas. 9 Cr.
  Film and Literature
  Film and Society
  History of Film

A second course from one of these three areas may be counted toward the minor.

Film and Literature Area. Offered by the Department of English and the Department of Foreign Languages and Literatures: ENGL 390, FLF 250, FLGR 250, FLS 250. These are special topics courses which from time to time offer appropriate topics such as Shakespeare on Film, The Novel and Film, Storytelling in Film and Literature. These courses scrutinize both similarities and differences in handling of a theme and show how literary analysis may be used in understanding the cinema.

Film and Society Area. Offered by the Department of History and the Department of Political Science: HIST 393, POLS 490 (Film and Politics). These courses consider film from the viewpoint of the historian and the social scientist, emphasizing the use of social-historical themes in film and the effect of film on society and history.

History of Film Area. Offered by the Department of Foreign Languages and Literatures, the Department of History and Christ College: FLGR 260, HIST 390, CC 300. Topics such as History of the German Film, History of the American Film and Film in Asia are offered. These courses consider the historical development of film art and the film industry in the context of one or more national traditions of cinema.

Gender Studies Minor

Administrative Committee:
Professors Dooley (Law), J. Moore (Theology), Rubchak (History), Associate Professors Burchak (English), Corazza (Art), Sandock (English, Chair), Seguin (History), Shingleton (Economics), van Doorn-Harder (Theology); Lecturer Leeb (Theology).

Objectives. The Gender Studies minor offers an interdisciplinary perspective on the lives of women and men, especially on the nature of social and cultural constructs that give meaning to the biological difference of sex. The fact that persons are male and female takes on a complex of meaning that can be explored through study of literature and the arts, religion, history, society and social institutions, the professions, human psychology and development, and life sciences. This program, by including courses that study women in culture, society, and history, and that include the best of a growing body of feminist theory and research, also intends to help correct a tradition of scholarship and teaching that has ignored the contributions and concerns of women. Overall, the program will give both men and women a better sense of identity and possibility, and will foster greater understanding of the complex ways in which we, for good and for ill, are influenced by culture and society.

Requirements. A minimum of 15 credit hours (normally five courses) constitutes a minor. Each student must take GNST 201, Introduction to Gender Studies, plus one course in social or life sciences and one course in the humanities or fine arts. The remainder of the program (normally two courses) are elective. All courses should be chosen from a list of courses approved each year by the committee. Regularly offered courses approved by the committee include:

Core Requirement

GNST 201 Introduction to Gender Studies .......................... 3 Cr.

Social and Life Sciences

- ECON 233 Economics of Race and Gender ..................... 3 Cr.
- PSY 390 Topics (when appropriate) ............................ 3 Cr.
- SOCW 210 Social Welfare: Policy and Services ................... 3 Cr.
- SOCW 330 Vulnerable Populations: Color, Gender and Orientation ................. 3 Cr.
- SOCW 390 Colloquium (when appropriate) ....................... 3 Cr.
- SOC 220 The Family ............................................. 3 Cr.
- SOC 275 Systems of Social Stratification .......................... 3 Cr.
- SOC 340 Gender ..................................................... 3 Cr.
- NUR 322 Women and Their Health .................................. 3 Cr.

Humanities and Fine Arts

- ART 311 Art History and Feminism ............................... 3 Cr.
- ART 312 Nineteenth Century European Art ........................ 3 Cr.
- COMM 145 Interpersonal Communication ......................... 3 Cr.
- ENGL 390 Topics (when appropriate) ............................ 3 Cr.
- HIST 316 The Great Witchcraft Delusion ......................... 3 Cr.
- THEO 326 History of Women in the Church ....................... 3 Cr.
- THEO 343 Theology of Marriage and Sexuality .................... 3 Cr.
- CC 300 Love and Friendship ..................................... 3 Cr.
- CC 301 Inventing the Couple ....................................... 3 Cr.
- CC 300 Faith and Feminism ...................................... 3 Cr.

GNST 201, Introduction to Gender Studies .......................... 3 Cr.

Interdisciplinary Programs

SOCI 160 Contemporary Social Problems .......................... 3 Cr.
with instructor required ............................................

SOCI 347 Race and Ethnic Relations ............................... 3 Cr.

THEO 337 Black Theology and Black Church ......................... 3 Cr.

THEO 353 Studies in Theology and Practice (when topic is appropriate) ....... 3 Cr.

THEO 368 Native American Religions .................................. 3 Cr.

Additional courses for the minor will consist of topics courses and departmental seminars, each of which must be approved and will be publicized by the administrative committee. Students wishing to use a course not listed above must have the course approved by the administrative committee prior to enrolling in the course.

Human Aging Minor

Administrative Committee:
Associate Professors G. Evans (Biology), Mauk (Nursing), Nelson (Psychology), Pepa (Nursing, Chair).

Objectives. The Human Aging minor offers an interdisciplinary perspective on the nature of the aging process and the needs of older adults. Aging involves a complex set of changes that involve biological, psychological, and spiritual dimensions, as well as the role of the older individual in society. It is the premise of the program that these changes are best understood and explored in an interdisciplinary context. As the average human life-span increases and the proportion of elderly people in our country increases, study in human aging will become very important to those seeking to understand and render service to our society.

Requirements. A minimum of 18 credit hours constitutes a minor. In addition to the 9 credit hours of core courses (one course from each area designation), the student must complete an additional 9 credit hours of electives from any of the courses listed. Students wishing to use a course not listed to meet elective requirements for the minor must have the course approved by the Administrative Committee prior to enrolling in the course.

Students are to choose one course from each of the following designated areas an additional 9 credits from the list of courses.

Aging, Behavior, and Society

- PSY 332 Psychology of Adolescence and Aging ................. 3 Cr.
- PSY 390 Neuropsychology ........................................ 3 Cr.
- SOC 372 Aging in American Society ................................ 3 Cr.
Aging and Religious Faith
THEO 353 Studies in Theology and Practice (when appropriate) 3 Cr.
THEO 358 Studies in Theology, Health and Healing (when appropriate) 3 Cr.
THEO 359 Theological Ethics 3 Cr.

Aging and Health
NUR 318 Global Health Issues 3 Cr.
NUR 331 The Aging Process 3 Cr.
NUR 390 Issues at End of Life 3 Cr.

Elective Courses
BIO 260 Human Nutrition 3 Cr.
SOC 220 The Family 3 Cr.
SOC 390 Issues in Sociology (when appropriate) 3 Cr.
THEO 341 Introduction to Biomedical Ethics 3 Cr.

Liberal Arts Business Minor

Administrative Committee:
Associate Professor Pirie (Finance, Co-Chair), David Schroeder (Information and Decision Sciences), Shingleton (Economics), Stieger (Physical Education, Co-Chair).

Objective. The objective of the Liberal Arts Business Minor is to introduce nonbusiness majors to the functional areas of business administration. This program is especially appropriate for students who plan to enter the job market after graduation with a traditional major from the College of Arts and Sciences.

Required Courses
ECON 221 Economics - Micro 3 Cr.
ACC 205 Financial Accounting 3 Cr.
BLAW 104 Legal Environment of Business 3 Cr.
IN 304 Financial Management 3 Cr.
MGT 304 Management and Organizational Behavior 3 Cr.
MKT 304 Marketing Management 3 Cr.

One course from the following:
- ECON 222 Economics - Macro
- ENGL 306 Introduction to Professional Writing
- MATH 240 Statistical Analysis
- PSY 201 Statistical Methods
- SOC 321 Data Analysis
- ACC 208 Managerial Accounting
- IDS 205 Business Statistics
- CE 202 Statistical Applications in Civil Engineering
- ECE 365 Probability and Statistics for Electrical and Computer Engineers

Arts and Sciences students who are considering the possibility of becoming Business Majors must take the prerequisite courses in mathematics, statistics, etc., in order to qualify for admission to the College of Business Administration.

Students who intend to complete the Liberal Arts Business Minor are strongly encouraged to consult with the office of the Dean of the College of Arts and Sciences to obtain proper advising.

The 15-10 credits earned in the courses offered by the College of Business Administration may be applied toward the 124 required for graduation with a Bachelor's degree in the College of Arts and Sciences (see page 50).

Upon completion of the minor, the designation, "Liberal Arts Business Minor," is placed on the student's transcript.

Manufacturing Management Minor

Administrative Committee:
Professors Ozgur (Information and Decision Sciences), Schoech (Mechanical Engineering, Co-Chair); Assistant Professor Bai (Information and Decision Sciences).

Objectives. This interdisciplinary minor program is designed to provide the opportunity for students to focus their study in manufacturing planning and control. It prepares students for entry-level positions in manufacturing and the related areas of quality control, product design and development, production system design, and production scheduling and control. It complements a student's major area of study in engineering, business, mathematics, computer science, or other disciplines.

Administration. This minor is jointly administered by the College of Engineering and the College of Business Administration.

Requirements. A total of 16 credit hours is required to complete this minor. Students who intend to complete this minor are strongly encouraged to consult their academic advisor and a member of the minor administrative committee before they begin their junior year. A cumulative grade point average of 2.00 or better in the minor is required to earn this minor.

Students are advised to include specific courses as electives in their plans of study. Students should consult their academic advisors to determine which requirements these other courses fulfill.

Students must complete the following courses:
- IDS 305 Production/Operations Management 3 Cr.
- IDS 320 Management Science 3 Cr.
- IDS/MATH 340 Statistics for Decision Making or ACC 320 Cost Accounting or IDS 430 Global Operations and Supply-Chain Management or ME 456 Manufacturing System Design 3 Cr.
- ME 253 or ME 354 Manufacturing Processes 4 Cr.
- ME 457 or ME 458 Product and Production System Design 3 Cr.

Mechanical Engineering and Information and Decision Sciences majors may not use IDS/MATH 340 or IDS 430 to fulfill the minor requirements.

Three credits of these courses may not be used to satisfy any of the minimum credit hours required for the completion of an engineering degree and may not be used to satisfy any other major or minor requirements. For Mechanical engineering majors, ME 253 is required and both ME 456 and ME 458 may also be used to satisfy the mechanical engineering electives requirement.

Peace and Social Justice Studies Minor

Administrative Committee:
Professors Baas (Political Science, Chair); Associate Professors Kingsland (Political Science), Winquist (Psychology); Assistant Professor Ringenberg (Social Work); Adjunct Assistant Professor Yogan (Sociology).

Objectives. Valparaiso University nurtures a community whose members learn to embody social responsibility. The community challenges its members to discover ways of using their abilities in the service of the whole human family. The Peace and Social Justice Studies Minor is an interdisciplinary program focusing on social responsibility by examining the means of establishing justice, achieving peace, and resolving conflicts nonviolently. Peace rooted in justice requires the nurturing of a culture of peace in homes, schools, communities, religious institutions, nations, and across the world. Peace rooted in justice requires teaching peace and social justice to cultivate those who will become socially responsible leaders.

Requirements. A minimum of 15 credit hours (usually five courses) is required for this minor. Each student must take PSJ 201, PSJ 386, and three courses (9 credits) appropriate to the chosen track with no more than two courses from specified General Electives. No more than two courses from either track or general electives can be taken from a single department. No more than one course at the 100 level may be taken as an elective.

There are two alternative tracks in the program. The International/Global Track concentrates on social responsibility between nations and other large groups, while the Individual/Local Track focuses on social responsibility among individuals, small groups and communities.

Program Core (Required)
PSJ 201 Principles of Peace and Social Justice 3 Cr.
PSJ 386 Internship in Peace and Social Justice Studies 3 Cr.

International/Global Track
HIST 331 Ideas and Power in Latin American History 3 Cr.
HIST 350 Colonialism and Independence: Understanding Modern Africa 3 Cr.
HIST 355 Modern Middle Eastern History 3 Cr.
POLS 230 International Relations 3 Cr.
POLS 338 Holocaust Theology 3 Cr.
POLS 337 The Church in the World 3 Cr.
POLS 325 Topics in Theology 3 Cr.
POLS 362 Understanding Islamic Religion and Culture 3 Cr.
POLS 384 The Buddhist Tradition 3 Cr.

Individual/Local Track
ECON 136 The Economics of Health, Education, and Welfare 3 Cr.
ECON 233 The Economics of Race and Gender 3 Cr.
HIST 225 Alternative Perspectives of United States History 3 Cr.
HIST 226 The Hispanic U.S. 3 Cr.
POLS 340 Constitutional Law I 3 Cr.
POLS 345 The Judicial Process 3 Cr.
SOC 130 The Criminal Justice System 3 Cr.
SOC 160 Contemporary Social Problems 3 Cr.
SOC 285 Crime and Society 3 Cr.
SOC 275 Social Stratification 3 Cr.
SOC 347 Race and Ethnicity 3 Cr.
SOC 386 Penology 3 Cr.
**Political Communication Minor**

Administrative Committee:
Professors Baas (Political Science), Janke (Geography and Meteorology); Associate Professors Kilpinen (Geography and Meteorology, Chair), Shingleton (Economics); Adjunct Assistant Professor Yogan (Sociology).

Objectives. The Urban Studies Minor provides students with an interdisciplinary consideration of the diverse social, cultural, economic, political, and spatial issues confronting contemporary American cities. The majority of the minor is comprised of an experiential semester in one of America’s largest and most diverse metropolitan areas—Chicago. This program involves living, learning, and working in the city and offers opportunities for students in a wide range of programs, from art to economics to premed. The goal of the minor is to enhance students’ career opportunities, particularly through the internship, while equipping them to contribute meaningfully to public life and discourse.

Requirements. A minimum of 19 credit hours constitutes the minor. Each student must complete the Chicago Urban Semester and one elective course.

**Chicago Urban Semester**
GS 338 The Core Course .................................................. 4 Cr.
GS 348 The Seminar ......................................................... 4 Cr.
GS 386 The Internship ...................................................... 4 Cr.
GS 395 Independent Study ................................................ 4 Cr.

**Elective Courses**
ECON 338 Urban Economic Problems .................................. 3 Cr.
ECON 300 Urban Geography .............................................. 3 Cr.
ECON 321 Urban and Regional Planning .................................. 3 Cr.
POLS 220 State and Local Politics ........................................ 3 Cr.
POLS 320 Urban Politics .................................................. 3 Cr.
POLS 325 Urban Sociology ................................................ 3 Cr.

A student may substitute an appropriate topics course or departmental seminar in place of one of the elective courses listed above, provided the topic has an urban focus and is approved by the chair of the administrative committee prior to the student’s enrolling in the course.

**Urban Semester**
The following courses are offered in a residential program in Chicago in cooperation with the Associated Colleges of the Midwest:

**Urban Studies Minor**

GS 336. The Core Course: Public Policy in an Urban Center.
Cr. 4. A survey of three of four important urban policy areas giving special attention to issues being publicly discussed during the current semester. The course relies on presentations by individuals actively involved with the topic at hand, selected to provide different and sometimes contradictory perspectives. The policy areas are selected from among the following: health care, urban politics, neighborhood development, mass transportation, public education and municipal finance. S/U grade.

GS 348. The Seminar.
Cr. 4. Each student chooses one urban issue to examine in depth in a seminar involving readings, class discussions and field visits. Topics represent a range of academic disciplines, usually making it possible to select a seminar relating to a major. Recent seminar titles included City Politics, Urban Planning, Arts in the Black Community, Sexism and Racism, The Helping Professions, Dynamics of Urban Housing. Graded A-F.

GS 386. The Internship.
Cr. 4. Each student devotes 15 hours per week to an agency which can provide direct involvement in city life and exposure to a particular career environment. The placement is determined jointly by the student and staff during the first week of the semester. A wide range of placements is available. Grades are assigned at the student’s choice upon entry into the program.

GS 395. Independent Study Project.
Cr. 4. Each student pursues a topic from the Chicago experience under the supervision of a faculty member. Some projects grow out of the Internship whereas others are based on another component of the program. The student may elect to write a research paper or a creative piece, or to use photographic or visual media. Graded A-F.

All sophomores, juniors and seniors at the University are eligible to participate in this program. Students shall be admitted to this program on the recommendation of the Urban Studies Advisory Committee.

Valparaiso University students register at Valparaiso for the Chicago Urban Semester and pay to Valparaiso University the general fee charged of all full-time students. Expenses for travel, meals and lodging are paid directly by the students. Full credit toward graduation is given for all courses taken in the Urban Studies program. The program is offered in both the fall and the spring semesters.
RESERVE OFFICER TRAINING CORPS

The Air Force Reserve Officer Training Corps (ROTC) is an educational program designed to give men and women the opportunity to become an Air Force Officer while completing a degree. The Air Force ROTC Programs develop leadership and management skills that students need to become leaders in the twenty-first century. In return for challenging and rewarding work, the Air Force offers the opportunity for advancement, education and training, and the sense of pride that comes from serving one’s country. Upon completion of the Air Force ROTC program, students are commissioned as second lieutenants in the Air Force. Following commissioning there are excellent opportunities for additional education in a wide variety of academic fields.

Valparaiso University has an enrollment agreement with the University of Notre Dame enabling Valparaiso University students to participate in their Air Force ROTC program. Course numbers ending in 11 are taught during the fall semester; course numbers ending in 12 are taught during the spring semester. Leadership Laboratory is open to students who are majors of ROTC or who are eligible to pursue a commission.

Use of AFROTC Credit Toward Graduation Requirements. The policy of applying AFROTC credit toward degree requirements varies from college to college. The College of Arts and Sciences will grant up to six (6) credits of AFROTC coursework for free electives only. The College of Business Administration will grant up to six (6) credits of AFROTC coursework for free electives only. The College of Engineering policy varies by major. Civil Engineering will grant six (6) credits of AFROTC coursework toward Career Enhancement Electives. Computer Engineering and Electrical Engineering will grant up to nine (9) credits of AFROTC coursework toward the two professional electives (6 credits) and the free elective (3 credits). Mechanical Engineering will grant up to four (4) credits of AFROTC coursework toward free electives.

The College of Nursing will grant twelve (12) credits of AFROTC coursework toward the 12 elective credits required for the B.S.N. degree.

AFROTC COURSES

Cr. 1. A survey course designed to introduce students to the United States Air Force and Air Force ROTC. Featured topics include: mission of the Air Force, officer leadership and professionalism, military customs and courtesies, Air Force officer opportunities, and an introduction to military communication skills.

AS 111L. Leadership Laboratory.
Cr. 0. A study of Air Force customs and courtesies, drill and ceremonies, and military commands. Also includes studying the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers. S/U grade only.

Cr. 1. Additional study of the organizational structure of the Air Force with emphasis on leadership and communication skills.

AS 112L. Leadership Laboratory.
Cr. 0. A study of Air Force customs and courtesies, drill and ceremonies, and military commands. Also includes studying the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers. S/U grade only.

Cr. 1. A course designed to examine general aspects of air and space power through a historical perspective, covering a time period from the first balloons and dirigibles through the Korean War and into the Cold War era.
The program of graduate studies was initiated by Valparaiso University in 1963 to serve a variety of educational needs, including those of residents of Northwest Indiana and the Great Lakes region. More than 2100 students have received a master's degree since the inception of this program. Since many of these alumni live and work in Northern Indiana, the University has, through this program, made a major contribution to the life of the larger community in which it resides.

The following degrees are offered: Master of Arts in Liberal Studies with concentrations in International Commerce and Policy, and Sports Administration; and Master of Arts in Legal Studies with concentrations in English, Ethics and Values, Gerontology, History, Human Behavior and Society, Theology, and Theology and Ministry. Many of these degrees are offered in combination with the J.D. degree from the Valparaiso University School of Law.

The schedule of classes for many programs is structured to meet the needs of part-time and most full-time students. Details about these programs and postgraduate non-degree programs may be found in the Graduate Catalog, which may be obtained by contacting the Graduate Division, Valparaiso University (219.464.5313).

The graduate programs are under the general supervision of the Provost and the College of Arts and Sciences. Its policies are defined by the College of Arts and Sciences and are administered by the Dean of the Graduate Division.

In the late 1870s, Valparaiso attorney and Civil War Colonel Mark L. DeMotte decided that the importance of formalized legal education warranted a new department for the study of law at the local college. Convincing the college president that such training was crucial to the quality of legal representation throughout the country, Colonel DeMotte founded in 1879 a program for legal study that would become the Valparaiso University School of Law.

From the beginning, the School of Law graduated new lawyers able to effectively practice law as soon as they joined the bar. This remains true today. By immersing its students in a rigorous program, Valparaiso School of Law produces graduates that are successful, respected, and prepared.

The School of Law provides a range of course offerings recognized for its breadth, depth and blend of legal theory and practice. The required curriculum provides a comprehensive and intensive study in the foundations of law, and a wealth of elective courses covering many substantive areas. Course concentrations, clinical programs, externships, and co-curricular organizations introduce students to advanced study in various areas of law and offer meaningful opportunities for innovation and specialization.

By limiting enrollment, the School provides a learning environment where the rigors of legal education can be experienced with the help of careful guidance and support by the extraordinarily accessible faculty. From the classroom to the courthouse to the boardroom, our graduates thrive on the ongoing support of faculty, staff, students and alumni.

Continuously accredited by the American Bar Association since 1929, and the Association of American Law Schools since 1930, the School offers both the Juris Doctor (J.D) and Masters in Law (LLM) degrees and dual degrees, J.D/MA in Psychology, J.D/MA in Clinical Mental Health Counseling, JDMA, J.L/MALA, JD/MALS, JD/MS in International Commerce, and JD/MS in Sports Administration.

The J.D degree options include the traditional three-year, full-time program; a part-time, five-year program; and an accelerated two and one-half-year program. Unique to the School of Law is the Honors Program, designed to offer a special academic challenge to highly talented students.

The LLM degree is offered through a one-year, full-time program. This particular program is designed primarily for international lawyers who have a law degree from their home country and wish to enhance their understanding of the American legal system.

The dual degrees are year-four programs. The J.D. application process is separate from the MA and MBA application processes. Application forms for the J.D. degree are available in the School of Law Admissions Office, Wesemann Hall, 888/625-7852.

Applications for the MA, MS and MBA programs are available in the office of Graduate Studies, Kretzmann Hall, 219/464-5313.

Determined program information about the School of Law and its admissions policies are available from the Admissions Office (1-888-VALPOLAW, or <www.valpo.edu/law/>.
SUMMER SESSIONS

The University offers two six-week sessions. Although most courses are six-week sessions, within each six-week term there are usually a number of specialized courses which are offered in shorter periods of time. These sessions are an integral part of the year-round program of course offerings for both graduate and undergraduate students. They are specifically designed to serve a variety of publics: regular Valparaiso University students accelerating their study, in-service teachers desiring further professional education, visiting students from other colleges earning credit while on summer vacation, junior and senior high school students beginning their college careers early and other interested persons who would like to take coursework toward degree objectives or simply for personal enrichment.

Students may earn a maximum of seven credit hours in each six-week term, or 14 for the entire summer, which is nearly the equivalent of one semester's work. Students enrolled in a two or four-week intensive course may not be simultaneously enrolled for any other course, except by petition.

Courses on the undergraduate and graduate levels are offered in each session in virtually all areas of the College of Arts and Sciences, together with selected undergraduate and graduate courses in the College of Business Administration, the College of Engineering, and the College of Nursing. The Summer Business Program enables students in Arts and Sciences, Nursing, and Engineering to add a Liberal Arts Business Minor to their transcript through one summer of intensive academic coursework.

Each summer session features a variety of courses in the morning and evening to accommodate the student who wishes to take coursework while employed full- or part-time. A selection of on-line courses offers maximal flexibility in scheduling and permits students to take coursework with minimal residency on campus. Also offered in the summer for academic credit are several one-week workshops and other abbreviated format courses.

Educational tours, both domestic and international, are regularly offered during the summer. Information regarding tours is normally included in the Summer Session bulletin, as well as in special descriptive brochures.

Valparaiso University features the three-year baccalaureate program which offers students in selected programs the opportunity to complete their degree in three years by careful planning and the utilization of summer sessions. To complete their program as planned, students must apply for participation in the spring of their freshman year to make certain that they have the proper advising. Students should contact their academic advisor or the Office of the Dean of the College of Arts and Sciences for more information.

FEES FOR 2005 SUMMER SESSIONS

Tuition per Credit Hour

| Undergraduate | $320.00 |
| Undergraduate Nursing | $565.00 |
| Graduate | $375.00 |
| Graduate Nursing | $440.00 |
| MBA | $520.00 |

Private Music Lessons (in addition to tuition) Each private or class lesson in applied music $300.00

COLLEGE OF ADULT SCHOLARS

The College of Adult Scholars is a special program for highly motivated nontraditional (adult) students starting or returning to college to seek their first degree, or returning to college for further professional training by seeking a second degree or certificate of specialization. The College has its own mission, students, and tuition structure, and although the admission criteria are intended to recognize the special needs and experiences of adult learners, admission to the College is selective. Students in the College may select from nearly all the majors and programs as full-time students, and they may take courses in the evening, daytime, or both. Because of the special tuition rate offered through the College of Adult Scholars, enrollment in certain programs and daytime courses may be restricted. To qualify for the special tuition rate, a student's credit load may not exceed eleven hours during the spring and fall semesters.

Admission and Registration.

Application to the College of Adult Scholars is made through the Office of Continuing Education. Students who meet any one of the following four criteria are eligible to apply for admission: twenty-four years or older; have interrupted their formal education for more than three years; have a baccalaureate degree; or plan to take a Valparaiso University course approved and offered by the College at an offsite location. Applicants who have completed an undergraduate degree or significant prior college coursework (minimum of 30 credits) with a grade point average of 2.0 or higher may be admitted unconditionally. Applicants not meeting these criteria but who show ability and promise for success may be admitted on a conditional basis. College board scores are not required, but students admitted on a conditional basis may be required to take a placement test to establish their qualification for entry into the College. The final decision for admission rests with the Dean of Continuing Education, whose judgement is based on the student's ability to benefit from the program.

Advising and registration of students in the College of Adult Scholars is done through the Office of Continuing Education. Students interested in enrolling in the College should call 219.464.5313 or visit the office in Kretzmann Hall, Room 116.

SAGE PROGRAM

The College of Adult Scholars also enrolls students in the SAGE (Senior Adult Growth through Education) program which allows seniors 60 and older, or 55 and retired, to audit courses for a fraction of the regular tuition cost.
ASSOCIATE OF ARTS DEGREE (61 CR.)

Students in the College of Adult Scholars have the option of pursuing the 61-credit Associate of Arts degree. This degree is particularly appropriate for students who plan to work toward a Bachelor of Arts degree in the College of Arts and Sciences. A student must complete a minimum of 45 credit hours as a College of Adult Scholar student in order to qualify for degree candidacy. Adult scholars who change to full-time status with fewer than 45 credits are not eligible for the Associate of Arts degree.

A. General Education Requirements .......... 37-40 Cr.
1. CORE 110 ............. 5 cr.
2. CORE 115 ............. 5 cr.
3. ENGL 200 .................. 3 cr.
4. Foundational Level Theology ........ 3 cr.
5. Fine Arts/Fine Arts Literature .......... 3 cr.
6. Social Analysis ............ 3 cr.
7. Philosophy/History ............ 3 cr.
8. Diversity: Global or U.S. ....... 0-3 cr.
9. Foreign Language (one) .......... 8 cr.
10. Natural Science (with lab) or Mathematics .................. 4 cr.

As stated on page 102, College of Adult Scholars students who have completed Level II of a foreign language in high school but have not studied that language for at least 6 full years may be allowed to count credit earned for level 101 toward the foreign language requirement. Students opting for a different language from their high school experience begin with course 101 in the new language.

B. Concentrations .......... 21 Cr.

Beyond completing the general education requirements, students elect one of the following concentrations. Coursework used to meet general education requirements for the Associate of Arts degree may not be used to meet concentration requirements.

1. Culture and Humanity ........ 21 cr.
   Courses from at least two of the following subjects: English, History, Philosophy, Theology, or Classical Civilization.

2. Social and Behavioral Science ........ 21 cr.
   Courses from at least two of the following subjects: Economics, Political Science, Psychology, Sociology and approved courses in Geography (GEO 101, 102, 200, 210, 274, 301, and approved 490).

3. Communication and Expressive Arts ........ 21 cr.
   Courses from at least two of the following subjects: Art, Foreign Languages and Literatures, Communication, Music, Theatre. From these concentrations, a student may construct the equivalent of an academic minor or, with additional coursework, an academic major that may be applied toward the degree requirements for the Bachelor of Arts.

C. Electives .................. 0-3 Cr.
0-3 credits of electives, depending on whether the diversity requirement was fulfilled by another course.

D. Other requirements

1. Students must achieve a minimum grade point average of 2.0 in their final 24 credits of work at Valparaiso University and in their selected concentration.
2. At least 6 credits in the concentration must be taken at the 200 level or above.
3. Thirty of the last 34 credits for the degree must be completed in residence.
4. Valparaiso University students must complete 45 credits as a student in the College of Adult Scholars program.
5. At least half of the concentration requirements must be completed in residence and as a student in the College of Adult Scholars program.
6. Enrollment in any course requires that the student meet the appropriate prerequisites.

Students who choose to pursue a bachelor’s degree must meet all the stated catalog requirements for that degree. For example, for the Bachelor of Arts degree, the following would need to be completed:

1. Upper Level Theology .......... 3 cr.
2. Diversity Requirement: (remaining Global or U.S.) ........ 3 cr.
3. Social Analysis (from one other department) ........ 3 cr.

ASSOCIATE OF ARTS DEGREE WITH A CONCENTRATION IN EDUCATION FOUNDATIONS (60 CR.)

This degree meets requirements for certification as a teacher aide and serves students wanting to take steps toward a career in teaching. The degree also provides a general foundation appropriate for any student intending to pursue a bachelor of arts or bachelor of science degree. Prior to enrollment in this program, a student must take the Mathematics Placement Exam.

A. General Education Requirements .......... 32-33 Cr.
1. CORE 110 and 115 ........ 10 cr.
   or ENGL 100 College Composition 3 cr.
   or FS 100 Freshman Seminar ........ 3 cr.
   or PHIL 125, HIST 200, HIST 210, THEO 100 ........ 3 cr.
2. ENGL 200 .................. 3 cr.
3. Foundation Level Theology ........ 3 cr.
5. Social Analysis ............ 3 cr.
6. History ............ 3 cr.
7. Diversity: Global ........ 0-3 cr.
8. Natural Science .......... 4 cr.

B. Concentration in Education Foundations .......... 21 cr.
1. ENGL 321 Intermediate Composition ........ 3 cr.
2. GEO 101 World Geography or SOC 160 Contemporary Social Problems ........ 3 cr.
3. PSY 110 General Psychology ........ 3 cr.
4. PSY 330 Child and Adolescent Development .................. 3 cr.
5. ED 204 Educational Psychology ........ 3 cr.
6. COMM 145 Interpersonal Communication .................. 3 cr.
7. In addition to the above, any US Diversity course ........ 3 cr.

C. Electives .................. 4-7 cr.
If Mathematics 110 is required, 4 credits of electives are available.

D. Other Requirements

Students must also meet other University requirements as stipulated under D1-D6 of the Associate of Arts degree.

Certificate Programs

Valparaiso University offers certificates in several fields. These stand-alone programs typically range from 15 to 30 credits. Each is designed to serve the needs of a specific professional audience and as such each has its own admission requirements. Certificate students may not be seeking a degree at Valparaiso University and are limited to eleven credits per semester (seven during each summer session).

GEOGRAPHIC AND ENVIRONMENTAL POLICY SYSTEMS

This interdisciplinary basic or advanced certificate (15 or 30 credits) prepares professionals for planning of space and environments in a variety of natural and human-made settings. The program emphasizes training in GIS software, its application to specific situations and its larger context of use (including policy). The certificate is appropriate for persons holding undergraduate and/or graduate degrees.

INFORMATION, COMMUNICATION, AND TECHNOLOGY

Software Design is a 19-credit certificate for developing proficiency in computer programming and design of software. This certificate is particularly appropriate for natural science, business, and engineering professionals needing to broaden their understanding of software design. A certified student possesses fundamental skills for general programming and in-depth knowledge of the current programming language JAVA. Graduates are able to adapt to new programming...
environments with a minimum of training and if desired, are prepared for entry into graduate study in computer science.

**Information Technology** is a 19-credit certificate on how to "use" rather than how to "design" computer systems. It combines software coursework in programming with several applications courses that deal with software systems and how they work. The program is open to any individual having an undergraduate degree (with some basic math), but is most useful to science and business majors. A certified student could work with digital communication systems as a programmer or analyst, understand communication protocols and manage computer networks or internet resources.

**Digital Systems** is for individuals who need to refresh or upgrade an existing engineering or science education by learning more about computer systems. This 17-credit program provides modest depth of exposure to a variety of computer engineering topics. Certified students would understand computer software and hardware well enough to apply them to their primary discipline. They would be able to design small digital circuits, write programs for both microcomputers and controllers, develop web pages and analyze computer networks.

**Communication and Information Management** is an 18-credit program designed for individuals wanting to develop proficiency in a variety of electronic applications related to communication and information. Certified students would possess an array of current technological skills relevant to publication, publicity, interoffice and electronic communication, and data management. They could understand and develop websites; work with desktop publishing; create, maintain, and manipulate data files; plan and design graphic presentations; and oversee office information systems.

**Organizational Management**

This 24-credit certificate is intended for individuals who work in an administrative or supervisory capacity and who would therefore benefit from training in business-related areas, including accounting, personnel management, marketing, business law, leadership, and business ethics. The certificate is open to persons with or without an undergraduate degree. All coursework may be applied toward a business degree at Valparaiso University.

**Public Service and Leadership**

Basic and advanced (18 or 30 credit) certificates are designed for individuals with liberal arts or professional degrees who are considering or currently working in government or the public and nonprofit sectors. Both programs include coursework in government, public communication, finance, social and public policy, research methods, and administration and leadership. The advanced certificate allows further specialization in one or more of these areas.

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**Admission**

Application for admission on a form provided by the Office of Admission may be filed at any time, but should be filed well in advance of the semester for which admission is desired. Each application must be accompanied by an Application Fee of $30.00. Applications for admission to undergraduate programs are sent to the Office of Admission. For admission to the School of Law, consult the catalog of the School of Law. For admission to the Graduate Division, consult the catalog of the Graduate Division.

**General Requirements**

Valparaiso University admits those students who demonstrate potential for success in rigorous academic work. Qualified applicants are admitted regardless of gender, disability, race, color, age, veteran status, or national origin or ancestry. The credentials of each applicant are individually evaluated, with consideration given to academic record, entrance examination scores, character, and evidence of motivation for college studies. The University reserves the right to deny admission to any applicant. A student who wishes to be considered for admission into the freshman class must have the following items on file: 1) a completed undergraduate application; 2) an official high school transcript; and 3) an official report of scores on the College Board's SAT I or the American College of Testing Program Assessment (ACT).

Most Valparaiso University applicants will have taken and successfully completed the most challenging program of studies available in their high schools. The number of high school units expected is listed below. One (1) unit is equal to one (1) year of satisfactory work (C- or better) in an accredited secondary school. Entrance requirements differ slightly for some colleges.
**Admission, Registration, Academic Policies**

and academic programs. For students intending to choose a major in the College of Arts and Sciences, high school preparation is expected to include:

- English .............................................. 4
- Algebra, geometry, and advanced algebra ............................................ 3
- Foreign language .................................... 2
- History ............................................. 2
- Laboratory Science ................................ 2
- Additional science, history, social sciences, language, English, and mathematics courses ............................................ 3

For students intending to major in the College of Nursing, high school preparation is expected to include:

- English .............................................. 4
- Algebra, geometry, and advanced algebra ............................................ 3
- Laboratory Science including biology and chemistry ............................... 3
- History ............................................. 2
- Additional science, history, social sciences, language, English, and mathematics courses ............................................ 3

For students intending to major in the College of Business Administration, high school preparation is expected to include:

- English .............................................. 4
- Algebra, geometry, and advanced algebra ............................................ 3
- History ............................................. 2
- Laboratory Science ................................ 2
- Additional science, history, social sciences, language, English, and mathematics courses ............................................ 4

For students intending to major in the College of Engineering, high school preparation is expected to include:

- English .............................................. 4
- Algebra, geometry, advanced algebra, and trigonometry/pre-calculus ......... 4
- History ............................................. 2
- Laboratory Science including chemistry/physics ................................... 3
- Additional science, history, social sciences, language, English, and mathematics courses ............................................ 3

Homeschooled Requirements: Students who are homeschooled are encouraged to contact the Office of Admission for specific requirements.

**TRANSFER REQUIREMENTS**

A student who wishes to be considered for admission as a transfer student must submit the following items:

1. a completed transfer admission application;
2. official copies of ALL college transcripts, and if a student has successfully completed (C-or-better) less than 24 semester hours of college credit, a high school transcript (including SAT I and/or ACT scores);
3. a transfer applicant, currently on academic probation, cannot be considered for admission until in good academic standing with the current school.

To be considered for admission, a minimum of 2.00 cumulative grade point average (C) in college coursework is required for most programs. However, some programs require a minimum 3.00 grade point average (B).

**SPECIAL REQUIREMENTS FOR CHRIST COLLEGE, THE HONORS COLLEGE.**

An academically talented student who is admitted to the University may be invited to apply for admission to Christ College by the Christ College Dean. Qualifications include superior academic performance, demonstrated leadership ability, and interest in pursuing stimulating interdisciplinary study. Students enrolled in Christ College are concurrently enrolled in one of the University’s four other colleges.

**SPECIAL STUDENT STATUS**

Students admitted to take classes for credit, but not admitted to degree-seeking status, are special, non-matriculated students. High school students concurrently enrolled at Valparaiso University, students who are taking classes for certification, personal enrichment, or as a precondition to admission as degree-seeking, and international intensive English language students are generally admitted as "special, non-matriculated students."

Students admitted through the Office of Continuing Education (the College of Adult Scholars) are admitted as special, non-matriculated students. For a change from this status to classified, degree-seeking student status, an application for admission through the Office of (Undergraduate) Admission is required.

This status is not available to a student dismissed from the University.

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**INTERNATIONAL REQUIREMENTS**

Valparaiso University welcomes applications from qualified international students. At present, over forty nations are represented in the University's international student population.

**Application and Fee.** The completed international undergraduate application, together with a check for $50.00 payable to Valparaiso University, should be returned to the Office of Admission at least six months before the term for which the student is applying. The following items must be received before the Admission Committee acts on the application:

1. **Academic records.** Certified, official transcripts (with original and English translation) of all secondary and university courses that have been completed or attempted;
2. **Affidavit of Financial Support.** The University is required by the Immigration and Naturalization Service to determine that international applicants have sufficient financial resources to cover all their expenses while in the United States. A notarized statement of this financial support must be submitted;
3. **Proof of English proficiency.** Successful completion of the INTERLINK English language program, the Test of English as a Foreign Language (TOEFL) score of at least 213 (computerized) or 550 (paper-based), or the equivalent is generally required for admission. For information on the TOEFL, write to TOEFL, Box 899, Princeton, NJ 08540-0899, U.S.A.

**Intensive English Language Program.** The INTERLINK program on the campus of Valparaiso University provides intensive English language training, cultural orientation, and academic preparation for qualified international students, scholars, and professionals preparing to study and work in the United States. The program emphasizes cultural awareness and interpersonal skills necessary for successful academic and social adjustment to life at a university in the United States. Its curriculum focuses on reading, writing, speaking, listening, conversation, pronunciation, and study skills. Admission to the program is open to adults who have completed secondary school in good standing and are able to meet their educational and living expenses. For information, write to the INTERLINK Program, Valparaiso University, Valparaiso, IN 46383-6493, U.S.A.; or e-mail: interlink@valpo.edu; FAX number (219) 464-6846.

**Full-Time Enrollment.** All international students who are studying on F-1 visas are required by the Immigration and Naturalization Service to successfully complete at least 12 credit hours per semester; otherwise, the continuation of study on the F-1 visa is jeopardized and the visa may be revoked. All decisions to withdraw from a course, absence, or transfer to another school should first be discussed with the International Student Advisor.

**Tuition.** See page 257 in this catalog.

**Financial Aid.** A limited number of international merit scholarships are available. Amounts vary. Valparaiso University offers no need-based financial aid to international students.

**Employment.** A limited number of on-campus jobs are available for international students each year, but these jobs are usually for no more than 5 or 6 hours per week. The Immigration and Naturalization Service does not allow off-campus employment during the first academic year in the United States, but after that it is possible in special cases to obtain approval to work off-campus. International students should not plan on paying for educational costs in this way.

**Health Insurance.** All full-time students are automatically covered for emergency medical treatment up to $500.00. In addition, Valparaiso University requires that all international students enroll in a special insurance policy (limit $250,000.00) in case there are major medical expenses. However, if international students can document that they have comparable insurance coverage provided by their parents or sponsor, they need not enroll in the University policy.

For further information regarding admission of international students, please write to: Coordinator of International Admissions, Valparaiso University, Valparaiso, IN 46383-6493, U.S.A.; or e-mail: undergrad.admissions@valpo.edu.

**International Transfer Students.** To receive transfer credit for university courses completed outside the United States,
Admission, Registration, Academic Policies

international applicants should submit detailed descriptions of their previous coursework. Valparaiso University may require that some mathematics is evaluated by a professional evaluation service at the applicant's expense.

Housing Application

An application for University housing ("Housing and Tuition Deposit Form") is mailed to each newly admitted student. This application and a deposit of $200.00 (tuition and housing) should be returned to the Office of Admission as soon as possible. All checks should be made payable to Valparaiso University.

Credit By Examination

Entering first-year students may become eligible for credit by examination in three ways: 1) through the Advanced Placement Program administered by the College Entrance Examination Board, 2) through the International Baccalaureate Program administered by International Baccalaureate North America, and 3) through the course credit program administered by individual departments.

Advanced Placement Program

Students who submit results of Advanced Placement examinations are eligible to receive credit in accordance with the following table. AP examinations must be taken before enrollment as a full-time student at Valparaiso University. For more information, contact the Admissions Office.

<table>
<thead>
<tr>
<th>Examination</th>
<th>Required Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>101-137-3 Cr.</td>
</tr>
<tr>
<td>Art Studio</td>
<td>120-187-3 Cr.</td>
</tr>
<tr>
<td>Biology</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>Computer Science</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>Economics</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>French Language</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>German Language</td>
<td>102-177-4 Cr.</td>
</tr>
<tr>
<td>English Language</td>
<td>103-187-3 Cr.</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>103-187-3 Cr.</td>
</tr>
<tr>
<td>Latin</td>
<td>103-187-3 Cr.</td>
</tr>
<tr>
<td>Mathematics</td>
<td>103-187-3 Cr.</td>
</tr>
<tr>
<td>Music</td>
<td>103-187-3 Cr.</td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>103-187-3 Cr.</td>
</tr>
</tbody>
</table>

Course Credit Examination Program

During the orientation period that precedes each semester, placement tests are offered to incoming students (freshmen and transfers) in the areas listed below.

| Spanish Language  | 103-187-3 Cr. |
| Spanish Literature| 103-187-3 Cr. |
| Latin             | 103-187-3 Cr. |
| Geography         | 103-187-3 Cr. |
| History, American | 103-187-3 Cr. |
| History, European | 103-187-3 Cr. |
| History, World    | 103-187-3 Cr. |
| Math, Calculus AB | 103-187-3 Cr. |
| Math, Calculus BC | 103-187-3 Cr. |
| Statistics        | 103-187-3 Cr. |
| Music Theory      | 103-187-3 Cr. |
| Physics B         | 103-187-3 Cr. |
| Physics C         | 103-187-3 Cr. |
| Government and Politics, American | 103-187-3 Cr. |
| Government and Politics, Comparative | 103-187-3 Cr. |
| Government and Politics, International | 103-187-3 Cr. |
| Physics          | 103-187-3 Cr. |
| Biology           | 103-187-3 Cr. |
| English Language  | 103-187-3 Cr. |
| Environmental Science | 103-187-3 Cr. |
| French Language   | 103-187-3 Cr. |
| German Language   | 103-187-3 Cr. |

These tests provide an opportunity for students to attain advanced placement, receive credit, or meet certain General Education Requirements at Valparaiso University. Advanced placement and/or credit are awarded in biology, foreign languages and mathematics, as explained in the listings for those departments.

In all of the cases, the credit is awarded on the student transcript, which is maintained by the Registrar's Office. This credit can be applied toward required or elective courses.

Credit earned by examination may achieve advanced standing, meet General Education Requirements, and accelerate progress in the advanced areas of study in an intended major or interdisciplinary program. Credit by examination may reduce the time required to earn an undergraduate degree.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP) OF THE CEED

The CLEP program provides an opportunity to gain college credit for those individuals who, through experience, independent study or enriched high school courses, have attained college-level knowledge in a particular field. It is not recommended that these examinations be taken only on the basis of normal high school courses.

Information and test center locations can be obtained from College Entrance Examination Board, Box 1822, Princeton, NJ 08501.

Valparaiso University awards credit for CLEP General Examinations in English, Humanities, Social Science-History and Natural Science, subject to the following conditions:

1. The General Examinations must be taken before matriculation at Valparaiso University.
2. Credit for a CLEP General Examination may not be applied to a major nor to any specific course requirement except as listed below and 5, 6, 7, and 8.
3. Credit for a CLEP General Examination is valid only if no other credit by examination is awarded in courses associated with the same area of general education.
4. A score of 500 or above on the English General Examination entitles a student to three credits for English 100.
5. A score of 500 or above on the Humanities General Examination entitles a student to three credits in the area of the Arts or Fine Arts Literature.
6. A score of 500 or above on the Social Science-History General Examination entitles the student to three credits in the area of Social Analysis.
7. A score of 500 or above on the Natural Science-General Examination entitles a student to four credits in the area of Natural Science. No credit is awarded in Mathematics for the general examination. A student who applies credits to the General Education Requirement in Natural Science and Mathematics General Examination is required to complete at least one laboratory course in science.

Valparaiso University awards credit for CLEP Subject Area examinations as indicated below. Credit for Subject Area examinations is awarded only if the examination is taken before the student enrolls in the specific college-level course for which credit by examination is sought.

Examination Required Score

Freshman College Composition (ENG 100-3 Cr.) 50
Analysis and Interpretation of Literature (ENG 102-3 Cr.) 50
English Composition (ENG 102-3 Cr.) 50
American Literature (ENG 401-4 Cr.) 50
College Level French I (FLF 102-4 Cr.) 50
College Level French II (FLF 103-8 Cr.) 50
College Level German I (FLG 102-4 Cr.) 50
College Level German II (FLG 103-8 Cr.) 50
College Level Spanish I (FLS 102-4 Cr.) 50
College Level Spanish II (FLS 103-8 Cr.) 50
Microeconomics (ECON 223-3 Cr.) 50
Principles of Macroeconomics (ECON 224-3 Cr.) 50
American History I (HIST 220-3 Cr.) 50
American History II (HIST 221-3 Cr.) 50
European Civilization I (HIST 220-3 Cr.) 50
European Civilization II (HIST 221-3 Cr.) 50
American Government (POLS 112-3 Cr.) 50
Introductory Psychology (PSY 110-3 Cr.) 50
Human Growth and Development (PSY 330-3 Cr.) 50
Introductory Sociology (SOC 110-3 Cr.) 50
General Biology (BIO 102-3 Cr.) 50
General Chemistry (CHEM 101, 122-8 Cr.) 50
Calculus with Elementary Functions (MATH 120-4 Cr.) 50
Principles of Accounting (ACC 205-3 Cr.) 50
Principles of Management (MGT 304-3 Cr.) 50
Principles of Marketing (MKT 304-3 Cr.) 50
Advanced Standing—Transfer Students

The University welcomes transfer students from junior colleges, community colleges and other accredited institutions of higher education. Students planning to transfer to Valparaiso University must apply for admission through the Office of Admissions at least three weeks before the official start day of the term for which they are applying and must present evidence of honorable dismissal from the institution last attended. Transfer students will not be admitted to Valparaiso University until official transcript(s) and other required credentials are on file in the Office of Admissions. After their records are evaluated, applicants will be notified regarding the courses which are found acceptable for transfer. Courses with grades of C- or above are accepted as transfer credit for graduation. Grades are not transferable; only credit transfers. For students in the College of Business Administration, see page 189. For registered nurses in the degree completion program of the College of Nursing, see page 220.

Credits earned more than fifteen years before application for admission are accepted toward graduation on a provisional basis, subject to validation by the first thirty semester hours completed in residence at Valparaiso University with a 2.00 (C) average.

Advanced standing is the record of courses and credits accepted by Valparaiso University from another institution.

The maximum number of advanced standing credits that may be transferred to this University is 94 credits (Colleges of Arts and Sciences, Business Administration or Nursing) or 102 credits (College of Engineering). See page 255 for residence requirements and restrictions related to majors and minors.

Credit for workshops, institutes or travel-study ordinarily will be granted only for work taken at Valparaiso University. In cases of exception to this restriction, transfer credit for institutes or workshops will not exceed one credit per calendar week of instruction. Transfer credit for travel-study programs usually will not exceed two credits per calendar week.

General Education. A Statement of Equivalency is prepared by the dean of the college in regard to the General Education

Requirements for the respective degree. Transfer students with more than 75 credits of advanced standing need to complete one course (three credits) of theology at Valparaiso University. One course in theology must be taken in residence at Valparaiso University.

Major Requirements. Statements of equivalence for academic majors, interdisciplinary programs or professional block schedules are prepared by the colleges or departments concerned.

Registration

All students are expected to register on the official registration days of each semester. For students currently enrolled, a registration period is announced each semester to file a schedule for the next semester with the Registrar’s Office. For freshmen, transfer students and students who have been off campus for at least a semester, a registration period is provided at the beginning of each semester as listed in the University Calendar. (For the registration days and the calendar of the School of Law, consult that School’s bulletin.)

HEALTH REQUIREMENT

All students entering the University for the first time and all students who have not been registered at this University during the previous sixteen month period must submit to the University Medical Center a report of their medical history, physical examination and required immunizations from a licensed physician.

MAXIMUM AND MINIMUM CREDIT HOURS

A full-time student is one who is registered for at least twelve semester credit hours. Maximum credit hours allowed per semester without petition are given in the following table:

<table>
<thead>
<tr>
<th>Program</th>
<th>Maximum Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Arts and Sciences</td>
<td>17 Cr.</td>
</tr>
<tr>
<td>Education (Elementary, Middle)</td>
<td>18 Cr.</td>
</tr>
<tr>
<td>Secondary Education majors</td>
<td>19 Cr.</td>
</tr>
<tr>
<td>Bachelor of Music</td>
<td>18 Cr.</td>
</tr>
<tr>
<td>Bachelor of Music Education</td>
<td>19 Cr.</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>18 Cr.</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>19 Cr.</td>
</tr>
<tr>
<td>College of Nursing (except in approved block schedules)</td>
<td>17 Cr.</td>
</tr>
</tbody>
</table>

Students who maintained a grade point average of 3.00 (B) or better during the previous semester may register for extra hours (three credits) of theology at Valparaiso University.

In unusual cases, a student may petition to waive a prerequisite. Such a petition must be signed by the instructor of the course, the student’s academic advisor and the Chair of the Department in which the course is offered, and be addressed to the Dean of the student’s College. Forms are available from the Registrar’s Office. Freshmen are not allowed to carry extra hours during the first semester.

COURSE PREREQUISITES

Students are held responsible for meeting the prerequisites of all courses for which they enroll. In unusual cases, a student may petition to waive a prerequisite. Such a petition must be signed by the instructor of the course, the student’s academic advisor and the Chair of the Department in which the course is offered, and be addressed to the Dean of the student’s College. Forms are available from the Registrar’s Office.

CHANGE OF SCHEDULE

Students may change the status of their registration in courses up to the time of the calendar deadlines published in the University catalog. Such changes are matters of serious consideration. Before deciding on such an action, students should obtain the counsel of their course instructor, academic advisor and the Chair of the Department in which the course is offered. Forms are available in the Registrar’s Office.

Any student-athlete who wishes to drop below 12 semester credit hours (full-time status) must obtain the signature of the Athletics Compliance Coordinator or her designee in addition to the other signatures required on the appropriate form from the Registrar’s Office.

Deadlines for course addition, course withdrawal, filing for S/U grade and registration from the University are published in the University Calendar. Once these deadlines have passed, students are held responsible for completion of courses under the terms of the registration they have selected. Changes in registration after these deadlines are allowed only in exceptional cases where students demonstrate that extreme contributory circumstances have rendered their registration in a course invalid. Serious physical disability, prolonged illness or the death of a loved one; documented occurrences of this kind that are considered reasonable grounds for requesting an exception to the regular calendar deadlines. A petition for exception to a deadline may be addressed to the Dean of the appropriate College; such a petition must be accompanied by supporting reasons for its presentation. Petition blanks are provided by the Office of the Registrar. The integrity of the Valparaiso University transcript and ultimately of the University itself demand that special exceptions be permitted only when special circumstances prevail.

Neither unsatisfactory academic performance, withdrawal, nor lack of adequate evaluation of a student’s performance in a course before the deadline are, in and of themselves, sufficient reason for petition.

Students may officially cancel enrollment in a course during the first six class days without reflection on their permanent record. All requests for adding a course during the first six class days remain at the discretion of the appropriate academic dean or department chair. From then until the published deadline, a student may officially withdraw from a course with a grade of W (withdrawal) on the student’s permanent record. Students are not permitted, without an approved petition, to cancel enrollment in courses after the end of the ninth week of a semester.

Not attending class does not constitute formal withdrawal from a course. After the drop period and until the seventh week of a semester, the tuition fee is prorated according to a schedule which can be viewed in the Office of the Registrar. These rules apply only if students change from full-time to part-time or the reverse, or if part-time students adjust their academic credit loads.

APPEALS

Denial of a petition by a student’s Dean may be appealed to the Committee on Academic and Professional Standards. The appealing student should append reasons for submitting his appeal to the Committee.
**Academic Policies**

**GRADING SYSTEM AND QUALITY POINTS**

For the School of Law and the Graduate Division, refer to the appropriate bulletin.

The course grades reported and recorded in the Registrar’s Office are as follows. The corresponding number of quality points per credit hour are also indicated.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points/Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A−</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B−</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C−</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>less than satisfactory, but passing 1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D−</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
<tr>
<td>I</td>
<td>incomplete</td>
</tr>
<tr>
<td>W</td>
<td>authorized withdrawal</td>
</tr>
<tr>
<td>S</td>
<td>satisfactory</td>
</tr>
<tr>
<td>U</td>
<td>unsatisfactory</td>
</tr>
</tbody>
</table>

**Grades A through D**—give credit toward graduation. A student who receives a grade of D−in a course is advised not to enroll in other courses for which the given course is a prerequisite. Candidates for graduation must have a cumulative grade point average of 2.00 or better in all their work at Valparaiso University.

The grade I (incomplete) may, at the discretion of the instructor, be given to a student under the following conditions:

1. The work completed in the course so far is passing (average D−or better).
2. The student has been unable to complete the remaining work in the course because of circumstances beyond his or her control.

An I (incomplete) received in one semester or summer session must be removed by the beginning of the official examination period of the next succeeding semester or it automatically becomes a grade of F. The student’s deadline for submitting the outstanding work to the instructor shall be one week before that date. No Semester Honors will be given if the student received a grade of Incomplete at the official end of the semester concerned.

**Authorized withdrawal** from a course or from the University within the published deadlines gives the student the grade of W to each course withdrawn. This mark carries no credit.

The **satisfactory grade**, S, is given under the following conditions:

1. The course is designated in this catalog to be graded S/U or the student officially opts or petitions to have the S/U grade in the course.
2. The student’s work in the course is satisfactory, of a quality which is comparable to a grade of C- (1.7 quality points per credit hour) or better.

Course credit hours with grades of S count toward graduation but are not counted in computing the student’s grade point average.

The **unsatisfactory grade**, U, is given under the following condition:

1. The student’s work does not meet the course objectives (condition 2 above). Course credit hours with grades of U do not count toward graduation and are not counted in computing the student’s grade point average.

The **failing grade**, F, is given under any of the following circumstances:

1. Work done in a course is below a minimum standard required for passing.
2. A student fails to complete work to remove a grade of I (incomplete) before the deadline stated above.
3. A student withdraws from a course without filing the necessary form and obtaining the necessary approval.
4. A student withdraws from a course after the published deadline.
5. A student withdraws from the University without giving official notification. F grades are given in all courses thus dropped.

Only in exceptional cases, such as prolonged or serious illness, does the appropriate committee permit a student to withdraw from a course without a grade of F after the deadline for withdrawing from a course with a grade of W. To withdraw from a course requires the filing of the appropriate form with the signature of the student’s academic advisor, the instructor and the Chair of the department of the course dropped and the Dean of the student’s College. Withdrawal from the University requires notification of the Office of the Assistant Provost for Student Affairs. The appropriate form is obtainable from that office.

**ADMISSION TO COURSES ON A SATISFACTORY/UNSATISFACTORY BASIS**

Undergraduate students are encouraged to venture outside the areas of their concentration, investigate new disciplines, and discover new, perhaps unsuspected, interests. If a student chooses, the Satisfactory/Unsatisfactory grading option may reduce the anxiety about electing a course in an area in which the student has had little or no prior experience. Students who are interested in conveying maximum information on their transcripts to professional and graduate school should speak to their advisors and the dean of their college prior to electing this option.

Certain courses normally result in S/U grades, as noted in the catalog descriptions. Physical Education courses numbered 105 have the S/U option which the student may elect by declaring this choice in the usual way. In addition to any of these courses, the student may take one course, normally letter graded (i.e., A to F), each semester on a satisfactory/unsatisfactory basis subject to the following conditions:

1. Such courses must not be selected from:
   a. The student’s major or minor field of study;
   b. The required courses for any professional degree or preprofessional program, except for liberal arts electives or other courses approved by the Dean of the student’s College;
   c. A repeated course, if not originally taken on the S/U basis;
   d. A course previously dropped or satisfactory.

2. Such registration must be signed by the student’s academic advisor.
3. A decision to elect a course on S/U basis must be made by the end of the fourth full week of the semester for courses of usual length. After this deadline, the S/U grading basis may not be changed. This deadline applies proportionately to Summer Session or seven-week half-semester courses.

**ADMISSION TO THE COURSE INTENSIFICATION PLAN**

Students may propose a special project for earning one extra credit in one liberal arts course in which they are enrolled in a given semester. In addition, students enrolled in the College of Business Administration (see page 190) and the College of Nursing (see page 222) have specific criteria for course intensification of their courses. This opportunity is part of the University’s Course Intensification Plan. The following regulations pertain to this option for all students regardless of their college:

1. The course must be offered for three or more credits.
2. The initiative and responsibility for developing a satisfactory proposal lie with the student.
3. Student must secure and fill out a proposal to Intensify a Course from the Registrar’s web page.
4. The proposal must be approved by the student’s advisor, the instructor of the course, the chair of the course, and the dean of the student’s college.
5. Approved proposals must be filed in the Registrar’s Office during the period specified in the academic calendar.

The Course Intensification Plan is a type of honors work, and under no circumstances should be considered a substitute for regular course work.

**ADMISSION TO COURSES AS AN AUDITOR**

A regularly classified student may register in a course as an auditor only with the permission of his or her advisor and the chair of the department which offers the course. An auditor may not be admitted to the final examination and is never granted credit for the course audited. No additional fee is charged when the student pays full tuition. Once in a course as an auditor, the student cannot change the status of his enrollment to get any kind of grade in the course.

**CREDIT HOURS**

A credit hour (abbreviated Cr. in lists of courses) represents one hour of recitation or
lecture, or two or more hours of laboratory, each week for one semester. If time outside the laboratory is required to prepare laboratory notes or reports, two hours may be equivalent to one period of class work. Drawing, shop work and other courses demanding no outside preparation require a minimum of three hours for one credit hour. See specific course descriptions for the exact number of hours required.

For **short (seven weeks) courses**, the time per week per credit hour is twice that for the semester.

**REPETITION OF RESIDENT COURSES FOR CREDIT**

Unless repetition of a course for credit is permitted as shown in its catalog description, only the credits, grade and quality points received the last time the course is taken by a student at Valparaiso University shall be used in determining credit for graduation and the cumulative grade point average. A grade of W shall be excluded from this policy. The student's transcript shall record all grades, original and repeat.

**ACADEMIC STANDING OF A STUDENT**

A student’s standing is determined by the ratio of the total number of quality points to the total number of credit hours attempted in all work at Valparaiso University except courses graded S/U. Thus, a student who makes an average mark of C (2.0 quality points per credit hour) throughout the course of 124 semester hours will have 248 quality points and a standing of 2.00. The standing for a semester’s work is understood to be the ratio of the number of quality points earned to the number of graded credit hours completed. Standing is also referred to as the **grade point average**.

Note the above exception regarding repetition of a course.

**ACADEMIC DEFICIENCY**

In the College of Arts and Sciences, College of Business Administration, College of Engineering and College of Nursing, students whose cumulative resident grade point average falls below 2.00 are considered academically deficient. Such students may be denied the privilege of continuing their studies at the University unless they succeed in improving the quality of their academic work to the satisfaction of the faculty during the following semester. The Dean of each College establishes procedures to give students who are academically deficient timely warning of their being denied continuation of their studies.

Parents or guardians are informed when an academic action has been taken concerning undergraduate students in the day program who are less than twenty-one years of age, unless the students who are not a dependent of their parents or guardians notifies their academic dean to the contrary.

For regulations concerning academic deficiency in the School of Law, see that School’s bulletin.

**Dropped for Low Scholarship.**

Whenever, in the judgment of an academic dean, students who are academically deficient would benefit from an interruption of their work in a particular college of the University, the dean will notify the students in writing that they have been dropped and will specify the period of time for which they have been dropped and the conditions which they must satisfy in order to be readmitted.

**CLASS STANDING OF A STUDENT**

An undergraduate student must have 24 semester credits to be classified as a sophomore; 56 semester credits to be classified as a junior; and 88 semester credits to be classified as a senior.

A student in the School of Law should consult that School’s bulletin.

**SEMESTER GRADE REPORT**

Grade reports are sent only to the student and only to the home address indicated by the student on the official biographical form. This report is considered by the University to be a progress report maintained by the University. Students may also view their grades on-line at https://datavu.valpo.edu.

**CLASSIFICATION OF COURSES**

The courses offered by the University are classified as follows:
- Lower division courses, numbered 100-299;
- Upper division courses, numbered 300-499;
- Graduate-undergraduate courses, numbered 500-599;
- Graduate only courses, numbered 600 and above.

**LEAVE OF ABSENCE—UNDERGRADUATE STUDENTS**

At the end of a semester, a student who has completed at least one full semester of work in residence and who is in good academic standing may apply for a leave of absence. This absence requires approval of the academic advisor and the academic dean. The necessary form may be obtained from the Registrar’s Office. This student may not return to Valparaiso University without formally applying for readmission within a period of two years following the start of the leave of absence. However, the student must notify the Registrar’s Office if the return date as originally stated is changed within the two period year. Leaves are not given to students who withdraw from the University during a semester.

All leaves must be requested before the beginning of the semester in which they are to take effect.

**READMISSION OF FORMER STUDENTS TO UNDERGRADUATE AND PROFESSIONAL PROGRAMS**

Students who have fully matriculated at Valparaiso University and who have interrupted their studies for whatever reason must apply for readmission to the University through the Readmissions Committee. The request for readmission is to be sent to the Registrar. Exceptions are students who took a formal leave of absence under the conditions specified above, and students enrolled in the Deaconess Training Program, who usually spend one year in in-service training. Cooperative Program work semesters and off-campus special semesters are considered to be continuation of study, for which students have officially registered.

Application for readmission must be made at least one week before the registration date of the term in which the student wishes to enroll. Applications will not be accepted after this date.

The student being readmitted must present the necessary information such as records of attendance and grades at other colleges, and a new medical examination report if the student has been out of school during the sixteen month period, before action will be taken on the request to be readmitted.

Credit hours earned more than fifteen years before application for readmission (either at Valparaiso University or at another accredited educational institution) are subject to reevaluation and, if accepted by the appropriate University standing committee, may be subject to validation by the first year’s work (30 semester credits) completed in residence with a 2.00 grade point average.

The case of each student applying for readmission is presented to the Readmissions Committee. The Registrar’s Office notifies the student of the Committee’s decision. Students with outstanding financial obligations to the University are not considered for readmission until these obligations have been paid in full.

**ADVANCED STANDING—RESIDENT STUDENTS**

Any resident student who has taken academic course work at any other accredited educational institution must request the Registrar of that institution to send an official transcript to the Valparaiso University Registrar’s Office, where an evaluation is made for possible acceptance of transfer credits. Courses with grades of C- or above are accepted for transfer credit. Grades are not transferable; only credit transfer is given.

Credit for workshops, institutes or travel-study ordinarily is granted only for work taken at Valparaiso University. In cases of exception to the preceding restriction, transfer credit for institutes or workshops will not exceed one credit per calendar week of instructor attendance. Transfer credit for travel-study programs will usually not exceed two credits per calendar week.

Resident students who wish to take courses at other approved schools concurrently with their Valparaiso work should refer to the appropriate paragraph under **Residence Requirements** on 256.

**TRANSFER TO ANOTHER PROGRAM**

If a student transfers from one major or interdisciplinary program to another, all requirements of the new specialization must be met. Such a transfer subjects credits previously earned to a reevaluation. In certain cases the change of program may result in some loss of credit (e.g., if a course taken as a General Education Requirement is
superseded by another course required for the new major). Therefore, such transfers may not be made without the written approval of the advisors and deans concerned. Necessary forms may be obtained from the Registrar's Office.

In the case of transfer from one college to another, note well in the requirements for the degrees of the new college any restrictions on credit hours which may be transferred from the former college.

EXAMINATIONS
Written tests and quizzes are given from time to time during the semester at the discretion of the instructor.
A final examination is required in all courses of 3 credit hours or more. Exceptions may be made for such courses as independent study, practica and internships, performance, studio and activity courses. Final examinations are held at the close of each semester and, for courses of 3 credit hours or more, must be conducted according to a schedule published by the Registrar.
Final examinations in courses of less than three credits are conducted during regularly scheduled class periods.
In order to give students adequate opportunity to prepare for final examinations, no tests may be given in courses of 3 credit hours or more within seven days before the beginning of the examination period.
Exceptions to these policies require the written approval of the Dean of the College in which the course is offered. Exceptions to the schedule are usually approved when a student has three or more examinations scheduled on the same day.

ABSENCE FROM CLASS
All students are expected to attend every one of their classes unless their absence has been approved by the instructor concerned or the appropriate dean. Absence from class is primarily a matter between the student and the instructor of the class. It is the students' responsibility to discuss with their instructors the reason for their absence and to learn what makeup work may be required.

WITHDRAWAL FROM THE UNIVERSITY
For the School of Law, consult that School's bulletin.
A student who wishes to withdraw from the University for the remainder of a semester or session must apply to the Dean of Students before the deadline date for a permit to withdraw (see calendar at front of catalog). Upon return of the permit properly signed to the Registrar's Office, the Registrar authorizes the return of such fees as are refundable. In the case of a student who is less than twenty-one years of age, the parent or guardian is notified of the withdrawal by University Registrar. If students withdraw after the seventh week of the semester, they are ordinarily not granted readmission for the following semester, unless extreme contributory circumstances such as severe illness caused the withdrawal.
The term "honorable dismissal" refers to conduct and character only, not to class standing and grades. It is not granted unless the students' conduct and character are such as would entitle them to continue in the University.
A student who withdraws from the University without authorization, or after the published deadline, is not entitled to refunds of any kind and the instructor of each course in which the student is enrolled is required to report a final grade of F to the registrar. For the School of Law, consult that School's bulletin.

Graduation
RESPONSIBILITY OF THE STUDENT
Every candidate for a degree is personally responsible for meeting requirements for graduation. No University official or advisor can relieve the student of this responsibility.
Students in the undergraduate program of the University may fulfill the requirements for graduation under any catalog issued during their years of attendance, beginning with the year they first entered the University, provided there is no absence of five or more years between periods of attendance. (For the School of Law, consult that School's bulletin.) All requirements in one catalog issue must be met.
Students who return to the University after an absence of five or more years may no longer be a candidate for a degree on the basis of the catalog requirements covered by their previous years of attendance, but must fulfill for graduation all the requirements and provisions beginning with the catalog of the year they return to the University. In addition, credits earned at Valparaiso University more than fifteen years before reentry are subject to reevaluation and shall not be accepted toward graduation requirements unless approved by the appropriate Faculty Senate Standing Committee.
No degree is conferred upon and no transcript is given for a student whose account with the University has not been settled in full.

SECOND DEGREES
In order to receive a second degree, a student must earn at least thirty semester credits and sixty quality points in excess of the total number of semester credits required for the first degree and, in addition, the student must fulfill all the specific course requirements for the second degree. No course used to fulfill a major or minor requirement for one degree may be used to fulfill any major or minor requirement for a second degree. This restriction refers to courses within the major or minor field, not to additional courses required from outside of the major or minor field. A student who selects an individualized major or minor for a second degree may not use the designated courses to fulfill any other graduation requirement.
Approval of applications for dual degrees must be given by the appropriate advisors, deans, and the Committee on Academic and Professional Standards. No student may graduate with one degree and a second degree in the same discipline.
Students in the Graduate Division should refer to that Division's bulletin for specific information.

CREDIT AND QUALITY POINT REQUIREMENTS
Candidates for graduation with an associate's degree or a bachelor's degree must have a grade point average of 2.00 or more in all their work at Valparaiso University. In addition, candidates for a bachelor's degree must have a grade point average of 2.00 or more in any major, minor, or interdisciplinary program, based on their work at Valparaiso University. Candidates for the Associate in Science degree must have a grade point average of 2.00 in all of their science courses at Valparaiso University. Candidates for the Associate of Arts degree must have a grade point average of 2.00 in their concentration area. In the computation of the students' standings, grades of D+, D, D- and F are included. Grades of S, U and W are not included.
Candidates for a master's degree or the Juris Doctor degree should consult the appropriate bulletin for the corresponding requirement.

RESIDENCE REQUIREMENTS
Regardless of other degree requirements, candidates for all bachelor's degrees must meet the following requirements in residence at Valparaiso University:
1. At least one-half the number of credit hours required for any major, minor or interdisciplinary program (a minimum of 15 credit hours in the area of foreign languages).
2. At least three credits in theology.
3. At least thirty of the last forty credits presented for the degree.

Residence requirements for master's degrees and the Juris Doctor degree may be found in the appropriate bulletins.

Ordinary credit is not given for courses taken concurrently at other approved schools, colleges or for correspondence courses taken during a student's enrollment at this University. Any exception to this policy must have the approval of the student's academic advisor, the Dean of the appropriate College and the Committee on Academic and Professional Standards. Note that credit for courses taken under one of the International Study Semesters or Special Semester programs described on pages 12-13 and 20-25 apply as taken in residence at this University.

APPLICATION FOR A DEGREE
A student who wishes to receive a degree at the end of a Fall Semester must formally apply for the degree on a form provided for this purpose by the Registrar's Office not later than the preceding April 1st. A student who wishes to receive a degree at the end of a Spring Semester or a Summer Session must formally apply for the degree on a form provided for this purpose by the Registrar's Office not later than the preceding October 1st.

A summer session student, not enrolled in the previous academic year, who expects to
receive a degree at the end of a Summer Session must formally apply for the degree at the beginning of that Summer Session.

If, for any reason, students (except a graduate student) do not meet the requirements for graduation after filing their application, the students must file a new formal application by the beginning of the session in which they then expect to receive a degree.

Candidates for degrees in August or December, who expect to complete requirements in absentia, must be sure that all course work is completed and the session ended by the deadline date set for candidates who are registered on campus. Official transcripts must be on file in the Registrar's Office no later than ten days after the close of a semester or session. This does not apply to May candidates, as these candidates must be certified before the May Commencement ceremony.

Further information will be furnished upon request from those candidates completing degree requirements in absentia.

PRESENCE AT COMMENCEMENT

A candidate for graduation at the end of the Spring Semester must be present at commencement in order to receive a degree. Degrees are not conferred in absentia, except on special permission.

Students who complete their work toward a degree at the end of a Fall Semester or of a Summer Session will be granted the degree at that time.

BACHELOR'S DEGREES WITH HONORS

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a grade point average of 3.60 in their work at this institution will be graduated Magna Cum Laude.

Students who have been in attendance at Valparaiso University at least two years (a minimum of sixty credit hours) and who have maintained a grade point average of 3.40 in their work at this institution will be graduated Cum Laude.

See the bulletin of the School of Law for the Juris Doctor degree with honors.

SEMESTER HONORS

An undergraduate student (freshman through senior) who achieves a grade point average of 3.50 in any semester will be awarded honors under the following restrictions:

1. The student received no grades of I or U at the official end of the semester concerned.
2. The student completed at least fourteen credit hours of work for that semester on campus or at least twelve credit hours in an International Studies Semester, Special Off-Campus Semester or any other approved cooperating program (pages 12-13 and 20-25).

TRANSCRIPTS OF ACADEMIC RECORDS

The Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) provides, in part, that the institution will maintain the confidentiality of student academic records. The University's entire policy may be found in the Student Guide to University Life.

No one outside the University shall have access to, nor will the University disclose any information from, student academic records without the written consent of students, except to persons, organizations or agencies which are permitted to receive such information under the Act.

Official transcripts of academic records are released only upon the written request of the student. No degree is conferred upon and no transcript is given for a student whose account with the University has not been settled in full.
Students taking private lessons are held responsible for making arrangements with the instructor to complete all lessons during the semester. If the student is unable to complete within the semester the series of lessons for which he was assessed, a report should be made immediately to the Chairman of the Department of Music by the student. The performance music fee is not refundable after the tenth class day of a semester.

**Tuition and Fees For Part-Time Undergraduate Students and Professional Programs**

Undergraduate students who register for less than 12 credit hours are classified as part-time students. Such undergraduate students pay tuition charges as follows:

- Enrolled in 6 or less credit hours per semester: $500 per credit hour
- Enrolled in more than 6 and less than 12 credit hours per semester: $1,000 per credit hour
- Enrolled in College of Adult Scholars, no credit hour requirement: $320 per credit hour

The general fee for Graduate and College of Adult Scholars students is a flat fee of $60.00 per semester. The general fee for part-time Undergraduate students is $20.00 per credit hour.

These charges do not include the use of the facilities, of the health service nor participation in the student insurance plan.

**Auditors** pay $1,000.00 per credit hour equivalent.

Part-time rates for the School of Law are published in the Law Catalog. Part-time rates for graduate students are published in the Graduate Catalog. Tuition charges for special programs for registered nurses sponsored by the College of Nursing may be obtained by contacting the Dean of Nursing or the Office of Admission.

**Special Fees**

- **Application**-$30.00. This fee is payable at the time of application for admission to the University. It is not refundable.
- **Readmission**-$20.00. This fee is payable at the time of application for readmission to the University. It is not refundable.

**Tuition Deposit**-$100.00. This fee is required of all new students, both resident and commuter. It is not refundable. For the School of Law, see the appropriate bulletin.

**Housing Deposit**-$100.00 ($100.00 for returning students). This fee is required of all students requesting University housing. In case of cancellation, see Refund Policy on page 257.

**Nursing Liability Insurance-$24.00 (Family Nurse Practitioner-$88.00)**. In connection with the clinical practice component of the nursing program, all students in the College of Nursing, beginning with the sophomore year, must secure and provide proof of professional and personal liability insurance.

**Nursing Lab Fee-$50.00.** This fee is payable by each nursing student entering the sophomore year.

**Nursing Testing Fee-$375.00.** This fee is payable by each nursing student entering the sophomore year.

**Vehicle Registration-$60.00 per year.**

**Study Abroad, Cambridge, England-$900.00.** Each participant pays this fee.

**Study Abroad, Reutlingen, Germany-$900.00.** Each participant pays this fee.

**Study Abroad, Puebla, Mexico-$900.00.** Each participant pays this fee.

**Study Abroad, Hangzhou, China-$900.00.** Each participant pays this fee.

**Transcript**—No charge is made for any transcript issued. No transcript of a student's record is released unless the student has met in full all obligations, financial or otherwise, to the University.

**Late Registration or Confirmation-$40.00.** This fee becomes effective on the first day of classes for fall and spring semesters only. In no case are students who register or confirm late exempted from this fee, unless for valid reasons they have been given written authorization for exemption by the Registrar.

**International Student Transfer Credit Evaluation-$200.00.** This fee is payable by each international student who transfers college level work for credit. The fee is used for the professional evaluation of the work to be transferred. This fee must accompany the transcript or certified copy sent to the Office of Admission.

**Engineering Fee-$335.00 per semester.** The engineering fee is assigned to students enrolled in the College of Engineering after they have completed the first year of the engineering program. For purposes of assessing the fee, engineering students who have completed 24 or more university credits at Valparaiso University or elsewhere (but excluding advanced placement credits) are considered to have completed the first year of the program.

Engineering courses numbered above 200 or cross-listed in other colleges and taken by a student who is enrolled in one of the other colleges at Valparaiso University may not subsequently be used to satisfy engineering degree requirements unless this fee is paid. Exceptions to this fee may be granted by the Vice President for Administration and Finance on the recommendation of the Dean of the College of Engineering.

**Undergraduate Co-operative Education Programs-$320.00 per credit hour.**

**PAYEE** Drafts, checks and money orders should be made payable to Valparaiso University. A $20.00 fee will be charged for each check returned by the bank due to insufficient funds, closed accounts, etc.

**Expenses**

An estimate of normal expenses for a semester in each college is given below.

<table>
<thead>
<tr>
<th>College and Category</th>
<th>Average Cost Per Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Engineering</td>
<td>$11,000.00</td>
</tr>
<tr>
<td>General Fee</td>
<td>$375.00</td>
</tr>
<tr>
<td>Rent of Room and Board</td>
<td>$3,110.00</td>
</tr>
<tr>
<td>Freshman</td>
<td>$3,040.00</td>
</tr>
<tr>
<td>Sophomore</td>
<td>$2,970.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>$500.00</td>
</tr>
<tr>
<td>Junior-Senior</td>
<td>$2,970.00</td>
</tr>
</tbody>
</table>

**College of Nursing**

| Tuition | $11,000.00 |
| General Fee | $375.00 |
| Rent of Room and Board | $3,110.00 |
| Freshman | $3,040.00 |
| Sophomore | $2,970.00 |
| Books and Supplies | $500.00 |
| Junior-Senior | $2,970.00 |
| School of Law | $13,200.00 |
| General Fee | $331.00 |
| Rent of Room and Board | N/A |
| Books and Supplies | $500.00 |

Estimated expenses for room and board are based upon a minimum meal plan buy-in of $1155.00 per semester (freshmen), $1085.00 per semester (sophomore), $1015.00 per semester (junior), and double occupancy room and board $2,095.00 per semester for Alumni, Lakenlau, Brandt, and Scheele Halls. Rates for other residence halls: $2,095.00 per semester for 807 Mound; $2,250.00 per semester for Wehrenberg, Guild, and Memorial Halls; $2,338.00 per semester for Kade-Duesenberg; and $2,405.00 per semester for 1077 Linwood. A limited number of single rooms may be available at an additional cost. The expenses for each academic year (two semesters) are approximately twice the above semester figures.

Clothing, travel, incidental expenses, fees for performance music lessons and special fees (page 258) are not included in these estimates.

**Amounts due the University are payable in full one week before the beginning of each semester.**

Approximately three weeks before the beginning of the semester, parents and students will receive a statement containing the estimated charges for the coming semester. Either payment or evidence of participating in a deferred payment plan as outlined below must be received in the Student Accounts Office one week before
the beginning of the semester. Adjustments to the estimated invoice required by additional course fees, for example, are detailed in a statement forwarded to parents and students approximately one month after registration confirmation. Credits for scholarships, loans, grants, etc., may be deducted in arriving at the balance due before registration.

Amounts to be earned through campus employment may not be deducted, as these are paid during the course of the semester directly to the student through the University’s regular payroll procedure.

Each student registering at Valparaiso University assumes responsibility to pay all college-related expenses not covered by financial aid.

Students who withdraw from the University must make arrangements to meet all outstanding financial obligations to the University. Examples of such obligations are tuition and fees, room and board, library fines, health fees, parking violations, etc. The student’s transcript is not released until payment of all obligations has been made. Each graduating student must pay any remaining financial obligations to the University before graduation.

No degree is conferred upon and no transcripts are given for a student whose account with the University has not been settled in full.

Loans such as the Federal Perkins Program or Valparaiso University Student Loans become due as stated in the promissory note signed by the student. Transcripts are not released to students who are in arrears on these loans.

EDUCATIONAL EXPENSE PAYMENT PLANS

Valparaiso University participates in a deferred payment plan for the convenience of those students and parents who may wish to spread payment over the school year or beyond. Under this plan, monthly payments may be arranged for the payment of tuition, fees, room and board. Listed below, along with a brief description, is the plan approved for use by the University. Detailed information is normally sent directly to each admitted applicant by the plan sponsor. Should a student not receive this information or should a student have further questions, the address and phone number of the plan is also provided.

Academic Management Services, One AMS Place, P.O. Box 100, Swansea, MA 02777. Phone: 1-800-635-0120. Website: <www.TuitionPay.com>. This is a monthly payment plan designed to relieve the pressure of “lump sum” payments by allowing participants to spread the cost over a period of months without borrowing or paying interest charges. The plan does require payment of an application fee.

Another payment option available to the student is the Valparaiso University Payment Agreement. This plan allows payments to be made over three consecutive months each term. Payments for the fall semester to be made as follows: first payment by August 15th; second payment by September 30th; and third payment by October 31st. There is no charge for using this plan and Payment Agreement forms are included with the fall and spring preliminary bills that are mailed to the student’s home approximately three weeks prior to the start of each term.

Housing Regulations

The University requires first-year students, sophomores and juniors to live in residence halls. Class standing is determined by student classification policy, page 252. Exceptions are made for veterans, those who will be 22 before September 1 of the academic year in question, those living with parents or spouse (commuter students), and sophomore and junior fraternity men who live in recognized fraternity houses. All sophomore and junior students who return from their fall semester of International Studies or other cooperative off-campus programs are required to live in University operated residence halls during the spring semester.

Senior, graduate and law students may apply to live in University residence halls, however, first priority is given to undergraduate students. The Office of Residential Life and Housing also maintains a listing of rooms in private homes, apartments and homes for sale or rent. Students desiring such accommodations should plan to visit the campus at least six weeks before the semester of enrollment to inspect the available listings and make arrangements with the individual landlords. Every landlord whose property is listed has signed a nondiscrimination statement. The University is not involved in arrangements between students and landlords, except in the event of racial discrimination. The University provides a listing service only and does not inspect, approve, recommend, or authorize any off-campus living units. Although students are normally required to live in University residence halls, an exception is made for commuter students. A commuter student is defined as a full-time, undergraduate student who lives with his/her parent or legal guardian, at their primary residence, within the shorter of 50 miles or one hour from campus. Students who otherwise would be required to live on campus may not reside at another off-campus address after registering as a commuter student. Questions related to this policy should be directed to the Office of Residential Life and Housing.

An application form for University housing is mailed to each new student with the New Student Enrollment Agreement. This application and the $200.00 deposit (tuition and housing) should be returned to the Office of Admissions as soon as possible. All checks should be made payable to Valparaiso University. A student who occupies a room in a University residence hall will have $100.00 of the deposit go towards their housing deposit and the remaining $100.00 toward tuition and fees. All returning students who are required to live in University residence halls according to University housing regulations must complete an Upperclass Housing Agreement form. If an upperclass student does not currently have a $100.00 Housing Deposit on file, he/she is required to make a deposit at the Finance Office in accordance with application guidelines established by the Office of Residential Life and Housing.

Assignment Policy. New freshman and transfer student assignments are made by the Office of Residential Life and Housing in the order in which their New Student Enrollment Agreements and deposits are received according to space availability. Returning student assignments are made according to the guidelines established by the Office of Residential Life and Housing. Assignments are made with the goal of establishing and developing positive residence hall communities. All Upperclass Housing Agreements received before the deadline indicated by the Office of Residential Life and Housing will be given equal consideration as outlined in the instructions for the assignment process.

The University will endeavor, but cannot guarantee, to assign accommodations according to the preferences indicated by the student.

Any request for a change in residence hall assignment must be submitted in writing and approved by the Office of Residential Life and Housing.

The University reserves the right to make changes in residence hall assignments if necessary for the most effective accommodation of the student body.

Refunds—New Students. The Housing Deposit is refunded in full if a written notice of cancellation is received by the Admissions Office on or before May 1 for the fall semester, or on or before November 1 for the spring semester. No refund will be given if enrollment cancellation notice is given after these respective dates.

Refunds—Returning Students. Deposits are refunded minus any other indebtedness to the University according to the following guidelines: The fall full deposit is refunded if written notice is given to the Office of Residential Life and Housing on or before the application deadline for fall semester, and November 15 for spring semester. One-half of the housing deposit is refunded if written notice of cancellation is received by the Office of Residential Life and Housing on or before June 1 for the fall semester, or on or before December 1 for the spring semester. No refund is given if cancellation is given after June 1 for fall semester and December 1 for spring semester. The Housing Agreement may not be cancelled after July 1 for fall semester and December 31 for spring semester by students not required to live in University housing.

If a student is denied readmission or if the University should be unable to provide housing, the full amount of the deposit will be refunded.

Occupancy. The housing agreement is binding for the full academic year. Students who are assigned residence hall housing are permitted to move out of the residence hall only if they withdraw from the University.
Service is available during periods of scheduled classes. Students are permitted to use dining facilities at any of the locations.

All students living in residence halls, other than sorority members living in Scheele Hall, must buy into the a la carte board plan at the set mandatory rate until they have completed six semesters of college attendance.

Transfers students living in residence halls will also be required to take part in the a la carte board plan based on the number of semesters of attendance completed as a full-time student. Participation requirements are mandatory until the completion of six semesters of such attendance.

The mandatory rate for 2005-2006 is $1,155 per semester (freshmen), $1,085 per semester (sophomores), and $1015 per semester (junior). Those dollars may be used to purchase food in any of the residence hall dining rooms, Union cafeteria, Grinnel’s Cafe, or campus grocery stores during the semester. All items for sale are individually priced.

When a meal plan account is reopened for spring semester, any unused a la carte balance of $60.00 or less from fall will be automatically added to the required buy-in level. No remaining balances will be refunded or carried over at the end of spring semester. If a new account is not reopened for spring semester, the remaining balance from the fall semester will not be refunded or carried over.

Refund Policy

Withdrawal from all classes. Students who withdraw from Valparaiso University may be eligible for a refund of a portion of the tuition and room and board charges for the semester of their withdrawal. The University and/or the student may be required to return some of the federal financial aid, if any, awarded to the student. If the student received financial aid from state, University or private funds (other than family), a portion of the refund amount may also be returned to the granting agency.

Valparaiso University’s refund policy is as follows: Students who withdraw from the University will receive a prorated refund of tuition and room fees according to the following schedule:

Before the start of the session . . . . . 100%
During the first week of classes . . . . 90%
During the second week of classes . . . 80%
During the third week of classes . . . . 70%
During the fourth week of classes . . . . 60%
During the fifth week of classes . . . . . 50%
During the sixth week of classes . . . . . 40%
During the seventh week of classes . . . . 30%
After seventh week of classes . . . . . none

The unused meal plan credit is refundable throughout the semester. The refund amount equals the balance of the unused contract less a ten percent administrative fee.

There will be no refund of general, special and laboratory fees.

If a student is receiving financial aid, University and state funds will be reduced according to the above University refund policy. However, the schedule is different for federal funds. If a student withdraws on or before the 60% point of the semester, the percentage of funds that must be returned to the federal government is equal to the number of calendar days remaining in the semester, divided by the number of calendar days in the semester. Scheduled breaks of more than four consecutive days are excluded. The calculation of the return of these funds may result in the student owing a balance to the University and/or the federal government.

Note: If funds are released to a student because of a credit balance on the student’s account, then the student may be required to repay some of the federal grants if the student withdraws.

Students considering withdrawing from all classes should consult with the staff in the Student Accounts and/or Financial Aid Offices if they are concerned about the financial impact of withdrawing.

Dropping Courses. Students who drop one or more courses but continue to be enrolled in at least one course for the semester will have tuition charges refunded according to the University’s refund policy. There will be no refund of the special, laboratory or general fees.

The financial aid award, if any, is subject to revision if the student drops one or more courses.
Financial Aid

Valparaiso University is committed to providing resources necessary to help students complete their education. In selecting the students to receive this assistance, the University places primary emphasis on the student's academic achievement and financial need. Financial aid consists of scholarships, grants, loans and campus employment, which may be offered to a student singly or in various combinations. The family of a student is expected to make a maximum effort to assist with college expenses. For more information about financial aid programs, contact the Office of Financial Aid.

METHOD OF APPLICATION

The following procedure should be followed by any student entering the University for the first time who wishes to apply for financial aid:

1. File an Application for Admission with the Office of Admission. No student will be considered for assistance until the formal application has been approved.

2. Submit the Free Application for Federal Student Aid (FAFSA).

The FAFSA requires no fee and can be secured from your high school guidance office, by writing to the Office of Financial Aid, Valparaiso University, or on-line at www.fafsa.ed.gov. All students should file the FAFSA before March 1 for priority consideration. (For Indiana residents, FAFSA must be received by the federal processor by March 10 to be eligible for Indiana awards.) Students who filed a FAFSA for the previous year may complete the Renewal Application for Federal Student Aid. This may be filed in lieu of the FAFSA. The filing of the FAFSA should be completed as soon after January 1 as possible. The Office of Financial Aid cannot guarantee full consideration for students whose FAFSA is filed later than March 1 of the spring before matriculation.

RENEWAL

All need-based financial assistance requires the annual filing of the Free Application for Federal Student Aid (FAFSA) or the Renewal Application. Students should file the renewal application by March 1 for priority consideration. Renewal depends on continued need, the availability of funds, and eligibility as described below.

FINANCIAL AID PROGRAMS

Financial aid awards may include gift aid (grants and scholarships) and/or self help (loans and employment).

Financial Aid Eligibility. To be eligible for most federal, state, and Valparaiso University assistance undergraduate students must be enrolled full-time (some federal and state assistance is available to part-time students) in a degree or certificate program with at least twelve credits per semester; maintain satisfactory academic progress; demonstrate financial need as determined by filing the FAFSA; be a U.S. citizen or an eligible noncitizen; not be in default on a federal loan or owe a refund or repayment on any federal or state program. Graduate students also must meet the above requirements. However, they must be enrolled in a degree program with at least five credits per semester.

Initial financial aid awards are based on the assumption that the recipient will be enrolled as a full-time student. Students who enroll for less than full time or who withdraw during a semester could have their financial aid award reduced or canceled. Enrollment status is determined at the beginning of each semester. For Federal Direct Loans, enrollment status is determined when the loan is disbursed.

SCHOLARSHIPS AND SPECIAL AWARDS

Valparaiso University makes available to new students a variety of scholarships and awards based on academic and other qualifications. Eligibility for all scholarships and grants is determined by the University Scholarship Committee whose decision is final. Scholarships and awards are offered in good faith by the University with the intent that they will be renewed under the conditions specified. Specific renewal requirements for scholarships and awards are stated in the scholarship award letter sent to each recipient. If an award is not renewed because the cumulative grade point average falls below the standard, the award may be restored if the student's cumulative grade point average meets the standard at a later time. The student should contact the Office of Financial Aid to request restoration of the award. The University does reserve the right to alter any scholarship or award should circumstances dictate. Some scholarships and awards may not be offered in combination with each other.

ACADEMIC SCHOLARSHIPS

Academic Scholarships for freshmen are awarded to eligible admitted applicants without regard to financial need on a funds-available basis, based on the admission application. Standardized test scores and high school academic record are the primary factors in determining scholarships.

SPECIAL AWARDS

These special awards are based on the admission application and in some cases, an additional application as noted below.

• Allen Pre-Ministerial, varying award amounts, for students preparing for church professions. A separate application is required; contact the Admissions Office.

• Alumni Heritage Awards, $1,000 annually to children of Valparaiso University alumni.

• Art Department Scholarships, $1,000 annual award, selected by the Art Department.

• Athletic Grants, varying award amounts, selected by the Athletic Department and individual coaches. Renewal subject to Athletic Department policy and NCAA regulations.

• Awards for Excellence, $500 annual award, for outstanding Lutheran High School performance.

• Chemistry Scholarships, $1,000 annual award, selected by the Chemistry Department.

• Deaconess Grants, varying award amounts, selected by the Lutheran Deaconess Association.
Financial Aid, Scholarships, Loan Funds

**Foreign Language Scholarships**, $1,000 annual award, selected by the Foreign Language Department.

**International Scholarships**, varying award amounts, to selected international students.

**Lutheran Leadership Awards**, varying award amounts, for one new student from the LCMS and one from the ELCA, selected for outstanding leadership. Nominations are due November 1; applications are due January 15.

**Martin Luther Awards**, Annual awards of varying amounts to children of full-time Lutheran professional church workers. Students who qualify for an academic award must also be eligible for the higher of the academic award or the Martin Luther award.

**Music Grants**, varying award amounts, selected by the Music Department based on auditions.

**Physics Scholarships**, $1,000 annual award, selected by the Physics Department.

**Phi Theta Kappa Awards**, up to $8,000 annual award, to selected transfer students who are Phi Theta Kappa members.

**Theatre Scholarships**, $1,000 annual award, selected by the Theatre Department.

**Valparaiso University National Merit Awards**, varying award amounts to National Merit Scholarship winners. Students must list Valparaiso University as the first college choice and not be receiving another type of National Merit Scholarship.

**CAMPUS EMPLOYMENT**

Students are employed in a variety of positions on campus. Open positions are posted in the Financial Aid Office throughout the year, and also on Valparaiso University's web site at <http://www.valpo.edu/finaid>. Students should contact the individual departments with job openings to apply for positions. Students with demonstrated financial need may work under the Federal Work Study Program (FWS). FWS students may also apply for off-campus jobs in the Community Service component of the program. Students may work on campus under the Valparaiso University Work Study Program regardless of financial need.

**NEED-BASED AID**

**GRANT PROGRAMS**

**Valparaiso University Gift Awards** are institutional awards that are not repaid. All students who file the FAFSA and demonstrate need will be considered. These awards may be funded by endowed scholarships, and other designated funds. Students will be notified if their award is funded by an endowed scholarship, and will be encouraged to thank the donor.

**Federal Pell Grants** are available to all students who have demonstrated financial need according to a federal formula. The FAFSA is required. Awards range from $400 to $4,050 annually; may be enrolled full-time or part-time.

**Federal Supplemental Educational Opportunity Grants (SEOG)** are federal grants, awarded to Valparaiso University students whose grants, scholarships, and other financial aid do not meet the greater financial need. Amount of the awards range from $200 to $4,000 annually; may be enrolled full-time or part-time.

**State Grants** (Higher Education Award, Freedom of Choice Award, and 21st Century Award) are for eligible Indiana residents and may be used at Valparaiso University. Non-Indiana residents should contact their state agencies for information and application procedures for any state grants for which they may be eligible. The **FAFSA must be received by the federal processor by March 10 to be eligible for Indiana Awards**. Awards range from $625 per year for freshmen; $3,500 for sophomores; $5,500 for juniors, seniors, and fifth year students. The aggregate maximum is $23,000 in the undergraduate program. Graduate students are capped at $8,500 per year, with a lifetime aggregate cap (including undergraduates) of $65,000. All first-time borrowers must complete an entrance interview.

**ALTERNATIVE SOURCES OF AID**

The following sources are not based on financial need. Non-need based loans are limited to the cost of education less other financial aid, or the annual loan limits, whichever is less.

**Federal Direct Unsubsidized Loans**. These loans are available to students who are enrolled at least half-time and who are not eligible for or were partially eligible for the Federal Direct Subsidized Loan. Terms and limits are the same as Federal Direct Subsidized Loans, except the student is charged interest on the loan from the date funds are disbursed.

**Financial Aid, Scholarships, Loan Funds**

For independent undergraduate and graduate students, the loan limits are higher than the Federal Direct Loan maximums. Freshmen and sophomore independent students may receive up to $4,000 in additional unsubsidized loans, juniors and seniors up to $5,000 and graduate students up to $10,000. Students should contact the Office of Financial Aid to apply.

**Federal Direct Parent Loans for Undergraduate Students (PLUS)**. These loans are for parents of dependent students enrolled in at least six semester hours. Monies come from the federal government. This loan is not based on financial need, but a credit check is required. The variable interest rate adjusts every July 1, and is capped at 9%.

The loan limits are up to the cost of education, less other aid, per student. Repayment of the principle and interest begins 60 days after the loan is fully disbursed. Contact the Office of Financial Aid to apply.

**Alternative Loans**. Available from a variety of private lenders. Principal and interest may be deferred while in school, and a co-signer may be required. Contact the Financial Aid Office.

**Veterans Programs**. Contact the Veteran's Administration for programs for veterans and dependents.

**Valparaiso University Loans**. Limited, low interest loans are administered by Valparaiso University. The amounts vary. Contact the Office of Financial Aid for details.

**Academic Management Services, Inc.** This service offers an insured monthly payment plan. A $55 annual participation fee is charged to participants. Contact Academic Management Services, Inc., 50 Vision Blvd., East Providence, RI 02914 (Telephone: 800-635-0120 or 410-431-1290).

**Vocational Rehabilitation.** Under the provision of Public Law 565, the federal government and the State of Indiana jointly provide funds for scholarship grants-in-aid to students who have a physical or mental impairment which constitutes a vocational handicap. The State Vocational Rehabilitation Division is responsible for the determination of the grants.
LOAN REPAYMENT INFORMATION
Sensible borrowing can not only help pay for college but also help establish a good credit history. Similarly, not making regular payments can result in a poor credit rating or even default status on student loans.

To estimate future repayment obligations for student loans, use the factors listed below, multiplied by each $1,000 in debt, to estimate the annual repayment amount. For example, the estimated monthly payment on $20,000 in Direct Loans at 4 percent interest would be $10.12 X 20 or $202.40. These results are estimates only; many programs have minimum monthly payments, and the Perkins program is usually repaid in quarterly installments. In addition, extended repayment plans and income-contingent plans are available.

Factors:
- 4 percent interest: 10.12
- 5 percent interest: 16.61
- 7 percent interest: 11.61
- 8 percent interest: 12.13

Federal Direct Loan borrowers will be notified by the Direct Loan Servicing Center about repayment of loans. There are a variety of repayment options and options for deferring repayment, including community service, Peace Corps Service, and service under the Domestic Volunteer Service Act of 1973.

PAYMENT OF FINANCIAL AID
Most aid is divided and credited to student accounts in equal amounts for each semester. Most aid is ready to disburse at the beginning of each semester, although the actual date that funds are disbursed varies and no aid can be disbursed until all requested documentation has been submitted to the Office of Financial Aid. Aid is credited regularly throughout the semester. Students must be enrolled for the sufficient number of credits (according to the requirements of each program) in a semester to receive financial aid.

Direct Loans awarded for one semester must be disbursed in two (2) disbursements; one at the start of the semester and the second at the midpoint. Students whose financial aid exceeds the University charges for the semester, may request a refund check from Student Accounts. It is each student’s responsibility to verify semester charges, financial aid credits, and refund check amounts for accuracy.

Students receive work-study awards as a direct deposit to their financial institution every two weeks for hours worked in the previous pay period, not as a credit on their student account.

Financial aid for students who withdraw from Valparaiso University will be adjusted based on the University’s refund policy. Specific information may be found in the Refund Policy section of this catalog.

SPECIAL STUDENTS
Certain restrictions apply to financial aid for students who are considered to have ‘special’ status. These are students in certification programs such as teacher/diastional certification programs or students who have earned a bachelor’s degree and return to school to enroll in undergraduate courses not necessarily as prerequisites to specific graduate programs. In any case, the student is eligible only for Federal (Unsubsidized or Subsidized) Direct and PLUS loans or employment. Not all certified programs are eligible for loans. It is advised that students with ‘special student’ status meet with a financial aid counselor for detailed information.

OFF-CAMPUS STUDY
Students enrolled in an off-campus program, including study abroad programs, which are approved for credit by Valparaiso University, are eligible to apply for federal and university financial aid.

EXIT INTERVIEWS
Prior to graduation, leaves of absence, or withdrawal from the University, students who have accepted loans must participate in separate interviews for Federal Direct Loans and Perkins Loans.

APPEAL PROCEDURE
A review of any decision concerning a financial aid package may be requested. First, contact the Office of Financial Aid. If the outcome of the initial review is unsatisfactory, then a case review by the Financial Aid Appeals Committee may be requested. If the decision of the Financial Aid Appeals Committee is unsatisfactory, then an appeal may be presented to the Vice President for Admissions and Financial Aid. The decision of the Vice President is final.

FINANCIAL AID REFUND POLICY
If a student is due a refund under the Valparaiso University refund policy, and the student has received any financial aid other than Federal Work-Study, part of the refund must be returned to the sponsoring aid programs. The amount of refund is determined in accordance with the University refund policy listed in the catalog (see page 262). Policies for returning a portion of that refund to sponsoring aid programs are as follows.

Valparaiso University Awards and Scholarships
If a refund balance remains after funds have been returned to the federal programs, a prorated percentage of Valparaiso University funds will be refunded.

Privately Funded Grants and Scholarships
Some students will be recipients of funds from private donors such as churches, civic groups, foundations, etc. Many of these organizations will provide specific instructions concerning disbursement of their funds to students who withdraw. In the absence of specific instructions from the donor, 100 percent of the semester award will be credited to the student’s account. Funds on deposit with the University that the donor designated for future terms of enrollment within the academic year will be returned to the donor.

Title IV Programs (Federal)
Federal law determines the total amount of refund due, if any, when a student withdraws and how much, if any, must be returned to the federal programs. See page 262.

State Grants and Scholarships
Refunding proration is done according to specific regulations of the sponsoring state.

STANDARDS OF SATISFACTORY ACADEMIC PROGRESS POLICY
Financial Aid recipients must maintain minimum standards of satisfactory academic progress for receipt of federal, state, and most Valparaiso University aid programs. All students receiving financial assistance must maintain matriculation status in a degree program. Regulations require a maximum time frame for degree completion, a quantitative measurement (credits earned toward a degree), and a qualitative measurement (cumulative grade point average). These three criteria are checked at the end of each academic year in May to determine whether students are maintaining satisfactory academic progress.

UNDERGRADUATE STUDENTS
Graduate and Law Students should refer to the Graduate and Law Bulletins for specific policy requirements.

Time Frame Measurement
Students may appeal up to 150 percent of the hours required for a bachelor’s degree. The 150 percent cap is the maximum limit according to federal regulations. The actual credit hour limit may vary depending on the requirements of each degree program. Most programs require 124 hours: for those programs the maximum attempted hours allowed is 186. Other programs, including music, engineering, nursing, and business degrees require more than 124 hours; therefore the maximum number of attempted hours allowed would be greater.

All attempted hours at Valparaiso University, including regular semesters and summer sessions, as well as any credits transferred from other schools, will apply toward the 150 percent.

Quantitative Measurement
To comply with the 150 percent time frame requirement, students must complete at least two thirds (2/3) of all Valparaiso University hours attempted with a passing grade. At the end of each academic year, each student’s Valparaiso University total hours completed will be compared to the Valparaiso University total hours attempted to determine whether they are meeting this requirement.

Qualitative Measurement
Minimum cumulative grade point average standards are as follows:
- Freshmen (less than 24 hours completed)…….. 1.65
- Sophomores (24 to 55 hours completed)……….. 1.75
- Junior and above (56 or more hours completed) 2.00

Incompletes, withdrawals, repeated courses, and non-credit remedial courses
Incompletes and withdrawals will count as hours attempted but not completed. If incompletes are later completed, they will be reflected when progress is again checked, or sooner if the student appeals. Repeated courses will not add to total hours attempted or hours completed; the grade will simply be replaced. The new grade will be included in the grade point average calculation, which will be considered when progress is again checked, or sooner if the student appeals.

Valparaiso University does not offer non-credit remedial courses.
RESPONSIBILITIES
Valparaiso may be exceeded before the maximum time-merit awards progress standards on an appropriate grade point average and approved, the student the not completed semester to attain grade point average and circumstances, which may exceed.

STUDENT FINANCIAL AID RIGHTS
1. To know what financial assistance is available, including information on all federal, state, and institutional financial aid programs.
2. To know the procedures and deadlines for submitting applications for each available financial aid program.
3. To know how the institution selects aid recipients.
4. To know how and when payments will be made and to know the refund policy for students who withdraw.
5. To request a review of the financial aid package should there be changes in the family's ability to meet costs of attendance.
6. To know how the institution determines whether the student is making satisfactory progress and what happens if he or she is not.
7. To be fully informed of the terms and provisions of loan payments, including typical repayment schedules.
8. To appeal any decisions relating to the determination of financial aid eligibility.

STUDENT FINANCIAL AID RESPONSIBILITIES
Students have the following responsibilities regarding financial aid assistance:
1. To pay special attention to their application for financial aid, complete it accurately, and submit it on time to the proper place.
2. To know and meet all deadline dates for applying or reapplying for aid.
3. To provide all documentation, corrections, and new information requested by the Office of Financial Aid or the agency to which the application is submitted.

Donated and Endowed Scholarships
These scholarships are funded by corporations, foundations, churches, organizations, and individual friends of Valparaiso University. Donors may provide annual funds, called Donated Scholarships, or establish Endowed Scholarships where the earnings from the funds are used to provide assistance to students. In most cases, donated and endowed scholarships are used to fund Valparaiso University Gift Awards and Academic Scholarships.

APPLICATION REQUIRED
Students should contact the indicated department or the Office of Financial Aid for further information about the following scholarships.

- Oliver W. and Emma W. Allen Scholarship. Awarded annually to students, selected through a special process, preparing for church professions within the Lutheran church (ordained ministers, commissioned lay leaders, associates in ministry, or lay teachers). Preference is given to students preparing to enter Lutheran seminaries, then to those preparing to attend seminaries of other church bodies or university-based divinity schools leading to ordination in the Lutheran church or to placement in some other roostable full-time Lutheran ministry. Students of other church bodies, preparing for similar ministries in their respective church bodies, may also be eligible as funds permit. Application forms are available from the Office of Admissions.

- Ament-Brenner Endowed Scholarships in Nursing. Preference to undergraduate students from Lutheran congregations in the greater St. Louis area studying nursing, preparing for admission to medical schools, or preparing for any profession that provides direct health care services (physical therapy, occupational therapy, etc.). Preference to students belonging to congregations affiliated with the Lutheran Charities Association and secondly with The Lutheran Church-Missouri Synod. Scholarable ability and financial need will be major criteria. Application forms are available from the Office of Admissions.

- Shirley Ayers Jud Memorial Endowed Guild Scholarship. Funded by memorials to Shirley Jud and gifts by Dr. Henry G. Jud, matched in part by University. The scholarship may be awarded to one freshman each year. The scholarship is awarded to students who express an interest in Lutheran ministry and the maturity, perspective and motivation to undertake summer work experience in a rigorous business environment each of their undergraduate summers. The Dean of the College of Business distributes applications to eligible students currently enrolled in that college and selects recipients.

- The Donna Spanoulous Memorial Scholarship. Annual award. Preference to senior students enrolled in the College of Nursing at Valparaiso University, who express an interest in specializing in pediatric care and have demonstrated clinical and academic ability. The scholarships may be renewed if the recipients maintain a 3.0 or better grade point average. The scholarship recipients shall be sons or daughters of Guild members. Application forms are available from the Office of Admissions. Application forms are available from the Office of Admissions.

- Valparaiso University Guild (Cookbook) Endowed Scholarship. New scholarships will be awarded annually to freshmen students with financial need and with academic ability. The scholarships may be renewed if the recipients maintain a 3.0 or better grade point average. The scholarship recipients shall be sons or daughters of Guild members. Application forms are available from the Office of Admissions. Application forms are available from the Office of Admissions.

- Valparaiso University Guild Past National Officer's Endowed Scholarship. Initiated by the Past National Presidents and Executive Directors in the name of all the women who have served as presidents, vice presidents, secretaries, treasurers and executive directors of the Guild, this scholarship is awarded to two juniors with a 3.0 grade point average at the University. These scholarships are awarded to sons or daughters of University Guild members. It may be renewed if the recipient maintains a 3.0 or better grade point average. Application must be made for this scholarship. Application forms are available from the Office of Admissions.

- Datatel Scholars Foundation Scholarships. Sponsored by Datatel Inc., the leading independent provider of information management systems to institutions of higher learning, for eligible students attending a Datatel client university. Scholarship amount ranges from $700 to $2,000, based on merit. Scholarship candidates recommended to Datatel Scholars Foundation by Office of Financial Aid based on preliminary application. Semifinalists complete formal application in early February. Scholarship recipients are notified by Datatel in May. Note: There is no guarantee that one of the recommended semifinalists from Valparaiso University will be selected as a scholarship recipient.

- Indiana Nursing Scholarship Program. Administered by the State Student Assistance Commission of Indiana. Eligible student must be an Indiana resident, agree in writing to work as a nurse in an Indiana health care setting for at least the first two years following graduation, demonstrate financial need, and have a minimum grade point average of 2.014.0. Renewable for a total of four years. Students must apply each year. Application forms are available in the Office of Financial Aid.

- Indiana Minority Teacher Scholarship Program. Education Services Scholarship Program. Administered by the State Student Assistance Commission of Indiana. Eligible students agree in writing to pursue their teaching career in an Indiana accredited school or vocational rehabilitation or
Other developmental disability center for three out of the first five years following completion of program. Eligible students must be Indiana resident and United States citizen; minority student seeking teacher certification or a student seeking a Special Education teaching certification or a student seeking an Occupational or Physical Therapy certification, and have a minimum grade point average of 2.0/4.0. Renewable for total of four annual scholarships. Students must reapply each year. Financial need may be considered. Applications are available in the Office of Financial Aid.

NO APPLICATION REQUIRED
Listed below are the scholarships awarded annually by Valparaiso University. Valparaiso University Academic Scholarships or Valparaiso University Gift Awards may be funded by these special scholarships. If additional information is required, the student will be contacted by the Office of Financial Aid.

Students need not make a separate application or request to be considered for these awards.

Note: The amount and number of awards given in endowed scholarships varies depending on the earnings of the established fund.

- 40th Reunion Scholarship
- James and JoAnne Albers Scholarship
- Waldemar H. and Mae H. Albers Endowed Scholarship
- Marjorie J. Albohm Athletic Training Scholarship
- Anna B. Althans Scholarship
- Alumni Board Endowed Scholarship (PACT)
- Alumni Heritage Endowed Scholarship
- American Public Works Association Donated Scholarship
- Amoco Foundation, Inc. Scholarship
- John W. Anderson Scholarship
- Reverend Theodore and Vera Andres Memorial Endowed Scholarship
- Hank Astor Scholarship
- Robert Augustine Menden Endowed Scholarship
- Oscar and Wilhelmetta Bahr Endowed Scholarship
- Eric Lee Bandick Endowed Scholarship
- Berk Memorial Endowed Scholarship
- Mr. and Mrs. Harry G. Barr Endowed Scholarship
- Herbert C. Bartlett Endowed Scholarship
- Otto and Gertrude Bartelt Endowed Scholarship (PACT)
- Carl H. Barz Memorial Endowed Scholarship
- Emory and Elsie Bauer Endowed Scholarship
- The Aimee M. L. Becker Memorial Endowed Scholarship
- Millard and Dianne Becker Scholarship Fund
- Dr. and Mrs. Henry Frederick Beckman Endowed Scholarship
- Donald and Eunice Behrmann Scholarship
- Victor H. Bergmann Endowed Scholarship
- Charlotte Berns Scholarship
- Wilfred and Olga Bernie Marshall Scholarship
- Leo and Jean Cunningham Besozzi Scholarship
- Bethel Lutheran Church of University City, Missouri, Endowed Scholarship (PACT)
- Edwin O. Biehl Scholarship
- Charles H. and Elizabeth Blume Endowed Scholarship
- Mrs. Arnalie Bokerman Endowed Scholarship
- W. H. and Phyllis Bokelman Endowed Scholarship
- John V. Borgarding Endowed Scholarship
- Mr. and Mrs. Stanley E. Bovim Endowed Memorial Scholarship
- Oris R. and Elizabeth Bowen Endowed Scholarship
- Otis R. and Elizabeth Bowen Board of Directors Endowed Scholarship
- Carol Ann Bowman Scholarship
- Paul and Claire Bloch Endowed Scholarship
- Daniel M. Brandt Endowed Scholarship
- Martin W. Brantl, Ph.D., Memorial Endowed Scholarship
- Paul and Cleo Brandt Endowed Scholarship
- Carl and Isabel Brauer Endowed Scholarship
- A. John & Ruth J. Briel Endowed Scholarship
- Ruth Brown Memorial Endowed Scholarship (PACT)
- Julius C. Buechner Endowed Scholarship
- William G. Buehner Endowed Scholarship
- Luella R. and Herbert P. Buetow Endowed Scholarship
- Mrs. Ella M. Burkhardt Endowed Music Scholarship
- Allen L. Burresson Memorial Scholarship
- Selma Deeke Busse Endowed Music Scholarship
- Kermit H. Carlson Endowed Scholarship (PACT)
- Paul and Cecelia Carmichael Endowed Scholarship
- Olavandt-Holger Cattan, Memorial Endowed Scholarship
- Dr. Eugene J. Chesser Endowed Memorial Scholarship
- John E. Christen Memorial Endowed Scholarship
- Emma C. Claus Christ College Scholarship
- Emma C. Claus Law Scholarship
- Robert F. and Caroline McMillan Collins Endowed Scholarship
- Community Foundation Incorporated Endowed Nursing Scholarship
- Concordia Lutheran Church, Wilmington, Delaware, Endowed Scholarship (PACT)
- Concordia Lutheran Church, Kirkwood, Missouri, Endowed Scholarship (PACT)
- The Conrail Family Scholarship
- Delta Coover Memorial Endowed Scholarship
- Kenneth Bayard Copeland and Todd Cushman Copeland Family Memorial Endowed Scholarship
- Eugene Crawford Memorial Endowed Scholarship (PACT)
- Czowanski Family Endowed Scholarship
- Arthur Vining Davis Endowed Scholarship
- Edwin F. Deicke Endowed Scholarship
- Tom and Violet DeLassus Scholarship
- Delta Upsilon Chapter of Eta Sigma Phi Scholarship
- Harold and Betty Denig Scholarship
- Donna and Lonnie Dodge Endowed Memorial Scholarship
- Sophie Doern Endowed Scholarship
- Wilbur C. and Donald W. Dopp Memorial Endowed Scholarship
- Wilbur H. and Marguerite M. Dosland Endowed Scholarship
- Robert K. Duerr and Family Endowed Scholarship
- Hugo and Edna Duesenberg Endowed Scholarship
- Richard W. and Phyllis (Blueneer) Duesenberg Endowed Scholarship
- Rupert and Ruth Dunklau Endowed Scholarship
- East Asian Donated Scholarship
- Bruce and Linda Eastmond Award
- Linda Ann Eastmond (Bauer) Memorial Endowed Scholarship
- Reverend Ernest H. Eggers Memorial Scholarship
- Oliver H. Eggers '36 Memorial Scholarship
- Prof. James Eggers Memorial Scholarship
- Reverend and Mrs. P. J. (Myrtle E.) Eckstett Endowed Scholarship
- Carol Ann Bowman Scholarship
- William F. and Elsie M.Engel Scholarship
- Engineer Scholars Endowed Scholarship
- E. Stanley and Calista Enlund Endowed Scholarship
- Erna J. Erickson Memorial Fund
- Twila Fabritius Memorial Endowed Scholarship
- Faith Lutheran Church, Lake Forest, Illinois, Endowed Scholarship (PACT)
- Fedder Scholarship
- Ruth E. Finlandes Scholarship
- Helen Finnehner Memorial Endowed Scholarship
- Carl Christian Fleischer Memorial Endowed Scholarship
- Henry W. Flemming Endowed Scholarship (PACT)
- Esther H. and Elmer E. Foelder Memorial Endowed Music Scholarship (PACT)
- Herbert J. and Marie Foelder Endowed Scholarship
- Edith Schuchard Forsberg Family Memorial Endowed Scholarship
- Dr. Louis Fosbre Endowed Scholarship
- Arthur Frankes Memorial Endowed Scholarship
- Paul and Emilie Freitag Endowed Scholarship
- Paul W.D., Jr. and Alta H. Freitag Endowed Scholarship
- Leslie F. and Katherine D. Freking Endowed Scholarship
- Earl R. Freueend Scholarship
- William A. Fuzy Family Endowed Scholarship
- Daniel and Thomas Gahl Endowed Scholarship (PACT)
- Dr. Ernest J. Gallmeyer Memorial Endowed Scholarship
- Betty J. Galow Memorial Scholarship
- Dr. and Mrs. E. C. Galsterer Endowed Scholarship
- Gamma Phi Anniversary (PACT)
- William C. Gast Memorial Endowed Scholarship
- Harold C. Gearing Endowed Scholarship
- Judith D. Gehrs Memorial Scholarship
- Gerbert Gerke Scholarship
- Dorothy Gozdzialkowski Endowed Scholarship
- Erwin E. Goehring Endowed Scholarship
- Mr. and Mrs. William H. Gouty Endowed Scholarship
- Grace Lutheran Church, Winter Haven, Florida, Endowed Scholarship (PACT)
- Grace Lutheran Church, River Forest, Illinois, Endowed Scholarship (PACT)
- Grace Lutheran Church, Tulsa, Oklahoma, Endowed Scholarship (PACT)
- Erwin and Helen Grazier Endowed Scholarship (PACT) (Van V)
- William B. and Nellie Booth Green Endowed Scholarship
- Earl L. Grieger Memorial Endowed Scholarship
- Professor Charles R. Gromley Endowed Scholarship
- Leona M. Groth Endowed Memorial Scholarship
- Henry C. and Ura E. Guhl Endowed Scholarship
- Charles Helleck Endowed Scholarship
- Arthur E. Halleberg Memorial Endowed Scholarship (PACT)
- Elsa and Lloyd Halverson Endowed Scholarship
- Clarence and Elise Hansen Endowed Scholarship
- Walter D. and Helen A. Hansen Endowed Scholarship (Myrtle E.) Eckstett Endowed Scholarship
- Rev. Dr. Oliver R. and Bertha Harms Endowed Scholarship
- Rev. Elmer and Bertha Harms Endowed Board of Directors Scholarship
- A. Fuzy Memorial Scholarship
- Edward W. Hartman Memorial Endowed Scholarship
- Rev. Harlan Hartner Endowed Scholarship
- Lilly Hayden Memorial Endowed Scholarship
- Rev. W. H. Hayser Endowed Scholarship (PACT)
- William Randolph Hearst Endowed Scholarship
- Walter T. F. and Laura M. Heinicke Endowed Scholarship
- Edward H. Heinen Memorial Scholarship
- Karl T. Hellerman Endowed Scholarship
- John and Dorothy Helms Endowed Scholarship
- Dr. Karl H. Henrichs Endowed Scholarship
- Karl H. and Luetta M. Henrichs Endowed Scholarship
- Hildegard Herfurth Endowed Scholarship
- John and Rosa Herscher Endowed Scholarship
- Herman C. and Helen Hesse Endowed Scholarship
- Mr. and Mrs. Peter Hessler Endowed Scholarship
- William and Vera Heyne Endowed Bach Scholarships (PACT)
- Charles H. Hickman Memorial Endowed Scholarship
- Dee Hildebrandt Memorial Endowed Scholarship (PACT)
- Mary John Endowed Scholarship
- Dan Hildengford Memorial Endowed Scholarship
- Heidi Steikey Hill Endowed Scholarship
- Rose L. Hill Memorial Endowed Scholarship
- Welter D. Hinderd Scholarship
- History Faculty Merit Scholarship
- Hoeppeg, Wagner and Evans Scholarship
- Richard J. Hoeger Endowed Scholarship
- Edwin Gusta Hoffman Endowed Scholarship
- Hilda H. Hofmann Endowed Scholarship
- Margaret H. Hoffman Memorial Endowed Scholarship
- Dr. O.C.J. Hoffmann-Dr. A. G. Huegli Endowed Scholarship
- Clara Hofmann Endowed Scholarship in honor of Dr. and Mrs. Andrew Hofmann
- Louis C. Holland Endowed Scholarship
- Oscar Horneman Endowed Scholarship
- Hope Lutheran Church, Park Forest, Illinois, Endowed Scholarship (PACT)
- Dr. and Mrs. A. G. Huegli Endowed Scholarship for Leadership
- A. G. Huegli Southeastern Michigan Endowed Scholarship
- Joyce Huegli Memorial Endowed Scholarship
- Goldie Hunt Memorial Endowed Scholarship Fund
- James and Karen Huston Scholarship
- Immanuel Lutheran Church, Michigan City, Indiana, Endowed Scholarship (PACT)
- Incentive Endowed Scholarship (PACT)
- Indian Medical Association of Northwest Indiana
- Judge and Mrs. F. A. Jaeckel Memorial Endowed Scholarship
- David A. Jenny Endowed Scholarship
- Richard F. and Martha W. Jeske Endowed Scholarship
Financial Aid, Scholarships, Loan Funds

- Edward Jiede, Jr. Endowed Scholarship
- Mr. and Mrs. Emil Jochem Scholarship
- Ralph and Marilyn Johnson Scholarship
- Max Kade Donated Scholarship
- The Irma B. Kampischmidt Endowed Scholarship
- Bud Kellner Memorial Endowed Scholarship (PACT)
- Norma and Joanne Kettner Scholarship
- Susan Kifroy Memorial Scholarship
- Dwight M. Kinder Endowed Memorial Scholarship for Law
- Stephen R. Kinder Endowed Music Scholarship
- Sharon L. King Scholarship for Law Students
- O. Charles and Dorothy Kingscick Endowed Scholarship
- Edwin W. Klinkerman Endowed Scholarship
- Walter C. Elizabeth K. Klug Memorial Endowed Scholarship
- Emile T. Knapp Memorial Endowed Scholarship
- John A. Knoepel Memorial Endowed Scholarship
- Mr. and Mrs. Edwin H. Koenerman Endowed Scholarship
- Erra E. Koenermann (Mrs. Henry F.) Endowed Scholarship
- Eleanor R. Koenig Memorial Endowed Scholarship (PACT)
- Herbert H. and Edith A. Koenig Memorial Endowed Scholarship (PACT)
- Martin and Doris Koschmann Scholarship in Music
- Jayne Hoffmann Krogia Memorial Endowed Scholarship
- Lauretta Krueger Endowed Scholarship
- Matilda M. Kramer Memorial Endowed Scholarship
- George V. Krampien Scholarship in Law
- John W. and Clara A. Krahutwold Endowed Scholarship
- Mr. and Mrs. Gilbert W. Krause Athletic Endowed Scholarship
- Carl Krekeifer Endowed Scholarship
- Carl and Viola Kreutzschend Memorial Scholarship
- Reverend Paul G. Kretzscherm Memorial Endowed Scholarship (PACT)
- Ruth Kreutzschend Endowed Scholarship (PACT)
- William H. Kroeger Endowed Scholarship
- William Garvery Kroemer Memorial Endowed Scholarship (PACT)
- Krumseig Scholarship Loan Fund
- Arlene E. Laetsch Endowed Scholarship
- Charles James Laetsch Endowed Scholarship
- Clara A. Laetsch Endowed Scholarship
- William F. and Florence R. Laetsch Endowed Scholarship
- Ernest and Adelaide Laetz Endowed Scholarship
- Lake County Donated Scholarship
- Ruth May Landis Scholarship in Church Music
- Erwin A. and Eleanor H. Lange Endowed Scholarship
- Harry and Emma Lange Memorial Endowed Scholarship
- Harry Langer Memorial Scholarship
- Helen Langer Memorial Scholarship
- Steven and Diane Langer Law Scholarship
- Edward C. Langdon Endowed Scholarship
- Tommy Lasorda Endowed Scholarship
- Richard H. Laube Memorial Endowed Scholarship (PACT)
- Charles and Gladys Laue Endowed Scholarship
- David A. Leavitt Endowment
- The Laura and Lindsay Endowment Fund
- Law School General Scholarship
- School of Law Board of Visitors Donated Scholarship
- Blase Lazzara Memorial Endowed Scholarship Fund
- A. J. W. and Elfrieda M. LeBien Endowed Scholarship
- Dr. and Mrs. H. A. P. Leininger Endowed Scholarship
- Edith Lessor Endowed Scholarship
- George and F Lorettette, Sr. Endowed Scholarship
- Stephen and Elaine Lewis Scholarship
- Ernest and Clara M. Lichtfluss Endowed Scholarship
- John A. Lichter Endowed Scholarship
- Nancy Lienbeck Memorial Endowed Scholarship
- Nancy Lienbeck Memorial Endowed Scholarship
- David L. Litten Endowed Scholarship
- George H. Liu Memorial Scholarship
- Scott C. Loeher Endowed Scholarship
- Mr. and Mrs. Orval M. Lohse Endowed Scholarship
- Lynette and Norman Lukeens Endowed Scholarship
- Lutheran Brotherhood Endowed Scholarship
- Luther E. Deaconess Endowed Scholarship (PACT)
- Esther and Karl Lutze Minority Endowed Scholarship (PACT)
- Walter A. MacNary Memorial Endowed Scholarship
- Orval L. and Maud L. Mains Memorial Endowed Scholarship
- Dr. and Mrs. Max K. Maillon Endowed Scholarship
- Dan and Louise Manka Endowed Chemistry Scholarship
- Manning H. Angel Memorial Endowed Scholarship
- Albert A. and Martha Marks Endowed Education Scholarship (PACT)
- Marowose Endowed Scholarship
- Dr. and Mrs. E. W. Marquardt Endowed Scholarship
- Margaret M. Martin Endowed Scholarship
- G. H. Maskus Endowed Scholarship
- J. R. Joanne McLeod Endowed Scholarship
- Vera M. McLeod Memorial Endowed Scholarship
- Mr. and Mrs. A. A. Meitz Endowed Scholarship
- Memorial Endowed Scholarship
- Ernest A. Menzel Endowed Scholarship
- Mr. and Mrs. Dirk Meyer Endowed Scholarship
- Gerhard F. Mayne Endowed Scholarship
- Michigan Student Endowed Scholarship
- Helen Miller Endowed Scholarship
- Leonard and Mildred Millies Donated Scholarship
- Minnesota Chemists Endowed Scholarship
- Dean H. Mitchell Endowed Scholarship
- Marie Moehring Endowed Nursing Scholarship
- Henry F. Moellingen Endowed Scholarship
- Alma and Henry Moellingen Endowed Music Scholarship Fund
- Dr. and Mrs. Robert C. Moellerling, Sr. Endowed Scholarship
- Drs. Charles and Florence Montz Endowed Scholarship
- R. Stuart and Margaret Moore Memorial Endowed Scholarship
- Robert and Nell Moore Law Scholarship
- Donald and Nancy Montgomery Endowed Scholarship
- Claire Mueller Endowed Scholarship
- Ewald H. Mueller Scholarship
- H. F. C. Mueller Endowed Scholarship
- Claudia Mueller Endowed Scholarship
- Louis A. Muller Endowed Scholarship
- Gail (nee Hendrickson) and Robert Murr Endowed Scholarship
- Martin David Mundt Memorial Endowed Scholarship (PACT)

Hildegard Must Memorial Scholarship
- George L. and Mary S. Myers Endowed Scholarship
- Max G. and Judith E. Nagel Scholarship
- Nancy Wehrmeier Nagel and Robert B. Nagel Scholarship
- National Association of Purchasing Management, Northwestern Indiana Scholarship in Business
- Mr. and Mrs. Robert Neubert Endowed Scholarship
- Shirley J. Neitzel Memorial Organ Scholarship
- J. Melvin and Lucille G. Nelson Endowed Psychology Scholarship
- Fan C. Newton Endowed Memorial Scholarship (PACT)
- Ernest and Adeline Nuethe Endowed Scholarship
- Non-Family Interest Scholarship
- Marilyn Niequist Memorial Endowed Scholarship
- Marilyn L. Norstedt Memorial Endowed Prize
- Philip L. and Marguerite Nolles Endowed Scholarship
- Nuechterlein Endowed Scholarship (PACT)
- Audrey C. and Duane Nuechterlein Donated Scholarship
- Carl Arnold C. Nuechterlein Endowed Scholarship
- Duane and Audrey Nuechterlein Deaconess Scholarship
- Joel S. Nye Memorial Endowed Basketball Scholarship
- Obstet Family Endowed Scholarship
- Arnold Oestmann Endowed Scholarship
- Eleanor Davis Oexemann Scholarship for the School of Law
- Ohio Annual Endowed Scholarship
- Rev. Armin and Evelyn Olsen Endowed Scholarship
- Dr. Craig Oglejznick Power Engineering Scholarship (formerly IEEE)
- George S. Olive and Company Donated Scholarship
- Helen Olson Memorial Endowed Scholarship
- Walter E. Olson Memorial Scholarship
- Orling Family Endowed Scholarship (PACT)
- Dr. Richard Oster Endowed Scholarship
- Thomas and Joyce Otten Memorial Endowed Scholarship (PACT)
- Our Savior Lutheran Church Congregation of Raleigh, North Carolina, Endowed Scholarship (PACT)
- Pacific Hills Lutheran Church, Omaha, Nebraska, Endowed Scholarship (PACT)
- Molly V. Page Endowed Scholarship
- Pauling Music Scholarship (PACT)
- Professor Charles G. Peller and John Van Altynest Peller Memorial Endowed Scholarship
- Peters Family West Michigan Endowed Scholarship
- Gilbert A. Peters Endowed Scholarship
- Professor Carol Petersen Award in French and German
- Arthur F. Peterson Endowed Scholarship
- Margaret A. Pfeiffer Endowed Scholarship
- Irma Pfiefer Memorial Endowed Lutheran Deaconess Scholarship (PACT)
- Morris A. Foundation Scholarship (PACT)
- Phi Mu Alpha Endowed Scholarship (PACT)
- Paul F. Phipps Merit in English Endowed Scholarship (PACT)
- Ella Pfeiffer Endowed Scholarship
- Margaret A. Pfeiffer Endowed Scholarship
- Irma Pfiefer Memorial Endowed Lutheran Deaconess Scholarship (PACT)
- Phi Mu Alpha Endowed Scholarship (PACT)
- Paul F. Phipps Merit in English Endowed Scholarship (PACT)
- Ella Pfeiffer Endowed Scholarship
- Pilgrim Evangelical Lutheran Church of Detroit Memorial Endowed Scholarship
- Edward and Marie Plucinski Scholarship
- Arthur H. Poeppe Memorial Endowed Scholarship
- Arthur E. Pohrman Endowed Scholarship
- Polkamin Family Endowed Scholarship
- Paul V. and Evelyn A. Pontz Scholarship
- The Rodney B. Poppe Endowed Scholarship
- Porter County Cancer Society Endowed Scholarship (PACT)
- Professor Henry W. and Laura M. Prahf Scholarship
- Mrs. Hazel Preodeh Memorial Endowed Scholarship
- Presidential Endowed Scholarship for Minority Students
- Vernon and Katherine Reid Family Endowed Scholarship
- Herman R. Rahm Memorial Scholarship
- Emma and William Rakowsky Memorial Endowed Scholarship
- Elizabeth Randay Endowed Scholarship
- Charles and Elizabeth Rau Scholarship
- Redeemer Lutheran Church, South Bend, Indiana, Endowed Scholarship (PACT)
- Rev. and Mrs. Arthur N. Ronne and the Rev. and Mrs. Augustus Reinke Memorial Endowed Scholarship
- Reutlingen Semester Scholarship
- Alton F. Riemer Memorial Endowed Alumni Scholarship (PACT)
- Mr. and Mrs. Carl Ritterberger Scholarship
- Sandra Felton Roberts Memorial Endowed Nursing Scholarship (PACT)
- Walter and Dorothy Rogoshek Scholarship (PACT)
- The Robert J. and Karen Roe Endowed Scholarship
- Waldemar M. Roth Memorial Endowed Scholarship
- Leona Rotzoll and Elsie Skusa Memorial Endowed Scholarship
- Walter C. and Gudrun M. Rubke Endowed Scholarship
- Adele Ruettgers Endowed Scholarship
- Noah B. Ruff Memorial Endowed Scholarship
- August and Helene Ruhe Endowed Scholarship
- Bernice Lilje Ruedi Endowed Scholarship (PACT)
- Freeman and Frances Russell Endowed Scholarship
- Clemence and Glencie Sabourin Endowed Scholarship (PACT)
- Gerhard Selmzmann Endowed Scholarship
- San Diego Guild/Alumni Endowed Scholarship (PACT)
- Judy Satiskas and Julie Kline Memorial Endowed Scholarship
- James Savage Endowed Scholarship Fund
- Walter W. Scharz Endowed Scholarship
- Frederick A. Schaper Endowed Scholarship
- Philip Schef old Family Endowed Scholarship
- Donald A. Schults Scholarship
- Lee R. Schleider Memorial Endowed Scholarship
- Walter E. Schmidt Memorial Endowed Scholarship (PACT)
- Jane Conway Schmuckpecker Endowed Scholarship
- Dr. Robert V. Schnabel Endowed Scholarship
- Mr. and Mrs. Henry J. Schneider Endowed Scholarship
- Richard A. Schoenbohm Endowed Music Scholarship (PACT)
- Scholarship in Law for Jewish Students
- Dr. Scholl Foundation Scholarship
- School of Law Alumni Board of Directors Scholarship
- Kermit A. Schottmann Scholarship in Law Endowment
- Paul Sengbusch Endowed Scholarship
- Pastor Carl (Pat) and Bert Schuette Endowed Scholarship (PACT)
- Dr. and Mrs. Ronald Schultz Scholarship
Financial Aid, Scholarships, Loan Funds

- Rev. and Mrs. Walter G. Schultz Endowed Scholarship
- Andrew and Margaret Schulze Endowed Scholarship Fund (PACT)
- Dorothy Schumacher Scholarship
- John H. Schuth Memorial Scholarship
- The Schwan Family Scholarship Fund
- Dana B. Schwanhorst Memorial Endowed Scholarship (PACT)
- Albert F. and Marilyn B. Scribner Endowed Scholarship
- Elmer Seebeck Memorial Endowed Scholarship
- Susan E. Seebier Memorial Endowed Scholarship
- Ray and Marie Seegers Family Scholarship
- Suel Endowed Scholarship
- Carl W. and Caroline D. Seybold Endowed Scholarship
- Mr. and Mrs. Hugh O. Sherbert Endowed Scholarship
- Vera L. Sieb Endowed Scholarship
- Sigma Phi Epsilon Undergraduate Endowed Scholarship
- Sigma Tau Gamma Undergraduate Endowed Scholarship
- Helen Stayback Memorial Endowed Scholarship
- Byron Smith Memorial Donated Scholarship
- J. Howard Smith Endowed Scholarship
- Carl O. Sohre Memorial Scholarship
- St. John Lutheran Church, Lombard, Illinois, Endowed Scholarship (PACT)
- St. John’s Lutheran Church, Long Green, Maryland, Endowed Scholarship (PACT)
- St. Peter Lutheran Church, Mishawaka, Indiana, Endowed Scholarship (PACT)
- Edward J. P. Staede and Amanda Hall Staede Endowed Scholarship
- Arthur and Cecelia Stamm Endowed Scholarship
- C. V. Starr Scholarship Fund
- Rev. Martin Th. Steege Endowed Scholarship
- J. L. Stendel Family Memorial Endowed Scholarships
- Frederick A. Stendell and Harry E. Stendell Endowed Scholarship
- Paul Stoner Endowed Scholarship
- Alvin A. and Marion S. Strider Endowed Scholarship
- Stride Donated Law Scholarship
- Mr. and Mrs. Herbert F. Stride Endowed Scholarship
- Fred L. and Selma A. Strieter Memorial Endowed Music Scholarship (PACT)
- Isa S. Strieter Memorial Endowed Scholarship
- George Strinbimu Memorial Endowed Arts Scholarship (PACT)
- William R. and Georgette M. Strutz Endowed Scholarship
- Margareta Sackville Tangerman Endowed Scholarship
- Mr. and Mrs. Paul E. Tegge Memorial Endowed Scholarship
- Lawrence E. Teich Endowed Scholarship
- Louis Thoeming Endowed Scholarship
- John David and Thomas Endowed Scholarship
- James A. Tiemann Memorial Scholarship
- Bertha S. Tietjen Endowed Scholarship
- Rev. Kenneth O. Timm Endowed Scholarship
- Suzanne Timmoff Endowed Scholarship
- Laura E. Traue Endowed Scholarship
- Turk Family Endowed Scholarship
- Margot Ann Uehling Endowed Scholarship
- George C. Uhrl Endowed Scholarship
- Dr. and Mrs. H. L. Ulbrich Endowed Scholarship
- UPS Donated Scholarship
- Wilbur and Gertrude Urbin Memorial Scholarship
- William E. Urschel Endowed Scholarship
- Valparaiso University Alumni and Friends of St. John’s Lutheran Church-Orange, California, Endowed Scholarship (PACT)
- Valparaiso University Board of Directors Endowed Scholarship (PACT)
- Valparaiso Women’s Club Endowed Scholarship
- Valparaiso University College of Nursing Endowed Scholarship
- Valparaiso University Guild Scholarship
- Glenn S. and Dawn J. Vician Scholarship
- Merlyn and Judith Vocke Donated Scholarship
- Ed. L. Voelz Endowed Scholarship
- Theodore H. and Paula Vogel Endowed Scholarship
- Henry and Anna Waldschmidt Memorial Scholarship
- F. G. Walker Endowed Scholarship
- David J. Walton Memorial Endowed Scholarship
- Frances Tint Endowed Scholarship - Law
- Florence E. and John F. Weck Scholarship
- Wehrenberg Endowed Scholarship
- Dr. and Mrs. J. Frederic Wenchei Memorial Endowed Scholarship
- Walter G. Wendland Endowed Scholarship
- Clara and Spencer Werner Endowed Law Scholarship
- Clara and Spencer Werner Endowed Scholarship
- Mr. and Mrs. L. W. Werner Endowed Scholarship
- Janet Wesemann Scholarship-Loan Fund
- Edith M. Will Endowed Scholarship
- Othevine Wilson Endowed Scholarship
- Wisconsin Endowed Merit Award
- Mathew Witter Memorial Endowed Scholarship (PACT)
- Charles W. Wolf Memorial Endowed Scholarship
- Matsida E. Wolff Memorial Endowed Scholarship
- Gilbert R. and Vivian P. Wolter Endowed Scholarship
- Dr. Joyce R. Zastrow Scholarship in Vocal Music
- Zion Lutheran Church, Kalamazoo, Michigan, Endowed Scholarships (PACT)
- Zuelkic Endowed Scholarship

Loan Funds

- The Garland Loan Fund. Loans for students majoring in the sciences or mathematics. These will be non-interest bearing loans.
- German Loan Fund. A loan fund has been established by Benjamin L. Garmen to help students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help.
- Fred Smoke Student Loan Fund. Administered by the Valparaiso University Alumni Association, this fund was established in January, 1965, and provides funds for loans to full-time students who are residents of Porter County, Indiana.
- Nettie Winifred Cheney Overton Memorial Loan Fund. This fund was established by Mr. William J. Overton as a memorial to Mrs. Overton. The income from the fund is available for loans to students from Lake County, Indiana.
- Henry Strong Educational Foundation. Provides loans to qualified full-time upperclass students under thirty years of age.

LOAN REPAYMENT TERMS

Each of the loan programs contains specific repayment terms and conditions which are a part of the promissory note the student signs upon receipt of the loan fund. Students are responsible for being aware of the various loan provisions and thus should review the terms of the repayment obligation prior to accepting funds under these loan programs.
FULL-TIME FACULTY

2004-2005

Kurt Douglas Acton, Ph.D., Associate Professor of Education; Central Michigan University (B.S., 1968; M.B.A., 1972); The University of Illinois at Urbana—Champaign (Ph.D., 1983)

Mark Leslie Adams, J.D., Professor of Law; Williams College (B.A., 1983); University of Chicago (J.D., 1988)

James William Albers, Th.D., Professor of Theology; Concordia Senior College (B.A., 1959); Concordia Seminary, St. Louis, Mo. (D.M., 1963; S.T.M., 1964; Th.D., 1972)

Zahdi Y. Aljabej, P.E., Ph.D., Associate Professor of Civil Engineering; The University of Toledo (B.S.C.E., 1986; M.S.C.E., 1987; Ph.D., 1994)

Karen Sue Allen, M.A., Instructor in Mathematics and Computer Science; Butler University (B.S., 1975; M.A., 1978)

Elise Martha Alverson, A.P.R.N., M.S.N., F.N.P., Lecturer in Nursing; St. Louis University (B.S.N., 1972); Ball State University (M.S.N., 1984); Valparaiso University (Ph.D., 1996)

Debra Collins Ames, Ph.D., Associate Professor of Foreign Languages and Literatures; Holy Cross College (B.A., 1980; University of Virginia (M.A., 1982; Ph.D., 1997)

Richard A. Altmhein, M.L.S., Dean, Library Services with rank of Associate Professor; Eastern Illinois University (B.M., 1978; M.A., 1981); Baylor University (M.M., 1980); Rutgers University (M.L.S., 1990)

Katherina Antonmariia (Ingham), Ph.D., Associate Professor in the College of Arts and Sciences; Lake Erie College (B.A., 1958); Massachusetts General Hospital (R.D., 1959); University of Pittsburgh (M.S., 1961; Ph.D., 1980)

Daniel Lee Arkellin, Ph.D., Professor of Psychology; Bowling Green State University (B.S., 1974; M.A., 1976; Ph.D., 1978)

Roy A. Austensen, Ph.D., Professor of History; Provost and Vice President for Academic Affairs; Concordia College, River Forest, III. (B.S., 1963); University of Illinois at Urbana-Champaign (M.A., 1964; Ph.D., 1968); University of Vienna

Larry Robert Bass, Ph.D., Professor of Political Science; University of Wisconsin—Whitewater (B.Ed., 1968); Kent State University (M.A., 1969; Ph.D., 1976)

Lihiu Bai, Ph.D., Assistant Professor of Information and Decision Sciences in the College of Business Administration; Inner Mongolia University (B.S., 1994); Chinese Academy of Sciences (M.S., 1999); University of Florida (Ph.D., 2004)


Teresa Marie Bals-Bielholz, Ph.D., Assistant Professor of Geography and Meteorology; University of Nebraska—Lincoln (B.S., 1987); Texas Tech University (M.S., 1990); State University of New York at Albany (Ph.D., 2002)

Janet Marie Brown, R.N., Ph.D., Professor of Nursing; Dean, College of Nursing; Indiana University (B.S.N., 1969; St. Xavier College (M.S.N., 1983); University of Wisconsin—Milwaukee (Ph.D., 1995)

Elizabeth Marie Bruch, J.D., Associate Professor of Law; Valparaiso University (B.A., 1988); University of Wisconsin—Madison (J.D., 1989)

Lorraine S. Brugh, Ph.D., Associate Professor of Music; the Kruse Organist Professor; Northwestern University (B.M., 1973; M.M., 1974; Ph.D., 1998); Garrett-Evangelical Theological Seminary (M.T.S., 1984)

Gretchen Townsend Buggein, Ph.D., Associate Professor of Humanities and American Studies in Christ College; Dartmouth College (B.A., 1986); University of Delaware (M.A., 1987); Yale University (Ph.D., 1993)

Martin Thomson Buinicki, Ph.D., Assistant Professor of English; University of Northern Colorado (B.A., 1996; M.A., 1997); The University of Iowa (Ph.D., 2003)

Marcia JoAnn Bunge, Ph.D., Professor of Humanities and Theology in Christ College; St. Olaf College (B.A., 1976); University of Chicago (M.A., 1979; Ph.D., 1985)

Elizabeth Ann Burrow-Flask, Ph.D., Associate Professor of English; Augustsburg College (B.A., 1988); University of Texas at Austin (Ph.D., 1997)

Michael J. Bushbaum, J.D., M.Libr., Associate Law Librarian for Access Services with rank of Associate Professor; University of Nevada, Reno (B.S., 1990); Lewis and Clark College (J.D., 1993); University of Washington (M.Libr., 1994)

Edward J. Byrne, Ph.D., Professor of English; Brooklyn College (B.A., 1974; M.A., 1978; Ph.D., 1983); University of Utah (Ph.D., 1983)

Rebecca J. Helm Byrum, M.L.S., Government Information Services Librarian with rank of Assistant Professor; Ball State University (B.S., 1978); Indiana University (M.L.S., 1979)

Mikelle A. Calhoun, J.D., Ph.D., Assistant Professor of Management in the College of Business Administration; Pennsylvania State University (B.A., 1984); Valparaiso University, Twin Cities Campus (M.A., 1984); University of North Carolina (J.D., 1987; M.B.A., 1988); New York University (Ph.D., 2003)

James Caristi, Ph.D., Professor of Mathematics and Computer Science; Florida State University (B.A., 1971); The University of Iowa (Ph.D., 1974)

Kieth Alton Carleton, Ph.D., Assistant Professor of Psychology; Gustavus Adolphus College (B.A., 1981); University of Nebraska—Lincoln (M.A., 1994; Ph.D., 1997)

Derrick A. Carter, J.D., Associate Professor of Law; Eastern Michigan University (B.S., 1972); Valparaiso University (J.D., 1978)
Richard Edwin DeMaris, Ph.D., Associate Professor of Religious Studies; Indiana University (B.A., 1975); University of Illinois at Urbana-Champaign (B.A., 1980); Florida State University (M.A., 1981); University of Virginia (Ph.D., 1991)

Richard, Alan, D.M.A., Associate Professor of Music; University of Illinois (B.A., 1978); University of Iowa (M.A., 1981); Harvard University (Ph.D., 1985).
On leave of absence, Spring Semester
On Sabbatical Leave, Fall Semester
On leave of absence, Spring Semester
On Sabbatical Leave, Fall Semester
On Sabbatical Leave, Fall 2013
On leave of absence, Spring Semester
On Sabbatical Leave, Fall 2000
On leave of absence, Spring Semester
On Sabbatical Leave, Fall 2003
On Sabbatical Leave, Fall 2004
On leave of absence, Spring Semester
On Sabbatical Leave, Fall 2005
On leave of absence, Fall Semester
On Sabbatical Leave, Spring Semester
T. D. Shirel Stanislaus, Ph.D., Associate Professor of Physics and Astronomy; University of Sri Lanka (B.Sc., 1976); University of British Columbia (M.Sc., 1983; Ph.D., 1988)

James Dill Statt, Ph.D., Senior Research Professor; University of Maryland (B.A., 1957; M.A., 1961; Ph.D., 1965)

John Rudolph Steffen, Ph.D., Professor of Mechanical Engineering; the Alfred W. Sieving Chair of Engineering; Valparaiso University (B.S. E.E., 1969); University of Notre Dame (M.S.M.E., 1968); Rutgers University (Ph.D., 1974)


J. Ronald Stiger, Ph.D., Associate Professor of Physical Education; Florida State University (B.S., 1964; M.S., 1969; Ph.D., 1978)

Richard Taylor Stith, III, J.D., Ph.D., Professor of Law; the Michael and Dianne Svygard Research Fellow; Harvard University (B.A., 1989); Universidad de la Republica, Uruguay; University of California, Berkeley (M.A., 1967); Yale University (M.Phil., 1971; J.D., 1972; Ph.D., 1973)

Charlotte Diane Strauman, M.S.N., Assistant Professor of Nursing; Valparaiso University (B.S.N., 1991; M.S.N., 1995)

Sandra Ellen Strasser, Ph.D., Associate Professor of Information and Decision Sciences in the College of Business Administration; University of California, Riverside (B.A., 1981); California State University, Fresno (M.A. 1988); University of Colorado at Boulder (Ph.D., 1990)

Michael Stevens Straubel, LL.M., Associate Professor of Law; Western Michigan University (B.S., 1979); Marquette University (M.S., 1982); McQuaid University (LL.M., 1987)

Mary Jane Streufert, Ph.D., L.V.N, Fellow and Lecturer in Humanities and Theology; Valparaiso University (B.A., 1989); Oregon State University (M.A.S., 1998); Claremont Graduate University (Ph.D., 2004)

Susan P. Stuart, J.D., Associate Professor of Law; DePauw University (B.A., 1973); Valparaiso University (M.Ed., 1978); Indiana University (J.D., 1982)

James Michael Stuck, Ph.D., Associate Professor of Management and International Business in the College of Business Administration; Azusa Pacific University (B.A., 1978; M.B.A., 1978); Claremont Graduate School (Ph.D., 1981)

Patrick John Sullivan, Ph.D., Associate Professor of Mathematics and Computer Science; University of Notre Dame (B.S., 1988); University of Michigan (M.S., 1985; Ph.D., 1988)

Robert John Swanson, Ph.D., Assistant Professor of Biology; Purdue University (B.S., 1995); University of Chicago (Ph.D., 2001)

Zsusanna Szaszio, Ph.D., Associate Professor of Mathematics and Computer Science; Kossuth University (B.S., 1990); McMaster University (M.S., 1992); University of Nebraska—Lincoln (Ph.D., 1996)

Angela D. Tarasikiewicz, M.A., Visiting Instructor in Foreign Languages and Literatures; Valparaiso University (B.A., 1994); University of Chicago (M.A., 1999)

D.A. Jeremy Telman, Ph.D., Assistant Professor of Law; Columbia University (B.A., 1985); Cornell University (M.A., 1988; Ph.D., 1993); New York University (J.D., 1999)

Aimee B. Tomasek, M.F.A., Assistant Professor of Art; University of Wisconsin—Green Bay (B.S., 1989); University of Kentucky, Lexington (M.F.A., 1990)

Paul Douglas Tougaw, Ph.D., Associate Professor of Electrical and Computer Engineering; the Leitha and Willard Richardson Professor of Engineering; Rose-Hulman Institute of Technology (B.S.E.E., 1991); University of Notre Dame (Ph.D., 1995)

Paul William Tougaw, Ph.D., Assistant Professor of Education; Eastern Illinois University (B.S., 1969; M.S., 1972); Southern Illinois University, Carbondale (Ph.D., 1993)

Paul Stephen Trapp, Ph.D., Assistant Professor of Marketing in the College of Business Administration; University of California (B.S.A., 1979); Indiana University (B.M.A., 1981); The University of Illinois at Urbana-Champaign (Ph.D., 1991)

Mary T. Tranor, Ph.D., Associate Professor of Mathematics and Computer Science; College of Mt. St. Vincent (B.A., 1964); University of Notre Dame (M.S., 1968; Ph.D., 1984)

Albert Raymond Trost, Jr., Ph.D., Professor of Physical Education; Lamar University (B.A., 1962); Valparaiso University (Ph.D., 1971)

David George Truemper, Ph.D., Professor of Theology, Concordia Seminary (B.A., 1961); Concordia Seminary, St. Louis (M.Div., 1965; S.T.M., 1969); Lutheran School of Theology at Chicago (I.S.T.D., 1974); University of Chicago (Ph.D., 1976)

Barbara A. Tyree, Ph.D., Assistant Professor of Physical Education; Lamar University (B.A., 1978); Washington State University (M.S., 1993); University of Idaho (Ph.D., 1996)

Edward Martin Uheling, Ph.D., Professor of English; Hastings College (B.A., 1967); The Pennsylvania State University (M.A.; 1973; Ph.D., 1980)

Stephanie Edna Umbach, M.A., Cataloging Services Librarian with rank of Assistant Professor; Valparaiso University (B.A., 1959); Indiana University (M.A., 1961)
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Position</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Andrew White, M.F.A.</td>
<td>Assistant Professor of Theatre</td>
<td>Valparaiso University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(B.A., 1990; Carnegie Mellon University)</td>
</tr>
<tr>
<td>William Heath White, Ph.D.</td>
<td>Assistant Professor of History</td>
<td>Valparaiso University</td>
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<td></td>
<td>(B.A., 1989; Regent College)</td>
</tr>
<tr>
<td>Brent Whitefield, Ph.D.</td>
<td>Assistant Professor of Aerospace Studies</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(M.S., 1998; Cambridge University)</td>
</tr>
<tr>
<td>Jemea Micheel Yohe, Ph.D.</td>
<td>Assistant Professor of Education</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(M.A., 1993; Ph.D., 2004)</td>
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<td>Hilme-Nelly Mont-Bello, J.A.</td>
<td>Professor of Physics and Astronomy</td>
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University Personnel

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Course Abbreviations

Below is an alphabetized list of course prefixes that are used on student records followed by the department or program referenced. Course descriptions may be found in the department or program text. See the Index for further reference.

ACC Accounting
ACRS Actuarial Science
AMST American Studies
ART Art
AS Aerospace Studies (ROTC)
ASTR Astronomy
BIO Biology
BLAW Business Law
CC Christ College (Honors College)
CE Civil Engineering
CHEM Chemistry
CLC Classical Civilization
COMM Communication
CORE The Valpo Core
COUN Counseling (graduate only)
CPED Cooperative Education (Arts and Sciences)
CS Computer Science
CTED Continuing Education
EAST Chinese and Japanese Studies
ECE Electrical and Computer Engineering
ECON Economics
ED Education
ENGL English
ENVS Environmental Studies
FIN Finance
FLC Chinese
FLF French
FLGK Greek
FLGR German
FLH Hebrew
FLJ Japanese
FLL Latin
FLS Spanish
FS Freshman Seminar

GE General Engineering
GEO Geography
GLST Global Studies
GNST Gender Studies
GS General Studies
HIST History
ICP International Commerce and Policy
IDS Information and Decision Sciences
(formerly DS)
IECA International Economics and Cultural Affairs
ISP International Service Program
LAW Law (graduate only)
LS Liberal Studies (graduate only)
MATH Mathematics
MBA Master of Business Administration (graduate only)
ME Mechanical Engineering
MET Meteorology
MEUR Modern European Studies
MGT Management
MKT Marketing
MUS Music
NUM Nursing
PE Physical Education
PHI Philosophy
PHYS Physics
POL Political Science
PSJ Peace and Social Justice
PSY Psychology
SOC Sociology
SOCW Social Work
SPED Special Education
THEO Theology
THTR Theatre (formerly TTVA)
VALPARAISO UNIVERSITY

Location
Valparaiso, Indiana—Population 27,500
45 Miles Southeast of Chicago; 13 Miles South of Lake Michigan

Campus Size
310 Acres, 70 Buildings

Control
Independent

Religious Affiliation
Lutheran

Major Academic Divisions
(Approximate Enrollments, Fall 2004)

- College of Arts and Sciences—2050
- College of Business Administration—440
- College of Engineering—350
- College of Nursing—225
- Christ College (Honors)—325
- Graduate Division—335
- Law School—565

ACCREDITATION

Accredited—The Higher Learning Commission; Member—North Central Association (All Programs), 30 North LaSalle Street, Suite 2400, Chicago, IL, 60602-2504; Tel: 312-263-456; Fax: 312-263-7462; www.ncahigherlearningcommission.org

The American Chemical Society, 1155 Sixteenth St. NW, Washington, DC, 20036; Tel: 202-872-4600 or 1-800-333-9511; help@acs.org

National Council for Accreditation of Teacher Education, 2010 Massachusetts Ave. NW, Suite 500, Washington, DC, 20036-1023; Tel: 202-466-7496; Fax: 202-296-6620; ncate@ncate.org

Indian State Department of Education—Indiana Professional Standards Board, 251 East Ohio Street, Suite 201, Indianapolis, IN, 46204-2133; Tel: 317-232-9010; Fax: 317-232-9023

National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, VA, 20190; Tel: 703-437-0700; Fax: 703-437-6312

The Council on Social Work Education, 1600 Duke Street, Suite 300, Alexandria, VA, 22314-3421; Tel: 703-683-6080; Fax: 703-683-8099

AACSB International, 600 Emerson Road, Suite 300, St. Louis, MO, 63141-6762; Tel: 314-872-8507

The Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD, 21202; Tel: 410-347-7700; Fax: 410-625-2238

State of Indiana Health Professions Bureau—Indiana State Board of Nursing, 402 W. Washington St., Room 041, Indianapolis, IN, 46204; Tel: 317-232-2960; Fax: 317-232-4236

Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC, 20036-1120; Tel: 202-887-6791; www.aacn.nche.edu

The Association of American Law Schools, 1201 Connecticut Ave. NW, Suite 800, Washington, DC, 20036-2605; Tel: 202-296-8851; Fax: 202-296-8869; aals@aals.org

The American Bar Association, 750 N. Lake Shore Drive, Chicago, IL, 60611; Tel: 312-988-5000; info@abanet.org

MAJOR AFFILIATIONS

The American Association of Colleges of Nursing
The American Council on Education
The American School of Classical Studies at Athens
The American Schools of Oriental Research
The American Society for Engineering Education
The Associated New American Colleges
The Association of American Colleges and Universities
The Association of Graduate Liberal Studies Programs
The Association to Advance Collegiate Schools of Business
The Center for Research Libraries
The Council of Applied Masters Programs in Psychology
The Lutheran Education Association