1990

Undergraduate Catalog, 1990-1991

Valparaiso University

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Location
Valparaiso, Indiana—Population 23,000
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 1989)
College of Arts and Sciences—2050
Christ College (Honors)—210
College of Business Administration—575
College of Engineering—380
College of Nursing—250
Law School—450
Graduate Division—315 Part-time

Accreditation
The North Central Association of Colleges and Schools (All Programs)
The American Chemical Society
National Council for Accreditation of Teacher Education
National Association of Schools of Music
The Council on Social Work Education
The Accreditation Board for Engineering and Technology
Indiana State Board of Nurses' Registration and Nursing Education
The National League for Nursing
The Association of American Law Schools
The American Bar Association
Indiana State Department of Education

Major Affiliations
The American Council on Education
The American School of Classical Studies at Athens
The Association of American Colleges
The Lutheran Education Association
The American Association of Colleges of Nursing
The American Society for Engineering Education
The American Assembly of Collegiate Schools of Business
The American Schools of Oriental Research
The Center for Research Libraries

Valparaiso University Information Operator—Call 219/464-5000
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ANNOUNCEMENTS FOR 1990-1991 SESSIONS

VALPARAISO UNIVERSITY BULLETIN (USPS 656-460)

Volume 64, July 1, 1990, Number 1
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.
The student himself is ultimately responsible for completion of the
requirements for his degree as well as for the value he receives from
University programs.

In years when the General Catalog is not published an
Announcement Bulletin gives information on important changes in
courses, calendar, staff, program and policies.

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.

It is the policy of Valparaiso University not to discriminate on the
basis of sex, race, color, handicap, age, veteran status or national or
ethnic origin in its educational programs, admission policies,
employment policies, financial aid or other school-administered
programs. This policy is enforced by federal law under Title IX of the
Education Amendments of 1972, Title VI of the Civil Rights Act of
1964 and Section 504 of the Rehabilitation Act of 1973. Inquiries
concerning the application of said federal regulations to this University
may be referred to the University Compliance Director of Affirmative
Action Plan.

Valparaiso University is authorized under federal law to enroll
non-immigrant alien students.
UNIVERSITY CALENDAR FOR
1990-1991

For the Colleges of Arts and Sciences, Business Administration, Engineering and Nursing. For the Law School, consult the Law School Bulletin.

1990

MINI SUMMER SESSION
May 22-June 15.

REGULAR SUMMER SESSION
June 19, Tuesday, 7:30 a.m.; 1:00 p.m. Instruction begins. Late registration.
July 4, Wednesday. No classes.
August 9, Thursday, 5:00 p.m. Summer Session closes.
August 10, Friday, 4:00 p.m. Deadline for all grades.

FALL SEMESTER
August 25, Saturday, 8:00 a.m. Orientation for freshmen begins.
August 27-28, Monday and Tuesday, 8:00 a.m. Registration Confirmation.
August 28, Tuesday, 8:00 a.m. Registration for freshmen, transfer students, former students and students who did not participate in last spring's advance registration.
August 29, Wednesday, 8:00 a.m. Instruction begins.
August 29-October 19, Dates for first half short courses.
September 5, Wednesday, 5:00 p.m. Deadline for adding first half short courses.
September 5, Wednesday, 5:00 p.m. Deadline for late registration for fall semester.
September 5, Wednesday, 5:00 p.m. Deadline for adding regular courses. All requests for adding a course during the official drop-add period (first seven class days) shall remain at the discretion of the appropriate academic dean or department chair.
September 12, Wednesday, 5:00 p.m. Deadline to file for S/U grade for first half short courses.
September 28, Friday, 5:00 p.m. Deadline for withdrawing from first half short courses with grade of W.
September 28, Friday, 5:00 p.m. Deadline to file for S/U grade for regular courses.
October 6, Saturday. Homecoming day.
October 12, Friday. Free day. No classes.
October 15-October 19. Adjustment period for adding second half short courses and for arranging course intensification.
October 15, Monday. Last day to file application of candidacy for the associate's and bachelor's degrees to be conferred in May or August, 1991.
October 22-December 14. Dates for second half short courses.
October 26, Friday, 5:00 p.m. Deadline for adding second half short courses.
October 30, Tuesday, 5:00 p.m. Deadline for withdrawing from regular courses with grade of W.
November 5, Monday, 5:00 p.m. Deadline to file for S/U grade for second half short courses.
November 16, Friday, 6:30 p.m. Thanksgiving recess begins.
November 26, Monday, 8:00 a.m. Thanksgiving recess ends.
November 28, Wednesday, 5:00 p.m. Deadline for withdrawing from second half short courses with grade of W.
December 7, Friday. Last day for tests in courses of 3 credits or more. Last day to petition for change in date of final examinations.
December 14, Friday, 5:00 p.m. Deadline to officially withdraw from the University for Fall Semester.
December 14, Friday, 10:00 p.m. Instruction ends.
December 15, Saturday. Reading day.
December 17, Monday, 8:00 a.m. Final examinations begin.
December 21, Friday, 12:30 p.m. Final examinations end. Semester ends.
December 24, Monday, noon. Deadline for reporting all grades.

1991
SPRING SEMESTER
January 7, Monday. Orientation for new students; registration confirmation.
January 8, Tuesday, 8:00 a.m. Registration confirmation; registration for all new students, former students and students who did not participate in last fall’s advance registration.
January 9, Wednesday, 8:00 a.m. Instruction begins.
January 16, Wednesday, 5:00 p.m. Deadline for adding first half short courses.
January 16, Wednesday, 5:00 p.m. Deadline for late registration for spring semester.
January 16, Wednesday, 5:00 p.m. Deadline for adding regular courses. All requests for adding a course during the official drop-add period (first seven class days) shall remain at the discretion of the appropriate academic dean or department chair.
January 21, Monday. Observation of Martin Luther King’s Birthday.
January 25, Friday, 5:00 p.m. Deadline to file for S/U grade for first half short courses.
February 5, Tuesday, 5:00 p.m. Deadline for withdrawing from first half short courses with grade of W.
February 8, Friday, 5:00 p.m. Deadline to file for S/U grade for regular courses.
February 21-February 28. Adjustment period for adding second half short courses and for arranging course intensification.
March 1-May 7. Dates for second half short courses.
March 1, Friday, 6:30 p.m. Spring recess begins.
March 18, Monday, 8:00 a.m. Spring recess ends.
March 21, Thursday, 5:00 p.m. Deadline for adding second half short courses.
March 26, Tuesday, 5:00 p.m. Deadline for withdrawing from regular courses with grade of W.
March 29, Friday, 5:00 p.m. Deadline to file for S/U grade for second half short courses.
March 13, Good Friday. No classes.
April 17, Wednesday, 5:00 p.m. Deadline for withdrawing from second half short courses with grade of W.
April 15, Monday. Last day to file application of candidacy for the associate’s and bachelor’s degrees to be conferred in December, 1991.
May 1, Wednesday. Last day for tests in courses of 3 credits or more. Last day to petition for change in date of final examinations.
May 7, Tuesday, 5:00 p.m. Deadline to officially withdraw from the University for Spring Semester.
May 7, Tuesday, 10:00 p.m. Instruction ends.
May 8, Wednesday. Reading day.
May 9, Thursday, 8:00 a.m. Final examinations begin.
May 14, Tuesday, 12:30 p.m. Final examinations end. Semester ends.
May 15, Wednesday, noon. Deadline for grades for all candidates for all degrees.
May 17, Friday, 5:00 p.m. Deadline for reporting all other grades.
May 19, Sunday. 117th Annual Commencement.

Certain other dates are observed annually by the University: Reformation Day, Ash Wednesday, and Ascension Day.
The Aims of the University

Valparaiso University is dedicated to superior teaching based on excellent scholarship. As a scholarly community it actively engages in the exploration, transmission and enlargement not only of knowledge but also of the cultural and religious heritage of mankind, and it is proud to prepare men and women for professional service. This community values respect for learning and truth, for human dignity, for freedom from ignorance and prejudice, and for a critically inquiring spirit. The University aims to develop in its members these values, together with a sense of vocation and social responsibility. It holds that these values receive their deepest meaning and strength within the context of the Christian faith.

As a church-related university concerned for the needs of its students in all aspects of their development as well as for the problems which face society, it aims to graduate informed and sensitive men and women who will not only leave their marks on society but find lives of personal fulfillment as well. Proud of all its alumni who have carried its values into leadership roles in their communities, the church, social institutions and the nation, it aims to continue graduating such potential leaders.

Under neither the control nor the authority of any church body, the University is an independent institution owned and operated by The Lutheran University Association. For more than half a century the University has been affiliated with congregations and members of The Lutheran Church-Missouri Synod. It enjoys, too, a partner relationship with members of all Lutheran churches, with all its constituents who share its aims and voluntarily support it, and with the communities of Northwest Indiana.
A Distinctive Institution

All American colleges and universities bear a family resemblance to one another as they come from a common set of ancestors in Europe and colonial America. Within that larger family, Valparaiso University belongs to a small and distinctive group. It is neither a large research university nor a small liberal arts college. At the same time that it promotes a basic liberal arts curriculum, it features strong undergraduate colleges of Engineering, Nursing and Business Administration, a professional direction lacking in the conventional liberal arts college. Conversely, the University is not a cluster of professional colleges which merely pays lip service to the liberal arts.

Education in the liberal arts is the foundation of every academic program, and the College of Arts and Sciences, the largest unit in the University, carries on many vital programs of its own.

This combination of liberal and professional studies of such variety within an institution of modest size is rare in American higher education. Broad enough in curriculum and in variety of programs to be a university, still Valparaiso University emphasizes undergraduate teaching in the manner of the traditional small college, with many small classes and strong individual guidance. While the University focuses on undergraduate education, it maintains a modest graduate program for part-time students as well as a fine law school of 400 students. The full-time student population is around 3600, with over 4000 served annually.

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 Moellering Memorial Library 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.
The Setting of the University

The spacious campus of 310 acres contains more than seventy academic and residential buildings, many of them built within the past two decades. The campus is located in the small city of Valparaiso, attractively situated in a rural setting at the edge of the busy industrial district of Northwest Indiana. Fifteen miles to the north, on the shore of Lake Michigan, are the Indiana Dunes. The city of Chicago with its vast cultural resources, an hour's drive from the campus, can be reached easily by train and bus. The University often charters buses so that students and faculty can take advantage of the theatres, museums and other educational benefits of this great city. Many programs of the University use the region—rich in natural, urban and industrial opportunities for field trips and investigative activities.

An Unusual History

In its 131 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 affiliated largely with The Lutheran Church-Missouri Synod, is an independent organization actively promoting higher education in the Christian context.

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 only about 30 per cent of its students from Indiana; another 50 per cent come from the other states surrounding the Great Lakes. 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. More than 60 per cent of the students come from the upper fifth of their high school graduating classes. Approximately fifty National Merit Scholars enroll at the University in any given year, a figure which places Valparaiso University in the upper 4 per cent of the nation's schools in such enrollment.
A rich diversity characterizes the University faculty (about 230 full-time and 80 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 newcomers 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 monthly 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 Senate, composed of faculty, students and administrators, 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 and 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

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 Home Economics
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
Academic Programs

Bachelor of Science in Mechanical Engineering
Bachelor of Science in Nursing
Juris Doctor
Master of Arts in Applied Behavioral Science
Master of Arts in Liberal Studies
Master of Education
Master of Music
Master of Science in Nursing

Requirements and Flexibility
Each degree entails a set of requirements which are specified at appropriate places in this bulletin. These requirements are designed to give structure to each student's education while affording the greatest possible freedom to design an individual academic program. Elsewhere in this bulletin are descriptions of a number of ways by which the University encourages further flexibility and individuality.

An Overview of the General Education Requirements at Valparaiso

These requirements vary somewhat in different degree programs, particularly in the professional colleges. These variations are described in the more detailed presentation of degree requirements elsewhere in this bulletin.

1. Freshman Studies (taken during the freshman year)
   Freshman Seminar
   Introduction to Christian Theology
   Exposition and Argument
   History of Western Thought and Society

2. Academic Area Studies
   Theology, two courses (one in the junior or senior year)
   Literature and Fine Arts, two courses
   Philosophical and Historical Studies, one course
   Studies in Social Analysis, two courses
   Studies in Natural Science and Mathematics, three courses
   Non-Western or Third World Studies, one course
   Foreign Languages, variable requirement
   Physical Education, one credit hour

3. Integrative Study
   A single University Course, one of a number of courses designed to encourage students to confront contemporary issues, applying knowledge and skills acquired in earlier stages of their learning. (Not open to freshmen and sophomores.)

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:
- American Studies
- Art
- Biology
- British Studies
- Broadcast Journalism
- Chemistry
- Classics
- Communication
- Communicative Disorders
- Computer Science
- Criminal Justice
- East Asian Studies
- Economics
- Elementary Education
- English
- Film Studies
- French
- Geography
- Geology
- German
- Greek
- Hebrew
- History
- Home Economics
- International Economics and Cultural Affairs
- Japanese
- Latin
- Mathematics
- Music
- Music Enterprises
- Philosophy
- Physical Education
- Physics
- Political Science
- Print Journalism
- Public Relations
- Psychology
- Secondary Education
- Social Work
- Sociology
- Spanish
- Theatre and Television Arts
- Theology
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. Each student, with the help of his academic adviser, designs a program that allows him first to explore various areas of interest and, in due time, to develop a plan of study focusing on a major area of interest.

A core of four courses, two each semester, involves all freshmen in common studies. A description of Freshman Seminar 100 is found below. Theology 100, Introduction to Christian Theology, helps students to investigate Christianity, the religion which not only has shaped our society, but which also remains vital today in giving meaning to human life. History 100, History of Western Thought and Society, is a course which leads students to understand how their own civilization has developed. English 100, Exposition and Argument, is a course which, like the others, requires students to increase their command of written and spoken English and their ability to analyze facts and ideas. Full descriptions of these courses can be found under their respective departmental headings within the chapter on the College of Arts and Sciences.

The Freshman Seminar. In this seminar, the student joins other freshmen to study in depth a single topic proposed by the instructor. Because of its clear focus, the course not only improves but investigates the skills central to a liberal education: critical reading and thinking, effective discussion, disciplined speech and writing. Students have valued the seminar experience, especially because it introduces them effectively, yet personally, to what college-level work means and because it develops their self-confidence at the beginning of their academic careers. Students indicate preferences among the various topics, different each semester. Usually they are assigned to one of their first three preferences. Topics of past seminars have included:

- Computers, Society and Human Beings
- Communities: Forms and Meanings
- Nuclear Warfare
- The Dramatic Character on the Historical Stage
- The Thirties
- North American Wildlife and Man

International Study Programs

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 either by Valparaiso University or by other institutions.

The University sponsors six programs abroad, two of which (Cambridge and Reutlingen) are exclusively Valparaiso programs; the other four (Tubingen, Puebla, Paris, and Hangzhou) are offered in conjunction with host-institution programs. 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 are encouraged to apply two semesters in advance of the semester in which they plan to participate. The deadline for applications is the end of the sixth week of each semester, and selections take place in the seventh week. Although
applications may be submitted through the sixth week of the semester immediately preceding the semester abroad, the number of spots available is smaller than when application is made two semesters in advance.

Any financial aid which students receive while attending Valparaiso University, with the exception of campus employment, may be applied to the six Valparaiso University sponsored programs.

**Cambridge, England.** The Cambridge Study Center is under the direction of a resident professor from Valparaiso University. Students take four or five courses (12-15 credits), which are taught by the resident director and British professors from the area. Added to the classroom experience are field trips in England and the opportunity to travel both in England and on the continent. In this way, students expand their experiences by living in different cultural environments. Students may participate in the Cambridge program either fall or spring semester.

**Reutlingen, West Germany.** The Reutlingen Study Center, located on the campus of its partner institution, the Fachhochschule für Technik und Wirtschaft, is under the direction of a resident professor from Valparaiso University. Students take four or five courses (13-16 credits), which are taught by the resident director and German professors from neighboring institutions. Except for the German language courses (beginning, intermediate, 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 new perspectives. Internship opportunities with German professionals are also a possibility for students with good German language skills. Students may participate in the Reutlingen program either 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 two students there per year for an entire academic year. Only students who will have junior standing for the year in question and who have a good command of the German language are eligible to apply. Students participate in a six-week intensive language and orientation program conducted by the Universität Tübingen before classes begin.
in October. During the academic year, students may take courses especially designed for foreign students or regular courses with the German Students.

**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 Americas-Puebla. These courses are designed for foreign students and are taught by Mexican professors in English or Spanish. Students who have a high level of Spanish proficiency may take courses along with the Mexican students. Numerous field trips led by the resident director enhance the students' academic and cultural experiences. The Puebla program is offered only spring 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 intended especially to strengthen students' facility in the French language and their knowledge of French manners and culture. Students enroll at the Sorbonne, where the medium of instruction in all classes is French. The full-year program is preceded by one month of intensive French language instruction at the Alliance Francaise. Students wishing to go for only one semester generally go for the spring semester.

**Hangzhou, China.** As a result of a recent exchange agreement, Valparaiso University students may now study at Hangzhou University in Zhejiang Province. A resident director from Valparaiso University, who has considerable experience in China, guides and assists the students during their stay. Because Hangzhou University has a center for teaching the Chinese language and culture, it is not necessary for students to have prior knowledge of Chinese. Students take intensive Chinese and a course on Chinese culture and civilization, for which they receive 13 credits. A number of field trips organized by the resident director and the Foreign Affairs Office at Hangzhou University enrich the overall experience. The Hangzhou program is offered only fall semester.

**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. The University is also a corporate member of the **American School of Classical Studies** in Athens, Greece, which offers similar opportunities in the classical world.

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 193), to Valparaiso University; for the Tübingen program, students pay regular tuition and the general fee to Valparaiso University, taking care of room expenses on their own; and for the program in Paris, students pay the Valparaiso general fee and Central College's tuition and fees to Valparaiso University.

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

In addition to the countries just listed, Valparaiso University students may study in Japan, as well as in other countries, through programs sponsored by different institutions. Specific suggestions and information are available through the Department of Foreign Languages and Literatures and the International Studies Office. When students decide on a program, it is necessary to obtain the prior approval of an academic adviser, 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.
**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 evaluation sessions led by academic instructors. The program includes semesters on National Politics, Urban Politics, Science and Technology, International Development, Foreign Policy, Economic Policy and Justice.

The Valparaiso University course Political Science 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.

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

For information on the Washington Semester Loan Fund see page 211.

**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 involves 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 Political Science 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 Urban Semester.**
Through the College of Arts and Sciences and with the cooperation of the Associated Colleges of the Midwest, the University offers to all students a 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 44.

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. Expenses 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 integrates classroom study with semesters of paid employment in business, industry, or government. The "Co-op Plan" at Valparaiso University is available in the College of Arts and Sciences (page 42), the College of Business Administration (page 141), the College of Engineering (page 151), and the College of Nursing (page 170).

All students in good standing who meet the grade point minimum declared by the individual college may participate in the program. Student placements may be made on an alternating basis (full-time employment) or a parallel basis (part-time employment).
employment), except in the College of Engineering which is only an alternating placement.

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

Academic credit for Cooperative Education is granted by the college or the participating department in which the student is enrolled. The number of credits that may be counted toward a major or a degree varies with each program. Students should consult their faculty advisor as to how their co-op credits will be used in their degree plans.

Students in the coop program are considered to be continuing full-time students of the University while in industrial assignments.

Other Academic Opportunities

Internships. A number of internship opportunities have been established in several departments in the College of Arts and Sciences and in the College of Business Administration. 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.

Honors Work and Independent Study. The University encourages honors work and independent study. Each college has its own approach to this form of instruction. Information should be sought from deans or department chairmen. Especially interesting is an opportunity for a group of students to develop a topic or area of studies to be approached as a group under the sponsorship of a faculty member. This independent group study program is administered through the Dean of the College of Arts and Sciences but is open to all students. More detailed information is given on pages 41-42.

Christ College. This College is itself one of the special educational opportunities available to all students of the University. It is an honors college which offers honors courses, special integrated courses and seminars which probe topics of interest not normally found in a single department. The College has a core community of students who follow a special course of studies in the area of general education but welcomes all students to inquire into its programs and to participate in it. Details are given on pages 136-137.

Mini Session. This session of three and one-half weeks is offered at the end of the Spring Semester. Courses during this session are designed specially to fit a concentrated period on a single topic and carry usually three credit hours. Details are available in a Mini Session Bulletin published about the beginning of the Spring Semester. See also page 176.

Summer Session. Certain courses normally taught in the Fall and Spring Semesters are offered during the Summer Session. A student can earn up to nine credit hours during this seven and one-half weeks session, fully credited toward his degree. The combination of Mini and Summer Sessions enables a student to earn nearly a semester of credits during the late spring and summer months. This opportunity is available to students who wish to accelerate their programs or to newly admitted students who want to begin work on the college level before the Fall Semester. Details are available in a Summer Session Bulletin published about the beginning of the Spring Semester. See also page 176.

Lectures

Valparaiso University presents numerous lectures by scholars and public figures on topics of scholarly or current interest as an integral part of its academic program. Various endowed and named lectures are also presented each year, bringing distinguished men and women to the campus to address the University community.

The Walter E. Bauer Endowed History Lectureship Fund, established by the family and friends of Dr. Walter E. Bauer, is an annual History Department event to honor Dr. Walter E. Bauer.

John Martin Gross and Clara Amanda Gross Memorial Lectures, established by Mr. and Mrs. Walter H. Gross, are delivered annually by outstanding religious leaders to the entire University community.
A. G. Huegli Lectureship in Church-Related Higher Education, is a lectureship series established by Dr. A. G. Huegli to stimulate discussion on key issues concerning Church-related higher education.

Rae M. Huegli Memorial Lectures in Health and Hospital Care provide income for annual lectures in the College of Nursing. This endowed fund was established in memory of the wife of former President Albert G. Huegli because of her long interest in health services.

O. P. Kretzmann Lectureship in Christian Ethics, established in honor of the late President of the University, 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 Elfrieda 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 scholar 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.

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.

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.

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.

Endowed Chairs and Professorships

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 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 Dr. Walter G. Friedrich, Valparaiso University professor emeritus of English, and to support and encourage high quality teaching in American Literature.

The Emil and Elfrieda Jochum Chair, a University Professorship established through a gift from Mr. Emil Jochum, supports the study of Christian values in public and professional life.

The Richard E. Meier Professorship of Management was established by Richard E. Meier to advance the College of Business Administration.
The Fredrick A. and Mazie N. Reddel Professorship of Music, established by the Reddel family to honor Fredrick 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. Schultz 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.

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 from friends of the University.

The Albert G. Huegli 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 Wheatridge 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 fund was established by the late Helen Lindemann in memory of her daughter who had taught at the College of Nursing. Its earnings support professional activities and research in nursing.

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

Buildings

Much of the University campus has been built within the past few decades. The academic buildings offer students modern, well-equipped laboratories and studios as well as classrooms and seminar facilities.

University Library Facilities

The general library for the University, the Henry F. Moellering Memorial Library, faces the Chapel of the Resurrection and, therefore, shares the center of the campus. Students, faculty and staff have available to them a collection of approximately 298,000 bound volumes, 98,000 microforms and over 1420 current periodicals. In addition, the library maintains a separate collection of 368,000 government documents and a collection of 92,000 maps. These have been developed primarily through depository status with the U.S. Superintendent of Documents, the State of Indiana, the U.S. Geological Survey and the Defense Map Service. Musical and literary recordings are available in the Music Record Library, a collection of 5200 records, tapes and compact discs. All materials are available to users on open shelves with the exception of reserve books, the University Archives and rare books. Reading rooms are air conditioned and seating is distributed throughout the building.

The library assumes an active role in interlibrary cooperative efforts and holds memberships in the Indiana Cooperative Library Services Authority, the Online Computer Library Center, and the Northwest Indiana Area Library Services Authority. It is a User Member of The Center for Research Libraries. Through these relationships, the interlibrary loan staff provide services from other libraries with maximum efficiency.

The library staff emphasizes person-to-person contacts, beginning with welcoming tours to all freshmen. The professional staff, in addition to the Director, consists of five full-time librarians and a part-time librarian in charge of the Music Library. A trained archivist works during twenty hours
of the week and on Sunday afternoons. The librarians present bibliographic instruction sessions to classes, prepare bibliographies on special subjects and search sources from Biographic Retrieval Services.

As the center for information on campus, the library provides a quarterly list of its newest holdings. Special days are highlighted through exhibits in the library; library materials are displayed at such times, and often a bibliography accompanies the exhibit. A "suggestion box" is available at the exit desk for serious comments from patrons and all suggestions are answered by the library's professional staff.

Seating for 600 persons is scattered throughout Moellering Library: in the stacks, in the large, brightly lighted Reference Room, and in the lounge area students may stretch out on comfortable floor pillows. For more privacy there are individual study carrels as well as fifteen study alcoves where one can close the door on a first come basis. There is a group study where students can confer without disturbing other fellow students.

Art works from the Sloan Collection of American Paintings adorn the walls of Moellering Library, not only adding beauty to the surroundings but also contributing to the instructional goals of the library. As the Director of Libraries has stated many times, "We see the library as a center of learning and instruction, where we in the library act as mediators between the tools of knowledge and the knowledge itself."

The library of the School of Law, with over 181,000 holdings and LEXIS and WESTLAW computer bibliographic systems is located in Wesemann Hall. A curriculum library is maintained in the J.W. Miller Hall of the Department of Education.

Computer Facilities

The Academic Computer Center encompasses computing facilities at three campus sites: the Academic Computer/Communications Center, the Guild Microcomputer and Writing Center located in the substory of Guild Hall, and microcomputers for word processing in Wesemann Hall. It provides extensive and up-to-date facilities to support instruction in all areas of the curriculum.

The Academic Computer Center also oversees the Educational Technologies Center (etc), where student representatives provide information about student discounts on Apple Macintosh, IBM and Zenith microcomputers.

The primary computer is a Data General MV/8000 time sharing system. It is used by the Social Sciences for statistical analysis and databases of election and census results; it is used by the College of Business Administration for management simulations; by mathematics and computer science for simulation and modelling, as well as programming in a variety of computer languages; and by engineering and the sciences for data analysis and specialized applications. There are forty-five terminals to the Data General in several campus locations, as well as ten dial up lines for remote access via modem.

Additional computer facilities include:

Forty-five Macintosh microcomputers dedicated to student word processing;

A mathematics microlab network of ten IBM PS/2 microcomputers for calculus courses using Computer Algebra Systems;

A Computer Science microlab network of Sun workstations and IBM and Zenith PCs;

A microcomputer lab in the College of Business Administration;

A network of fifteen Zenith 286 LP microcomputers for home economics, psychology, education, engineering and general use.

All locations provide generous hours of access and extensive staff and student aide support. Access to facilities is granted to any Valparaiso University student. No time limitations are placed on computer usage nor is there a fee charged for reasonable computer usage.

Day to day operations and consulting services are to a great extent provided by student operators.

A variety of microcomputers is also provided in the laboratories of the departments of Electrical and Computer Engineering, Mechanical Engineering, Physics, Chemistry, Education and Psychology. A Data General MV/4000 time-sharing system is used for research by faculty in the Physics Department.
HONORS AND AWARDS

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 3.800 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 3.600 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 3.400 in their work at this institution are graduated "Cum Laude."

Semester Honors

Undergraduate students who achieve a standing of 3.500 in any semester except the last before graduation 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 was registered for at least fourteen credit hours of work for that semester on campus in the College of Arts and Sciences, Business Administration or Nursing, at least fifteen credit hours in the College of Engineering, or at least twelve credit hours in an International Studies Semester, Special Off-Campus Semester or any other approved cooperating program.

Graduating senior honors are announced at Commencement and are based on the work of the last two semesters. The standing of 3.500 must have been maintained cumulatively for both semesters; restriction 1 above applies, and the total credit hours for both semesters must be at least the cumulative total from restriction 2 above (for example, twenty-eight credit hours on campus in the College of Business Administration, or twenty-six hours for one semester on campus in the College of Arts and Sciences and one Washington Semester).

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 41.

### 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.

**NATIONAL SENIOR HONOR SOCIETY**

*Mortar Board.* 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 pre-medical or pre-dental program.

*Sigma Theta Tau.* This national honor society for nursing elects outstanding upper class students to membership on the basis of scholarship, leadership and character.

*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**

*Chi Beta Alpha.* This honor society recognizes academic achievements of students in the College of Business Administration. Membership is limited to the upper ten percent of the senior class and the upper five percent of the junior class.

*Lumina Award.* This honor is presented in the Spring of the Junior year to students enrolled in the College of Arts and Sciences whose accumulated grade point average for the five preceding semesters is 3.60 (level of High Distinction) 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
- Classics— Eta Sigma Phi
- Drama— Alpha Psi Omega
- Economics— Omicron Delta Epsilon
- Finance— Financial Management Association Honorary Society
- French— Pi Delta Phi
- Geography— Gamma Theta Upsilon
- German— Delta Phi Alpha
- History— Phi Alpha Theta
- Home Economics— Kappa Omicron Phi
- Journalism— Society of Collegiate Journalists
- Music— Pi Kappa Lambda
- Physics— Sigma Pi Sigma
- Political Science— Pi Sigma Alpha
- Spanish— Sigma Delta Pi
- Theatre— Alpha Psi Omega

### Awards and Prizes

**Walther M. Miller Memorial Prize.** This prize is awarded to a student who has majored in German and demonstrated excellence in German studies at Valparaiso University. It is awarded in memory of Walther M. Miller, Distinguished Service Professor of German Language and Literature.

**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.

**Roger and Hazel Guillaumant Award.** This award is presented annually by the Department of Foreign Languages and Literatures to the French major who has demonstrated outstanding achievement and promise in French studies. It is given in honor of Professor Emerita Hazel Guillaumant and her husband, Roger.

**The Victor Hoffmann Award.** Each year the Beta Nu Chapter of Pi Sigma
Honors and Awards

Alpha, national honorary political science organization, presents an award to the outstanding political science major voted by the faculty of the Political Science Department.

Howard K. Hughes Mathematics Prize. An annual award is presented to the Valparaiso University students who shows the greatest proficiency in the first four calculus courses. This proficiency is demonstrated through participation in the Hughes Mathematics Competition which takes place in the Spring Semester of each academic year.

Kingswood Hospital Award for Psychiatric Nursing. The Kingswood Hospital awards this prize to a senior nursing student selected by the nursing faculty for scholarship and dedication to working with the mentally ill.

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 recipient through his chosen calling and by his exceptional activity in the advancement of the mission of Valparaiso University.
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

Although a number of students live in private or university-owned apartments near the university or in the Foreign Language House, and a number commute from the immediate region, the large majority of students live in one of the nine university residence halls or in one of the ten fraternity houses located on or near the campus.

Dau, Kreinheder, Lankenau, Wehrenberg, Alumni and Brandt Halls are modern residence halls with rooms for two students. The last two are co-ed halls, men and women living on alternate floors. Guild and Memorial are slightly older but very comfortable buildings with two-student rooms on the first two floors and three- or four-student rooms on the third floors. Scheele Hall, a modern residence, is divided into individualized areas to provide accommodations for sororities. The Foreign Language House, located five minutes from campus, houses a small number of foreign language students under the direction of a native speaker. All of these residence halls and the Foreign Language House are self-governed.

Three 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 Handbook.

Each student enrolling at Valparaiso University thereby accepts the rules, regulations and procedures as found in this catalog and the Student Handbook. 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 only by the Vice President for Student Affairs on the recommendation of the Campus Judiciary 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 Code.

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 to give nor to receive unauthorized aid. Non-tolerance of the use of unauthorized aid is a further responsibility which is inherent in the Honor System. All students must report to the Honor Council any violation of the System of which they become aware. Students are asked to sign a pledge on all work submitted for academic credit to the effect that no unauthorized aid was given, received nor tolerated.

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 alleged Honor Code violations and then makes decisions regarding guilt or innocence and any penalty. 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

Instrumental ensembles and choral groups are sponsored by the Music Department. These are open to all qualified students; admission to most groups is by audition, though not all require an audition. Private musical instruction is also available. The major choral ensembles are the Concert Choir, the Kantorei, the Chapel Choir, and the Choral Society. Instrumental ensembles are the Symphonic Band, the University Symphony Orchestra, the Marching/University Band, and the Jazz Band.

Theatre

The University Theatre brings the best of classic drama and new plays to the Kroencke Hall stage. Offerings also include musicals, chancel dramas, and studio productions. Interaction with television arts provides creative opportunities for any student interested in dramatic arts. Theatre work is focused in performance, production, and administration. Advanced students regularly supervise in all areas.

Art

The Art Department offers basic studio courses in painting, drawing, design, graphic design, sculpture, film, photography, ceramics, fibers, and art education and history. Galleries exhibit
Student work as well as distinguished work by visiting artists. The Sloan Collection of American Paintings is the core of the University Museum, a collection of nearly 1,300 works of increasing national reputation. Summer programs of study overseas provide students with immediate experience of Western cultural heritages.

**Dance**

While not yet a formal part of the University's curriculum, dance groups organized and maintained by students attract many participants. Co-curricular workshops as well as performances by visiting dance ensembles are important parts of campus activities.

**Creative Writing**

Courses in creative writing are offered to students by the English Department and informal writing groups meet often to discuss works in progress. WORDFEST annually brings professional writers to campus and awards prizes for fiction, poetry, and non-fiction prose. The Lighter, a campus literary magazine, presents student work in award-winning form.

**Athletics**

Valparaiso University provides a varied athletic program which assumes that sports can play a major role in college life by encouraging wide participation by the student body. The newly enlarged Athletics-Recreation Center is a major indoor facility. Outdoor facilities include tennis courts, eight all-purpose intramural fields, a hard surface track 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.

**Intramural Sports/Campus Recreation.** 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.** The women's division of the intercollegiate athletic program offers participation in basketball, cross country, softball, swimming, gymnastics, tennis and volleyball. Membership is maintained in the National Collegiate Athletic Association and the North Star Conference.

The men's division offers intercollegiate competition in football, basketball, baseball, soccer, cross country, golf, swimming, tennis and wrestling. Membership is maintained in the National Collegiate Athletic Association. The men's teams participate in the Association of Mid-Continent Universities and the Midwest Intercollegiate Football Conference.

**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 Publications and Committee on Broadcasting are 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 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.

**WVUR.** The campus radio station WVUR (95.1 FM) offers students a wide variety of experiences in radio broadcasting and management.

**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. It is composed of upper class student representatives and officers elected in the spring and freshman representatives elected in the fall. The Student Senate affords students the opportunity to assume the privileges and responsibilities of self-government. It also coordinates the five standing committees of Publications, Broadcasting, Residences, Committee on Committees and Union Board.

**Committee on Publications.** The Committee on Publications is responsible for policies and regulations of the University’s student publications.

**Committee on Broadcasting.** The Committee on Broadcasting is responsible for policies and regulations of the campus radio station, WVUR.

**Committee on Residences.** The Committee on Residences has responsibility for the policies and procedures regarding residence hall use.

**Committee on Committees.** The Committee on Committees reviews the activities of the Standing Committees of Student Senate, adjudicates conflicts which arise between student organizations, and grants or removes recognition for student organizations. Committees or councils under the Committee on Committees include: Committee on Broadcasting, Committee on Publications, Committee on Residences, Union Board, the Honor Council, the Orientation Committee, the Senior Class Steering Committee, and the Campus Judiciary Board.

**The Valparaiso Union Board.** The Valparaiso Union Board develops, presents and coordinates social, recreational and educational events and programs to broaden student acquaintances and improve student life, and establishes policies for the use of the Valparaiso Union.

**Fraternities and Sororities**

Active chapters of national Greek social fraternities on campus include Delta Sigma Phi, Lambda Chi Alpha, Phi Delta Theta, Phi Kappa Psi, Phi Sigma Kappa, Pi Kappa Alpha, Sigma Chi, Sigma Phi Epsilon, Sigma Pi, Sigma Tau Gamma and Theta Chi.

Greek social sororities include Alpha Phi Delta, Alpha Xi Epsilon, Chi Sigma Xi, Delta Phi Kappa, Gamma Phi, Kappa Psi Omega, Phi Beta Chi and Phi Omega.

The Dean of Women is the official adviser to the sororities and the Intersorority Council. The Dean of Men is the official adviser to the fraternities and the Interfraternity Council.

Fraternities are housed in their own individual residences. Sororities are housed in Scheele Hall, in individualized units within the hall.

**Alpha Phi Omega.** Alpha Phi Omega is the nation’s largest service fraternity founded to develop leadership, promote friendship and give service to the campus, community and nation. Alpha Phi Omega is a co-ed organization whose goals are the development of the individual through both service and social events. Active membership in this service fraternity is open to all students of the University, and in no way interferes with membership in a social fraternity or sorority.

**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.

**Black Student Organization.** The Black Student Organization is devoted to maintaining a cohesive black community on campus, to promoting knowledge of black culture and to providing a forum for the expression of the ideas and goals of black students.

**Foreign Language House.** The Foreign Language House promotes use of foreign languages by providing residents with a living environment in which they can practice speaking a foreign language and by providing a place where non-residents may share experiences and information relevant to foreign language study.
The Valparaiso Union

The Valparaiso Union is a combination of facilities, services, programs, activities, and people. Located in the center of the campus community, it assists in meeting the needs of students, faculty, administration, alumni, and guests.

The purposes of the Valparaiso Union are many. The Union is a common meeting place. Here students may meet guests, listen to music, watch TV, attend banquets, have meetings, study, hear recitals and lectures, see films and art exhibits, eat, discuss, listen, read, work, dance, play, or just lounge.

The Union provides informal educational opportunities of a social, cultural, and recreational nature. Because the programs and activities are student sponsored, it gives each student an opportunity to develop qualities of leadership, cooperation, and responsibility. The Union is truly a vital part of the total educational program of Valparaiso University.

The Union is open eighteen hours a day, seven days a week, and includes a variety of facilities under one roof. These include:

Jester's on the lower level of the Union is operated by Valparaiso University Dining Services. The snack bar, grill and cafeteria feature daily lunch specials plus complete menus for breakfast, lunch and dinner. The Catering Department offers a wide variety of services, such as banquets, luncheons, receptions, coffee breaks, picnics, barbeques and snacks for students, faculty, staff and outside groups.

Located on the north end of the Union Building, the University Book Center contains all the required textbooks needed for classes, as well as a wide selection of other books, materials and gifts. The center also offers check cashing, notary public and a U.S. Post Office.

The Union Recreation Center includes billiards, bowling, video games, table soccer and table tennis. Outdoor recreation equipment enables students to pursue a variety of outdoor recreational activities. Equipment such as tents, backpacks, cross country skis and sleeping bags are available for use for trips and excursions. Trips such as skiing, canoeing, camping, whitewater rafting, and backpacking in the Great Smoky Mountains are regularly offered.

The Union Advertising Service assists any campus group in publicizing its services and information. Posters, flyers, buttons, brochures, announcements and mail box stuffers can be printed to aid in advertising campus events.

The Student Activities Office serves as a resource center for all student organizations, assisting with program planning, leadership development, promotion and publicity, committee recruitment and retention, budget preparation and time management. The Student Activities Office also encourages student involvement with off-campus agencies and organizations for worthwhile community volunteer service.

Union Board develops activities in the areas of film, concerts, dances, comedy acts, coffeehouses, lectures, mini courses, travel, and special events such as Homecoming, the Union Late-Nighter and Spring Weekend. Bus trips to Chicago to museums, art galleries, stores, concerts, sporting events and theatres are arranged by Union Board.

Other Union services include a ride board, commuter student mailboxes, lockers, bulletin boards, art exhibits, meeting and study rooms, lounges, and televisions. To inform the campus of events, the Union publishes the daily "Today on Campus", the weekly "What's on at VU", and the monthly "Student Activities Calendar". Union Board also offers a telephone activities hot line—a prerecorded message listing the latest in campus activities. The Union information Desk sells a variety of tickets for on-campus events, offers magazines for browsing, and sells a variety of merchandise.

Campus Ministry

The ministry of Word and Sacraments centers in the Chapel of the Resurrection. A ministry is carried on also in the residence halls and fraternity houses.

Students and faculty participate with the University Pastor and University Associate Pastor in preparing a wide range of services. In addition to holding services on Sunday and throughout the week at various times, the University has appointed
Student Life

10:10 for Morning Prayer Monday through Friday when members of the community may come together for prayer and praise. Pastoral counseling is available at any time.

Students participate in the Choir of the Chapel of the Resurrection, the Kantorei, as well as other choirs which sing for chapel worship services; serve as organists for daily services; and serve as cantors and instrumentalists for Sunday and weekday services. Students design the service folder covers for Sunday services, 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, visitation, and Christian growth and witness. 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 and a lay minister. 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. A listing of area churches and the time of worship is available in the chapel office.

Services For Students

The Office of Minority Programs

The Office of Minority Programs, housed in the Martin Luther King Cultural Center on campus, provides services and programming designed to address minority students' specific cultural interests and needs.

The Office conducts personal and academic counseling, offers student leadership and job opportunities, and structures cultural events throughout the year that serve to promote cross-cultural understanding, as well as preserve ethnic integrity.

The Martin Luther King Cultural Center offers the resources of a library with computer and word-processor, and entertainment and recreational facilities.

The Director of Minority Programs supports the Black Student Organization (BSO), provides services to the Black Law Student Association (BLSA), and serves on the Presidential Advisory Committee for Minority Concerns.

Career Planning and Placement

The Career Planning and Placement Office offers assistance to Valparaiso University students seeking employment and offers career planning services to those who may need assistance with career decisions.

The Office has close contact with a wide variety of businesses, industries, and government agencies throughout the country. Each year a large number of companies and agencies send representatives to the campus in order to interview seniors. Additionally, the Office keeps on file the credentials and resumes of all graduates who register, without charge. Browsing racks and the Career Library contain a wealth of information regarding institutions, companies, job opportunities and career information. Summer job and internship information is also available.

Career planning assistance is provided through seminars and workshops on topics such as "How to Succeed in Interviewing", "Marketing your Major", and "How to Do a Job Search in a Distant City." Students also have the opportunity to participate in special event activities—job fairs, Nursing Career Days, junior and senior orientations, and video interviews. A resume critiquing service is also available, as well as a biweekly job opportunities bulletin. The Alumni Career Services Network provides currently enrolled students the opportunity to interact with VU alumni to discuss career direction, summer job information, co-op/internship opportunities, employment opportunities, and other assistance.

Students with career concerns and questions are assisted through the complicated job search process by the professional staff at the Office of Career Planning and Placement. Hours are 8 to 12 and 1 to 5, Monday through Friday.
The Teacher Placement Office, located in Miller Hall, gives assistance to beginning and experienced teacher candidates who have completed requirements for certification under the supervision of the Department of Education at Valparaiso University.

**Student Counseling and Development Center**

The Student Counseling and Development Center provides counseling services to Valparaiso University students with personal, substance abuse, relationship, career, and academic skills issues. The center is staffed by doctoral and master level psychologists and counselors, a consulting psychiatrist, and support personnel. The services provided emphasize both the prevention and remediation of problems of individuals and groups of the university and are confidential and free of charge. The counseling relationship is founded on respect for the individual and 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.

**Clinical Services.** The Student Counseling and Development Center offers individual, conjoint, and group counseling for personal and interpersonal issues such as depression, anxiety, low self-esteem, non-assertiveness, and victimization. Help with academic skills deficits, including time and stress management, test anxiety reduction, and poor motivation are also addressed.

**Career Services.** The Student Counseling and Development Center provides personalized career counseling as well as career-related workshops. These options may be particularly useful to the freshman or sophomore student who is in the beginning phases of making career choices. Individual counseling involves an exploration of the student’s values, interests, and abilities, combined with an exploration of the world of work. Assistance in developing exploration skills and in utilizing campus resources is also provided. Some recent workshops offered include “Marketing a Liberal Arts Degree,” “Using Personality-Style as a Basis for Occupational Selection”, and “Dual Career Issues.”

The Student Counseling and Development Center also maintains a Career Resource Center with comprehensive career and graduate school information. Over 200 career files and numerous books on occupations, industries, and career fields are available. Graduate school directories and hundreds of individual graduate and professional school bulletins are also housed in the Career Resource Center. Students can use these materials without an appointment.

**Substance Abuse Services.** The Student Counseling and Development Center offers a substance abuse service which is staffed by a Certified Alcohol Counselor. Services are provided at both the prevention and treatment levels, including campus education programs, as well as individual assessment, counseling, and referral. Weekly groups are held to deal with alcohol and drug education, and with the recovery process. In addition, those persons who have Adult Children of Alcoholics issues are served through both individual and group counseling.

**Outreach Services.** The Student Counseling and Development Center’s outreach program presently consists of two components: the Academic Skills Program and the Speaker’s Bureau. Through the Academic Skills Program, the staff presents several seminars at the beginning of each semester, aimed at providing students with specialized training and information in areas not usually addressed in courses, such as “Improving Your Study Skills,” “Time Management,” “Dealing With Test Anxiety,” and “How To Get Motivated.” Through the Speaker’s Bureau program the Student Counseling and Development Center encourages the university community to request seminars on topics of their own interest. As a result of these requests, the staff have presented seminars on a wide variety of topics, including depression, anxiety, suicide, rape, AIDS, and stress management.

**Academic Advising**

One of the benefits of an education at Valparaiso 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.

Each entering student is assigned to an academic adviser to assist him in selecting a curriculum, meeting University requirements and making the most of his studies.

In the College of Arts and Sciences, each student who has not declared a major is assigned a general adviser. As soon as a student declares a major, he is assigned to a departmental adviser, often the chairman of his major department. A student in a special program is assigned a program adviser. The major field or interdisciplinary program of study should be chosen by the beginning of the junior year at the latest. Some majors and programs, for example, teacher certification, 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.

Each student must have his proposed schedule for the next semester signed by his academic adviser before it is filed with the registrar. If the student has more than one adviser (e.g. departmental, special program, Christ College), the student should have the signature of the special program adviser, but after consulting with the other adviser(s). The adviser’s signature indicates only that he has counseled the student, not that he approves the schedule. Nor does the adviser’s signature guarantee that the schedule will meet the requirements of the student’s program.

The Writing Center

At the Guild Microcomputing and Writing Center, students will find all the tools for writing close at hand. Students can discuss writing projects with faculty and student tutors, as well as use computers for word processing. The tutors help writers plan, revise, and proofread. Other resources like handbooks, dictionaries, and ample table space make this site an excellent place to write.

Tutoring

Mortar Board, an honor society, provides tutorial help to students in need of assistance.

The Valparaiso University Student Health Center

The Student Health Center provides an environment that enhances dignity and individual student responsibility for maintaining health. The Health Center is interested in promoting good health practices as well as preventing sickness and accident among students.

Health services, as well as a Basic Student Insurance Policy, are provided without charge to all full-time undergraduate and law students of the University. The cost is covered by the general fees which a student pays at the beginning of each semester. The services include assessment by a nurse and/or physician and minor laboratory tests.

The Student Health Center does not treat cases of serious illness or injury which require hospitalization; these are referred to the local county hospital adjacent to the campus or to physicians in the community.

The student insurance is not designed to cover all medical costs. The students or parents will be billed directly for costs over and above the Basic Insurance payments by the individual physician, hospital or lab in those cases where the Basic Insurance Policy pays only a part of the medical expenses incurred. So that a determination of benefits can be made, it is the student’s responsibility to bring all itemized bills to the Health Center and complete the insurance claim form for services covered by the Basic Student Insurance Plan.

All full-time undergraduate and law students are required to file a complete Health History on the University’s form before their registration at the University is considered complete. This report includes a medical history and verification of immunizations and the specific dates they were given.

The Health Center is open for student use between the hours of 8:30 a.m. to noon and 1:00 p.m. to 4:00 p.m., Monday through Friday, when the University is in session. At other times, in case of emergency, students may use the services of the Emergency Room at the local hospital, located one block from the campus. When the Center is closed, a physician is on call.

The Health Center will also administer allergy injections on a limited fee basis.
The required Health History form must be on file. In addition, a letter will also be needed from the physician who ordered the medication, stating the allergies and recommended injection schedule. Students may contact the Health Center for the allergy hours schedule.

The Valparaiso University Federal Credit Union
This is a financial cooperative whose membership is open to all students, alumni, members of the faculty and employees of the University, as well as their respective families. Its purpose is to provide the University community with a convenient financial facility. The Credit Union is governed by a board of directors elected by the membership and is supervised by the National Credit Union Administration of the United States Government. All accounts up to $100,000 are insured by the National Credit Union Administration.
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:
- The general education component;
- The major field or interdisciplinary program.

To these two parts, the student adds elective courses chosen from all the offerings of the University.

**General Education**

A general overview of the general education program is presented on page 10. Although the general 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 IN SCIENCE DEGREE (60 CR.)

### A. General education requirements
1. Theology 100 or 106 . . . . 3 Cr.
2. English 100 or 101 . . . . 3 Cr.
3. History 100 . . . . 3 Cr.
4. Social Analysis . . . . 3 Cr.
5. Physical Education 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 Adviser.)

### 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. The general education requirement in theology
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.

## BACHELOR OF ARTS DEGREE (124 CR.)

### A. General education requirements
1. Freshman Studies . . . . (12 Cr.)
   a. Freshman Seminar . . . . 3 Cr.
   b. Introduction to Christian Theology or Families of Abraham . . . . 3 Cr.
   c. Exposition and Argument . . . . 3 Cr.
   d. History of Western Thought and Society . . . . 3 Cr.
2. Academic Area Studies . . . . (47 Cr.)
   a. Theology . . . . 6 Cr.
      One course from Level II and one course from Level III taken in the junior or senior year (in addition to one from Level I).
   b. Literature and Fine Arts . . . . 7 Cr.
      English 200, Literary Studies and one course in Fine Arts or Fine Arts-Literature. Courses which fulfill the latter requirement are Art 101, 102, 290, 311, 317, 318, 319, 320, 321; Communication 238, 239, 290, 335, 337; English 231, 265: Comedy and Modern Literature, and Architecture and Fiction; English 490: Literature and Film, and Shakespeare on Film; German 250: Romanticism in German Literature, Music, and Art, 260; Spanish 250: Spanish America in Literature and the Arts; Greek 251; Music 101, 290, 310, 317, 318, 319.
   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 in any foreign language. A student who has completed a second year language course in high school will not be granted credit for course 101 in that language at Valparaiso University. International students whose native language is not English and who are studying on a non-immigrant visa are exempt from the foreign language requirement provided that they have fulfilled the general education requirements in English (English 100 or 101, and 200).
   d. Non-Western or Third World Studies . . . . 0-3 Cr.
      Courses which fulfill this requirement are Economics 336; Geography 102, 174, 210: North American Indian on Film, 311, 313, 314, 316; History 230, 231, 240, 241, 331, 341, 342, 390; Japanese 251; Philosophy 310; Political Science 130, 335; Sociology 150; Spanish 250: Spanish American in Literature and the Arts; Theology 260, 362, 363, 364, 365. In appropriate cases, a course from this area may be used to fulfill another area requirement.
   e. Philosophical and Historical Studies . . . . 3 Cr.
      One course in either philosophy or history.
f. Studies in Social Analysis 6 Cr.
Two courses from the following selection: Economics 221, 222; Geography 101, 102, 201; Political Science 110, 120, 130, 220; Sociology 110, 150. The two courses must be from two different departments.
g. Studies in Natural Science and Mathematics 12 Cr.
One course with laboratory from each of the two following areas: the life sciences (biology, psychology), the physical sciences (astronomy, chemistry, physics, physical geography). The third course may be selected in one of three ways:
1. A course from any of the above five disciplines not previously selected;
2. An additional course (with lab) from astronomy, biology, chemistry, physics, or psychology which has that earlier course as its prerequisite;
Note: Geography 103 is not a prerequisite for Geography 104; therefore, a second geography course may not be used to fulfill this part of the third course option.
3. Four credits in Mathematics and Computer Science.
Note: Neither Mathematics 114 nor Computer Science 117 will fulfill this requirement.
h. Physical Education 101-105 1 Cr.
3. Integrative Studies
(University Course).
Taken in the junior or senior year. This requirement may be fulfilled by taking a 300 or 400 level course outside of the student's major or minor fields. This course may not be one used to fulfill any other general education requirement except the Non-Western or Third World Studies requirement. 3 Cr.
(See page 43 for complete information.)

B. Major Field Requirements
Students may fulfill the major field requirements of the Bachelor of Arts degree by completing either a Department Major or an Individualized Major and by meeting one of the completion requirements listed below. In addition, the student may complete the Major Field requirement through an Interdisciplinary Program.

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, Geology, German, Greek, History, Latin, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology, Spanish, 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 academic or 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 adviser.
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 adviser. 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 minors be selected that are complementary to the major. An area minor in American Studies, British Studies, East Asian Studies, or Film Studies may be presented in fulfillment of this requirement. No course may be used to fulfill both a major and a minor requirement except with the permission of the Dean of the College.

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. None 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 area listed above, Home Economics and Physical Education may also be selected. An approved individualized major may also be presented in fulfillment of requirements of a second major.

4. 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 a double major in the Department of Foreign Languages and Literatures, students pursing double majors in Mathematics and Computer Science in the Department of Mathematics and Computer Science, Home Economics vocational certification, the Bachelor of Music or Bachelor of Music Education degrees, or students pursuing a Bachelor of Fine Arts degree.)

5. The Liberal Arts Business Minor, comprised of courses from both the College of Arts and Sciences and the College of Business Administration. See page 172 for details.

Interdisciplinary Programs

The College of Arts and Sciences offers four 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 boundaries of the traditional academic disciplines. Interdisciplinary Programs are currently offered in American Studies, East Asian Studies, International Economics and Cultural Affairs and Music Enterprises.

A departmental second major or departmental minor may be added to the Interdisciplinary Programs with approval of the Dean’s office.

In addition, area minors in Interdisciplinary Programs in American Studies, British Studies, East Asian Studies, and Film Studies may be added to departmental majors.

BACHELOR OF MUSIC DEGREE

(128-134 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 134 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 2.000.

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. Freshman Studies ............ 12 Cr.
2. Academic Area Studies
   Theology .......................... 6 Cr.
   English 200 ........................ 4 Cr.
   Foreign Language
   (Course 102 or 103) .............. 4-8 Cr.
   Non-Western or Third World Studies .......................... 3 Cr.
   Philosophical and Historical Studies .......................... 3 Cr.
   Studies in Social Analysis ........ 6 Cr.
   Studies in Natural Science and Mathematics .............. 4 Cr.
   Physical Education 101-105 .... 1 Cr.
3. Integrative Studies
   University Course or other upper division elective ........ 3 Cr.

B. Music Requirements

The requirements for the major fields are given on page 107.

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. Three specializations are offered: vocal, instrumental, and combination. The combination specialization is designed for students who wish to prepare themselves for teaching in both the vocal and instrumental fields. Any one of the specializations meets also state requirements for the teaching of general music. Students must earn a total of 138 credit hours in the vocal specialization, 140 credit hours in the instrumental specialization, and 142 credit hours in the...
combination specialization. They must have a grade point average of 2.50. In addition to meeting the music requirements for the BME 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, pages 68-69.

A. General Education Requirements
For details see the Bachelor of Arts degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
   a. Theology 6 Cr.
   b. Non-Western or Third World Studies 4 Cr.
   c. Studies in Social Analysis 3 Cr.
   d. Studies in Natural Science and Mathematics 8 Cr.
   e. Physical Education 101-105 1 Cr.
3. Integrative Studies
   University Course or other upper division elective 3 Cr.

B. Professional Education Requirements
Foundations of Education 201 3 Cr.
Orientation to Secondary Teaching 350 3 Cr.
Psychological Foundations of Secondary Education 356 3 Cr.
Principles and General Methods of Teaching 455 3 Cr.
Supervised Teaching 459 10 Cr.
Reading in the Content Areas 460 3 Cr.
The Junior High/Middle School 475 3 Cr.
Special Education 340 1 Cr.

C. Music Requirements
The requirements of the major field are given on page 107.

BACHELOR OF SCIENCE DEGREE
(124 CR.)

A. General Education Requirements
For details see Bachelor of Arts degree.

1. Freshman Studies 12 Cr.
2. Academic Area Studies
   a. Theology 6 Cr.
   b. English 200 4 Cr.
   c. Non-Western or Third World Studies 3 Cr.
   d. Studies in Social Analysis 6 Cr.
   e. Studies in Natural Science and Mathematics 12 Cr.
   One course with laboratory from each of the following two areas: the life sciences (biology, psychology) and the physical sciences (astronomy, chemistry, physics, physical geography). In addition, students pursuing the Bachelor of Science degree must take a calculus course or Mathematics 124 (or equivalent) or Computer Science 115 (or equivalent).
   f. Physical Education 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.
4. Integrative Studies
   University Course or other upper division elective 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, physics, psychology) and:

1. A science minor, or
2. A non-science major, or
3. The Liberal Arts Business Minor
   (See page 172 for details), or
4. An Education Minor;

or two minimum science majors (biology, chemistry, computer science, geology, mathematics, physics, psychology);

or complete at least 40 credit hours in the first major.

No more than 48 credit hours from a major may be applied toward the 124 credit hours required for graduation.

A 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 34, 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 elementary education leads to the degree of Bachelor of Science in Education. This degree is intended for students who plan to become teachers in elementary schools. The requirements for this degree are given in the announcement of the Department of Education on pages 66-67.

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

A. General Education Requirements
For details see the Bachelor of Arts degree.
1. Freshman Studies .......... 12 Cr.
2. Academic Area Studies
   a. Theology ............. 6 Cr.
   b. English 200 ........ 4 Cr.
   c. Non-Western or Third World Studies ....... 3 Cr.
   d. Studies in Social Analysis .... 6 Cr.
   e. Studies in Natural Science and Mathematics 12 Cr.
   f. Physical Education 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.
4. Integrative Studies.
   University Course or other upper division elective .... 3 Cr.

B. Major Field Requirements
1. The student must complete a major in art consisting of at least 54 credit hours, including Art 101, 102, 121, 122, 132, 133, 162, 221, 251, one from (311, 317, 318, 319, 320, or 321) and 493. A concentration must be chosen in painting, sculpture, ceramics, photography, graphic design or art history.
2. The student must receive approval by the Department of Art of a portfolio presentation by the beginning of the junior year to be eligible for this degree.

C. Other Requirements
The student must earn at least 62 credit hours in non-art courses, which may be comprised of the general education requirements and electives.

BACHELOR OF SCIENCE IN HOME ECONOMICS DEGREE (124 CR.)

A. General Education Requirements
For details see Bachelor of Arts degree.
1. Freshman Studies .......... 12 Cr.
2. Academic Area Studies
   a. Theology ............. 6 Cr.
   b. English 200 ........ 4 Cr.
   c. Non-Western or Third World Studies ....... 3 Cr.
   d. Studies in Social Analysis .... 3 Cr.
   e. Studies in Natural Science and Mathematics 12 Cr.
   f. Physical Education 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.
4. Integrative Studies.
   University Course or other upper division elective .... 3 Cr.

B. Major Field Requirements
See pages 93-94 for requirements in the various home economics concentrations.

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION DEGREE (124 CR.)

A. General Education Requirements
For details see Bachelor of Arts degree.
1. Freshman Studies .......... 12 Cr.
2. Academic Area Studies
   a. Theology ............. 6 Cr.
   b. English 200 ........ 4 Cr.
   c. Non-Western or Third World Studies ....... 3 Cr.
   d. Studies in Social Analysis .... 6 Cr.
   e. Studies in Natural Science and Mathematics 12 Cr.
Students interested in any of these programs should declare the program before entering the sophomore year.

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.

Note: Major and minor areas for teacher certification as in the list below are not the same as academic majors or minors. Consult the Department of Education for those courses required for major and minor areas for teacher certification.

The University currently prepares applicants for certification in the following types of teaching:

**Elementary**
- General Elementary (Grades 1-6)
- Endorsements in:
  - Reading
  - Special Education (learning disabilities/neurologically impaired)
  - Coaching
  - Health Education
  - Music
  - Physical Education
  - Recreation
  - Visual Arts

**Junior High/Middle School (Grades 5-9)** endorsement
- Social Studies
- Language Arts
- Mathematics
- Science
- Foreign Language
- Visual Arts

**Senior-Junior High/Middle School (Grades 5-12)**
- Coaching endorsement
- English major or minor
- Foreign Language major or minor
- French
- German
- Latin
- Spanish
- Health and Safety minor
- Journalism minor
- Mathematics major or minor
- Music minor
- Physical Education minor
- Reading minor
- Recreation minor
- Science
  - Biology primary, supporting or minor
  - Chemistry primary, supporting or minor
  - Physics primary, supporting or minor
  - Earth Space Science supporting area
  - General Science supporting area
  - Mathematics supporting area
  - Physical Science supporting area

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 home economics, work in physical education and social work. The appropriate degrees are described above, pages 33-38. 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 Deaconess Program, the pre-legal program and the pre-medical arts programs are professional preparatory programs a student may complete while pursuing a liberal arts major.
Sociology primary or supporting
U.S. History primary or supporting
World Civilization primary or supporting
Speech minor
Visual Arts major or minor

All Grade Education (Grades 1-12)
Coaching endorsement
Music area major
Music (choral, general or instrumental) major or minor
Physical Education major or minor
Visual Arts major or minor
Recreation minor

School Services Personnel
Nurse

PREPARATION FOR THE MEDICAL ARTS

Students can prepare for entrance into medical, dental, veterinary, medical technology or paramedical schools by entering one of the pre-medical arts programs of the College. Students in these programs must have their schedules approved at the beginning of each semester by an assigned academic adviser. Advising in the pre-medical arts is handled by pre-medical advisers, who are members of the Committee on Pre-Medical Arts. All recommendations to the professional schools are sent out by this Committee: Professors G. Cook (Chemistry), W. Leoschke (Chemistry), E. Nagel (Chemistry), Associate Professor G. Hicks (Biology), and Assistant Professor D. Scupham (Biology).

Pre-medical and pre-dental students are invited to join the Pre-Medical Society, a student organization which promotes interest in medicine and dentistry through a program of guest lectures and social events. Those with outstanding academic records may be invited to join Alpha Epsilon Delta, a national medical honorary society.

In some fields such as medicine, dentistry and veterinary medicine, completion of a Bachelor of Arts or Bachelor of Science degree is often required before admission to a professional school. However, if three years or less of college work are needed for entrance into a professional program, a student may earn a bachelor's degree through the University's Combined Liberal Arts-Medical Arts program. This involves three years of work at Valparaiso University and one year of work at an approved professional school. Details are in the next section of this catalog. This program is often used by students in medical technology.

Students who want to enter allied health fields which require two years or less of college preparation may want to earn the Associate in Science Degree described on page 33. Further information about allied health fields may be obtained from the office of the Allied Health Adviser, Associate Professor G. Hicks.

Under the course, Group Studies 395 (see page 43), two topics are offered in the Mini Session (see page 176) that are of interest to students in pre-medical arts: Medical Apprenticeship and Dental Apprenticeship. Details are given in a Mini Session announcement each year.

COMBINED LIBERAL ARTS-MEDICAL ARTS 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.

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 and the Integrative Studies requirement are 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 make application 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, particular courses are 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. The pre-law student should, therefore, consult with his academic adviser or Pre-Law Adviser 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-Legal Society.

PREPARATION FOR SEMINARY

Students may prepare themselves for seminary 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, as well as the entrance requirement of all Lutheran and other Protestant seminaries. 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 seminary entrance is helped by an adviser to select appropriate undergraduate courses. These include studies in the arts and humanities, in theology, in the biblical languages and in areas of the student's own special interest.

Further information on this program is available from the Chairman 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 168, with a standing of 2.000 or better may then apply to the Dean of the College of Nursing for admission to that College.

PROGRAM OF STUDIES IN DEACONESS MINISTRY

The University and the Lutheran Deaconess Association cooperate in the education of women for service in Deaconess Ministry.

A deaconess student may choose one of the following education plans:

PLAN 1—The student completes requirements for the Bachelor of Arts degree with a major in Theology, minor in a related field. Attendance at Valparaiso University during the junior and senior years is required. Practical courses are Fieldwork (two semesters) and Clinical Deaconess Education. A year of internship is required between the junior and senior years. This is a year of supervised learning through work in a church-related setting, enabling the student to develop knowledge and skills for Deaconess Ministry.

PLAN 2—The student completes the requirements for a major at Valparaiso University in nursing, social work, education, communicative disorders or music. In addition she takes at least a minor in Theology. Practical requirements are met in connection with the practicum for the major. A year of internship is an option. Otherwise, one year of association with graduate deaconesses is required after graduation before certification for consecration.

PLAN 3—A person who already has a bachelor's degree from an accredited college or university attends Valparaiso University for two semesters plus a mini session. The student takes a full complement of theology courses, including Fieldwork (one semester) and Clinical Deaconess Education. The student does one year of internship following completion of the academic work at Valparaiso University.

Pi Delta Chi is a professional society of deaconess students. This organization helps the student in the understanding of the diaconate and the varieties of
ministries in which she can serve God and people.

Deaconess students participate in various formation, worship and social activities. The residence requirement for PLAN 1 students is two years. Students under PLAN 2 or PLAN 3 should discuss the residency requirement with the staff of the Lutheran Deaconess Association.

The education program is under the counsel and guidance of the staff of the Lutheran Deaconess Association. Inquiries should be directed to the Director of Student Services, Center for Diaconal Ministry, 1304 LaPorte Avenue, Valparaiso, Indiana 46383-9978.

COMBINED LIBERAL ARTS-ENGINEERING PROGRAM

A student may earn in five years (ten semesters) both the Bachelor of Arts degree and one of the Bachelor of Science in Engineering degrees. He may earn the two degrees by completing one of the engineering curricula and the general education requirements of the Bachelor of Arts degree as well as the major requirement of the College of Arts and Sciences. This requires him to earn 168 credit hours and to have a standing of at least 2.000 in all of his work. Students who elect such a program must have their schedules approved by both the Dean of the College of Arts and Sciences and the Dean of the College of Engineering at the beginning of each semester. Sample or representative curricula for such programs may be obtained upon application to the Dean of the College of Engineering.

Departmental Honors Work

Honors work is designated for students of exceptional ability who may benefit by earning a limited number of the credits required for graduation through supervised independent study rather than through regular course work. Students who make application for Honors Work should understand that their work will be evaluated according to the highest standards of scholarly achievement.

Honors Work may be taken by any student in the College of Arts and Sciences whose major or program is administered by a department or an administrative committee.

A student who has completed at least 80 credit hours, but has not yet entered upon the work of the last two semesters, and who has a cumulative grade point average of at least 3.000 and a grade point average in the major of at least 3.500 may apply through his or her 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. This plan must be presented to the chair of the student’s department or program for approval and forwarded to the dean’s office at least seven days prior to the examination period of the student’s second semester, 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 enroll in the first semester of the senior year in course numbered 497 "Honors Work in (the major department or program)."

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 seven days before the beginning of the final examination period of the student’s first semester of the 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). In the case of 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 mid-year by a project committee consisting of the chair of the major department or program, the project adviser, one additional department reader, and one outside reader appointed by 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 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 will be denied admission to Candidacy for Honors. Students should consult with their project adviser for departmental/program evaluation policy.

If admitted to Candidacy for Honors, the student shall register 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 completed project report must be delivered to the chair of the major department or program at least fifteen 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.

During the semester or semesters the student is engaged in Honors Work, he or she is not allowed to carry more than 12 credit hours in addition to Honors Work. A student enrolled in Honors Candidacy is excused from all regular final examinations of the last semester of the senior year.

Students whose major requires completion of a senior project or who are preparing a major independent project for Christ College, 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 should be followed.

Cooperative Education

Cooperative Education in the College of Arts and Sciences is a program in which students combine professional, practical work experience with their academic programs. Students may be employed in full-time (called alternating) and part-time (called parallel) placements. 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. Students are eligible when they have completed two semesters in residence and have a minimum cumulative grade point average of 2.500.
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

*Normally, a full semester, 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 hours.
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

**Freshman Seminar 100.** Cr. 3. A limited enrollment course offered on a variety of topics and taught by faculty from across the University, Freshman Seminar introduces students to methods of study and inquiry central to a liberal education. By teaching skills of critical reading, thinking and writing, and integrating these with skills of oral presentation and productive discussion, the course encourages students in their learning and prepares them for lively participation in their academic careers. Students who transfer into the University with 24 or more semester hours of credit are excused from the seminar.**

**Note:** Courses 330 and 335 are available in Overseas Study Centers only.

**GS 330. Cambridge Tutorial: English Life and Culture.** Cr. 3. Tutorial studies in aspects of English life and culture. Bi-weekly essays and meetings with tutor. Cambridge Center only.

**GS 335. Reutlingen Tutorial: German Life and Culture.** Cr. 3. Tutorial studies in aspects of German life and culture. Bi-weekly essays and meetings with tutor. Reutlingen Center only.

**Cooperative Education 381.** Cr. 0.5-3. This course is a pre-arranged, 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 2.5, and the approval of the Coordinator of Cooperative Education.

**Cooperative Education 382-383.** 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 Cooperative employer(s). This course may be repeated beyond 383 for additional credit, subject to the guidelines of the College, as stated on pages 42-43.

**Group Studies 395. Independent Group Study Project.** Each sem. Cr. 1-3. An independent group project is conducted on a topic selected by the group. 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 as a group on an academic project. A proposal for an independent group 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.

**Integrative Studies Requirement (University Course).** Cr. 3. Taken in the student's junior or senior year.

The Integrative Studies requirement may be fulfilled by taking either a course listed as UC 400, or a 300 or 400 level course outside of the student's major or minor fields. Courses which may not be used are: co-op courses, internships, independent studies, or applied, methods, laboratory, or studio courses.

The course taken to fulfill the Integrative Studies requirement must be taken on the Valparaiso University campus or as part of an approved off-campus program. The course may not fulfill another General Education requirement except for Non-Western/Third World, International Economics and Cultural Affairs, American Studies, and East Asian Studies majors may not choose for this requirement any course listed as a requirement or option for completing their major. Mathematics majors may not choose a course in Computer Science.

*Students enrolled in the Christ College Freshman Program are exempted.*
and Computer Science majors may not select a course in Mathematics to fulfill the Integrative Studies requirement.

**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. A survey of three or four important urban policy areas giving special attention to issues being publicly discussed during the current semester. The course relies on presentational 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. Graded either A–F or S/U at the student's choice upon entry into the program.

- **GS 395. Independent Study Project.**
  - Cr. 4. Each student pursues one topic from his Chicago experience under the supervision of an individual 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 other 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.

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**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 course in Non-Western or Third World Studies. Appropriately designated Non-Western or Third World Studies 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), except in the case of specified four-credit courses comprised of two two-credit components.

3. Courses taken to fulfill major requirements 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 125, 128, 225, 229, and 290 may be applied toward degree requirements.

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 110.

4. No more than 48 credit hours in any one department may be applied toward the total of 124 credit hours required for graduation. This limitation does not apply to students pursuing double majors in Mathematics and in Computer Science in the Department of Mathematics and Computer Science, vocational certification in home economics, the Bachelor of Music or Bachelor of Music Education degrees or to students pursuing the degree
Bachelor of Science in Fine Arts who present at least 62 non-art credit hours.

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. For students in the Home Economics-Merchandising Programs or students in the Music Enterprises Program, required courses beyond the 15 credit hour limitation are allowed.

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.
American Studies

Administrative Committee:
Professor Feaster (English, Chair); Professors Albers (Theology), Janke (Geography), Sponberg (English), Trost (Political Science); Associate Professors Brauer (Art), Kohlhoff (History), Martinson (Sociology), and Piehl (Christ College).

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 materials that reach 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; the Sloan Art Gallery, and the Washington Semester Program (page 14), which allows students to spend a semester in Washington, DC, and intern at such institutions as the National Archives and the Smithsonian.

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 adviser 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.

Honors Work may be undertaken in American Studies with appropriate approval. Students should register for American Studies (AMST) 497, Honors Work in American Studies, and 498, Honors Candidacy in American Studies (see page 41).

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.

<table>
<thead>
<tr>
<th>Program Core</th>
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<tbody>
<tr>
<td>Art 320 or 321—American Painting or American Architecture</td>
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<tr>
<td>English 401 and 402—American Literature</td>
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<tr>
<td>Geography 474—Historical Geography of the U.S.</td>
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<tr>
<td>History 220 and 221—American History</td>
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<tr>
<td>Political Science 120—Government of the U.S.</td>
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<tr>
<td>Theology 324—The American Religious Experience</td>
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</tbody>
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<tr>
<th>Elective Courses</th>
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<tbody>
<tr>
<td>Art 311—Modern Art since 1945</td>
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<tr>
<td>Christ College 340—America at the Movies</td>
</tr>
<tr>
<td>Christ College 365, Seminar—Modern American Social Thought</td>
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<tr>
<td>Christ College 375, Seminar—Literature of the American Dream</td>
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<tr>
<td>Communication 337—American Theatre</td>
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<tr>
<td>Economics 360—Economic History of the U.S.</td>
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<tr>
<td>English 465—Studies in American Literature</td>
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<tr>
<td>English 490—Topics in Literature</td>
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</table>

Note: the Department of English offers courses under both 465 and 490 that are applicable to the American Studies Program. Recent offerings include Literature of the South, The American Dream, Literature and History of the 1920's in America.

<p>| Geography 174—North American Indian | 3 Cr. |
| Geography 310—Regional Geography of the United States and Canada | 3 Cr. |
| History 321—The American Revolution, 1763-1789 | 3 Cr. |
| History 322—Slavery, Abolitionism and Sectionalism, 1815-1860 | 3 Cr. |</p>
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>History 323</td>
<td>Civil War and Reconstruction</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 324</td>
<td>Depression and War: United States, 1929-1945</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 325</td>
<td>The Age of Anxiety: The United States Since 1945</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 326</td>
<td>American Constitutional History</td>
<td>3 Cr.</td>
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<tr>
<td>History 327</td>
<td>History of American Political Parties</td>
<td>3 Cr.</td>
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<tr>
<td>History 493</td>
<td>Research Seminar</td>
<td>3 Cr.</td>
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<tr>
<td>Philosophy 270</td>
<td>Philosophical Topics: American Philosophy</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Philosophy 370</td>
<td>Analytic and Contemporary Anglo-American Philosophy</td>
<td>3 Cr.</td>
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<tr>
<td>Political Science 220</td>
<td>State and Local Politics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Political Science 320</td>
<td>Problems in State and Local Politics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Political Science 325</td>
<td>Problems in American Politics</td>
<td>3 Cr.</td>
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<tr>
<td>Political Science 350</td>
<td>Problems in Political Philosophy: American Democratic Thought</td>
<td>3 Cr.</td>
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<tr>
<td>Political Science 340</td>
<td>Constitutional Law I</td>
<td>3 Cr.</td>
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<tr>
<td>Political Science 341</td>
<td>Constitutional Law II</td>
<td>3 Cr.</td>
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<tr>
<td>Political Science 326</td>
<td>The Presidency</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Political Science 327</td>
<td>Congress</td>
<td>3 Cr.</td>
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<tr>
<td>Sociology 330</td>
<td>When one of the following topics is offered:</td>
<td>3 Cr.</td>
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<tr>
<td>Sociology 320</td>
<td>Social Class and Life Styles</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Sociology 495</td>
<td>The American People</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Theology 325</td>
<td>History of Lutherans in America</td>
<td>3 Cr.</td>
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</table>

Note: The Department of History frequently offers seminars that are applicable to the American Studies Program. Recent offerings include The American South, The Jim Crow Era, Slavery in the Americas, American Social Reform, History of American Thought, The Cold War.
Art

Associate Professors Brauer, Frey, Strimbu (Acting Chair); Assistant Professors Corazzo, Morgan, Sirko.

The Valparaiso University Art Department offers instruction in basic design, graphic design, drawing, painting, photography, printmaking, sculpture, ceramics, art of fiber, art education and art history. Interdisciplinary majors are possible which combine these areas with such fields as journalism, interior design, drama, marketing 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. The University has the endowed Sloan Collection of American Paintings and an active exhibition program.

A major in art may lead to careers in the fine arts and related fine art 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 121, 132, 133, 101, 102, 221, and 251. The Bachelor of Science in Fine Arts degree requires 54 credit hours of art; see page 37.

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. in 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. Art 121, 132, 133, and either 101 or 102 must be included.

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 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 37 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 adviser in the Education Department concerning state and University Requirements.

ART HISTORY

101. Art History I.
   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/Literature component of the general education requirements.

102. Art History II.
   Cr. 3. A survey of art history from the Renaissance to the present. Field trip. This course may be used to fulfill the Fine Arts/Literature component of the general education requirements.

311 /511. Topics in the Theory and History of Art.
   Cr. 1-4. An investigation of major periods or development in the visual arts. Included may be historical topics such as modern art since 1945, art and religion in the Modern period, or theory topics such as aesthetics or color. Field trip. May be repeated for credit provided topic is different. This course may be used to fulfill the Fine Arts/Literature component of the general education requirements.

317 /517. 17th and 18th Century European Art.
   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/Literature component of the general education requirements. Prerequisite: junior standing or approval of the Chair of the Department.

318 /518. 19th Century European Art.
   Cr. 3. A seminar course tracing major themes in 19th century European art. This course may be used to fulfill the Fine Arts/Literature component of the general education requirements. Prerequisite: junior standing or approval of the Chair of the Department.
Cr. 3. 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.

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 architectural 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.

STUDIO

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.

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

133. Design II.
0+6, Cr. 3. A continuation of Design I. Field trip.
Prerequisite: Art 132.

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

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.

162. Photography.
0+6, Cr. 3. Problems in forming photographic
images for expressive aesthetic purposes with
instruction in camera and darkroom techniques.
Field trip.

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.

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

231. Graphic Design I.
0+6, Cr. 3. Problems in visual communications
focused on the language of form. Emphasis is
placed on typography and an introduction to
computer aided design. Field trip.

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

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 133 or consent of the instructor.

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

0+6, Cr. 3. A study of more advanced
techniques and problems in photography. Field
trip. Prerequisite: Art 161.

263. Filmmaking for the Beginner.
Cr. 3. A course in Super-8 filmmaking for the
beginner. Aesthetic and practical aspects of
filmmaking are considered. Students must own or
rent their own cameras and meet costs of film
processing. Enrollment limited to fifteen students.
Field trip.

265. Photojournalism.
Cr. 3. Study of photography for publications,
camera and darkroom techniques. Principles and
production of single photographic images, photo
series, photographic essays, the photo layout,
and slide/sound presentation. Field trip.

271. Printmaking.
0+6, Cr. 3. Offering may be in relief printing,
tiagio techniques (etching, aquatinting, drypoint)
or silk screen printing. Check with department for
specifics. Course may be repeated to cover
different topics. Field trip. Prerequisite: Art 121.

0+6, Cr. 3. Continuation of Art 161 emphasizing
more advanced techniques. Field trip.
Prerequisite: Art 271.

274. Art of Fiber.
0+6, Cr. 3. A basic course in fiber manipulation,
including loom weaving, tapestry, coiling. Field
trip.

0+6, Cr. 3. Advanced techniques and problems
in the art of fiber. Field trip. Prerequisite: Art 274.

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

341. Elementary School Art—Methods and Materials Workshop.
0+6, Cr. 3. A basic course providing the prospective teacher with studio experiences in the selection, organization and use of two- and three-dimensional art and craft materials for the elementary school. This course may not be counted toward a minimum major or a minor in art. Field trip.

342. Secondary and Middle School Art—Methods and Materials Workshop.
0+6, Cr. 3. A basic course providing the prospective teacher with studio experiences in the selection, organization and use of two- and three-dimensional art materials for the middle, junior and senior high schools. This course may not be counted toward a minimum major or minor in art. Field trip.

489. The Teaching of Visual Arts.
Cr. 2. (See Education 489.) A study of the methods of teaching art in the secondary schools. This course may not be counted toward a major or minor in art. Field trip. Prerequisite: admission to Supervised Teaching.

SPECIAL STUDIES

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 S/U grade option may be stipulated at the beginning of the course. May be repeated for credit. (Graphic Design internship is taken S/U only.) 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 graduates: undergraduate art major or consent of instructor.

493. Senior Seminar.
Cr. 3. Independent work in a studio major's specialized program, combined with participation in group discussion and other 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.

497. Honors Work in Art.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Art.
Cr. 3. See Honors Work, page 41.
Biology

Professors F. Meyer, Tan (Chair); Associate Professors Davis, Hicks, Marks; Assistant Professors Edinger, Scupham.

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 focus of biology may be at many levels: molecular, cellular, organismic, population, community, ecosystem. The department's program of study provides an introduction to each of these levels. Moreover, it is designed to meet the requirements of students who desire to do graduate study in one of the biological sciences, who plan to enter professional schools, who plan a teaching career in biology or who will work in industrial or governmental positions.

Pre-Medical Arts Programs. A major in Biology is an appropriate preparation for entrance 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.

Major. A minimum of 28 credit hours in biology is required for the Bachelor of Arts degree. Courses must include Biology 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, physics or psychology). Courses must include Biology 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 Liberal Arts Business Minor, a science minor, or an education minor. Courses must include Biology 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 Biology 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 Biology 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 Biology 290 to 498.

Majors must include general chemistry and organic chemistry in their programs. It is most appropriate for Biology majors to include in their plans of study courses in physics, mathematics, statistics and additional chemistry. The most appropriate foreign languages for biology majors are German and French. Majors desiring a Bachelor of Science degree must include a calculus course or Mathematics 114 (or its equivalent) or Computer Science 115 (or the equivalent) in their programs.

Minor. A minimum of 16 credit hours in biology constitutes a minor. Two options are offered.

General Biology Minor. Courses must include Biology 171, 172, 270 and four additional credit hours from Biology 290 to 493.

Human Biology Minor. Courses must include Biology 151, 152 and eight additional credit hours from Biology 210 to 493.

Biology Club. Students with an interest in biology are invited to join the Biology Club.

Approval of Schedules. All students taking a major or minor in biology and all students planning to teach biological subjects must have their schedules approved by the Chair of the Department at the beginning of each semester.

Note: Entering students who satisfy requirements for Biology 171 or equivalent by passing a departmental placement
examination, the College Level Examination Program (CLEP) examination in Biology, or the Advanced Placement Examination (AP) in Biology are granted 4 credit hours toward graduation.

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 requirement in Natural Science. Not open to students who have received credit for Biology 151 or 171.

151. Human Biology I.
3+3, Cr. 4. An introductory study of the physiochemical nature of cells and tissues, cell division and human genetics, the musculoskeletal system, the nervous system and special senses and the endocrine system and chemical control. May be used for partial fulfillment of the general education requirement in Natural Science. May not be counted toward graduation by students who have taken Biology 171.

152. Human Biology II.
3+3, Cr. 4. A continuation of Human Biology I. A study of hematology and the anatomy and physiology of the following organ systems: cardiovascular, respiratory, digestive, excretory and reproductive. May be used for partial fulfillment of the general education requirement in Natural Science. Prerequisite: Biology 151.

171. Unity of Life.
3+3, Cr. 4. A study of organic molecules, cells, tissues and organs for biology majors and minors. Emphasis is placed on the principles which unify all living forms: structure, energetics, physiology, inheritance and development. May be used for partial fulfillment of the general education requirement in Natural Science. May not be counted toward graduation by students who have taken Biology 151.

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 and ecology, evolution and the social and economic importance of representative members. May be used for partial fulfillment of the general education requirement in Natural Science. Prerequisite: Biology 171.

210. Microbiology.
3+3, Cr. 4. A study of bacteria, viruses and selected fungi. Major emphasis is given to understanding infectious disease and immunology. Prerequisites: Biology 151 or 171 and Chemistry 111 or 121.

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 requirement in Natural Science. Prerequisite: Biology 171.

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.

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

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: Biology 270.

340. Field Biology: Fall.
2+4, Cr. 3. This course is designed to acquaint students with organisms they are likely to encounter in the field 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: Biology 172.

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/or birds, the most abundant organisms at this time, but in the field attention is paid to other common or conspicuous organisms. Prerequisite: Biology 172.

370. Human Environmental Biology.
Cr. 3. A study of the relationships between humans, technology, and the environment. Emphasis is placed on ecological principles, human population growth, resources, and pollution. Prerequisite: junior standing.

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

3+3, 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. Prerequisite: Biology 172 and preferably a prior field course.

450. Microbial Genetics.
3+3, Cr. 4. A study of microorganisms with particular emphasis on processes unique to their physiology and genetics. Topics include prokaryotic biochemistry, immunology, and genetic engineering with medical and pharmacological applications. Laboratories emphasize standard microbiological techniques as well as recent advances in cloning and
molecular genetics. Prerequisites: Biology 270 and Chemistry 211 or 221.

460. Cell Physiology.
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 and cell organelles, energy conversion and synthesis, membrane transport, excitability and contraction. Prerequisite: Biology 171 and Chemistry 211 or 221.

489. The Teaching of Natural Sciences.
Cr. 2. (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. Prerequisite: admission to Supervised Teaching.

493. Seminar in Biology.
Cr. 1. Student and staff presentation and discussion of selected topics in biology. Current topics are Biology of Algae, Cancer, Economic Botany, Endocrinology, Genetic Toxicology, Human Evolution, Somatic Cell Genetics, Immunology, Mechanisms in Morphogenesis, Protozoology, Temperature regulation, Viruses. 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.

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

497. Honors Work in Biology.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Biology.
Cr. 3. See Honors Work, page 41.
British Studies

Administrative Committee:
Professor Startt (History, Chair);
Professors Henderson (Economics),
Sponberg (English), Trost (Political Science).

An area minor in British Studies may be presented in partial fulfillment of the major field requirements for the Bachelor of Arts degree under a Major Option.

Objectives. The British Studies Minor affords students an opportunity to study a body of knowledge as broad in scope as it is significant for the modern world. Great Britain has been the major laboratory not only of democracy but also of social reform, industrialization and the development of economic and political theory. Its widely acclaimed genius in the literary arts has been matched by its political leadership and by advances made in social experimentation. Moreover, in developing the idea of constructive political evolution as opposed to revolution, it advanced one of the great political ideas of the last several centuries. The study of such experience and achievement, however, exceeds traditional disciplinary boundaries. Therefore the interdisciplinary program approach is a logical and feasible way to structure a minor in this field of study.

Requirements. A minimum of 24 hours constitutes a minor. Courses must include four from the required Core Courses (12 credit hours) and at least four elective courses (12 credit hours).

Program Core

Economics. Select one of the following three courses ................................................. 3 Cr.

- Economics 365—Modern European Economic History
- Economics 370—History of Economic Thought
- Economics 375—History of Socialist Economic Thought

English 456—The Novel ................................................. 3 Cr.

History. Select one of the following two courses ................................................. 3 Cr.

- History 313—History of Modern England
- History 351—Survey of English History and Culture. Cambridge Center only

Political Science 130—Comparative Politics ................................................. 3 Cr.

Elective Courses

Core courses which are repeated below may be chosen as electives when they are not selected as core courses.

Economics 365 ................................................. 3 Cr.
Economics 370 ................................................. 3 Cr.
Economics 375 ................................................. 3 Cr.
Economics 390 ................................................. 3 Cr.

Topics in Economics:
The Department of Economics may offer topics that are applicable to the British Studies Program.

English 409—Literature of the Medieval Period ................................................. 3 Cr.
English 410—Shakespeare ................................................. 3 Cr.
English 420—Literature of the Sixteenth and Seventeenth Centuries ................................................. 3 Cr.
English 430—Literature of the Restoration and Eighteenth Century ................................................. 3 Cr.
English 450—Nineteenth Century British Literature ................................................. 3 Cr.

History 313—History of Modern England ................................................. 3 Cr.
History 314—British Imperial Experience ................................................. 3 Cr.
History 351—Cambridge Center only ................................................. 3 Cr.
History 390—Topics in History ................................................. 3 Cr.

History 492—Seminars ................................................. 2-3 Cr.
History 495—Supervised Study ................................................. 2-3 Cr.

Note: the Department of History frequently offers topics in courses 390, 492 and 495 that are applicable to the British Studies Program. Recent topics include The History of Journalism in Its Anglo-American Setting; Selected Readings in Historical Literature.

Philosophy 225 ................................................. 3 Cr.

- History of Renaissance and Enlightenment Philosophy

Political Science 330 ................................................. 3 Cr.

- Politics of Industrialized States: British Politics

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Chemistry

Professors Cook (Chair), Kosman, Leoschke, Nagel; Assistant Professors Engerer, Goyne.

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. A student may choose to work toward a Bachelor of Arts degree which requires at least 24 credit hours in chemistry, a Bachelor of Science degree which requires at least 32 credit hours in chemistry or a Bachelor of Science degree in professional chemistry which requires at least 40 credit hours in chemistry.

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

1. Bachelor of Arts degree—A minimum of 24 credit hours in chemistry is required. Courses must include Chemistry (122 or 131), 222 and 230. A combination of this major with a minimum minor in another science can lead to a Bachelor of Science Degree (see page 39).

2. Bachelor of Science degree—A minimum of 32 credit hours in chemistry are required. Courses must include Chemistry (122 or 131), 124, 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 Chemistry (122 or 131), 124, 222, 230, 322, 332, 421, three credits selected from (303, 304 and 495), and one advanced course selected from 315, 316, 390, 440, 450, 460, 495 and 496. German is the recommended foreign language. With the approval of the Chair of the Department, the chemistry elective may be the Honors Work sequence, Chemistry 497 and 498.

Biochemistry Concentration. Within either of the two Bachelor of Science degree options listed above, a student may choose to have a biochemistry concentration. This concentration requires the following courses: Chemistry 316 and 317, Biology 171 and 270 along with the courses listed above. In the Professional Chemistry program, only one credit is required from courses 303, 304 or 495.

Minor. A minimum of 16 credit hours in 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 Chemistry 222 with a cumulative grade point average of 2.5 in their mathematics and science courses.
(For further information, refer to Cooperative Education, College of Arts and Sciences, page 42.)

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. Students who pass the Chemistry Placement Examination (4 Cr.) and successfully complete Chemistry 131 (4 Cr.) are granted 8 credit hours toward graduation.

111. General Chemistry.#  
3+2, Cr. 4. Intended for students who elect chemistry to meet one of the natural science requirements. It is a study of the principles of chemistry. Students taking a major or minor in Elementary Education, Home Economics, Nursing or Physical Education should take this course to meet their chemistry requirement. Not open to students who have taken Chemistry 121.

112. General Chemistry.#  
3+2, Cr. 4. A continuation of Chemistry 111. It includes the study of organic chemistry and biochemistry. Not open to students who have taken Chemistry 122. Prerequisite: Chemistry 111 or 121.

115. General Chemistry.  
3+2, Cr. 4. Similar to Chemistry 121 except for laboratory hours. For engineering students.

116. General Chemistry.  
3+0, Cr. 3. Similar to Chemistry 122 but without laboratory and with more emphasis on organic chemistry. For engineering students. Prerequisite: Chemistry 115 or 121.

121. General Chemistry.#  
3+3, Cr. 4. An introductory course in the fundamental principles of chemistry designed primarily for students who wish to pursue a scientific vocation. It is required of majors and minors in chemistry and students in pre-medical, pre-dental or medical technology programs except for students who take Chemistry 131.

122. General Chemistry.#  
3+3, Cr. 4. A continuation of Chemistry 121. Semi-micro inorganic qualitative analysis is included in the laboratory work. Prerequisite: Chemistry 121.

124. Inorganic Chemistry.  
1+0, Cr. 1. An introduction to the reactions and properties of the elements and their compounds. Prerequisite: Chemistry 121 or 131.

131. General Chemistry.  
3+3, Cr. 4. An accelerated introductory course in the fundamental principles of chemistry for students with a strong background in chemistry. The laboratory includes semi-micro inorganic qualitative analysis. This is the introductory course that would normally be taken by the student planning to enter the chemical profession or graduate work in chemistry. Admittance by Departmental Placement Examination.

160. Symmetry in Chemistry.  
7 weeks. Cr. 1. A qualitative introduction to the significance of symmetry in chemistry including the topics of molecular geometry, symmetry elements and operations, Schoenflies point group classification and molecular orbital nomenclature. Prerequisite: Chemistry 122 or 131. S/U grade.

221. Organic Chemistry I.  
3+3, Cr. 4. An introductory survey of the nomenclature, reactions, structures and properties of carbon compounds. Prerequisite: Chemistry 122 or 131.

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

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: Chemistry 122 or 131.

303. Organic Instrumental Analysis.  
0+6, Cr. 2. Experiments involving theory and use of modern instrumental techniques to separate and identify organic compounds. Instruction both on the use of the instruments and on the interpretation of results. Prerequisite: Chemistry 222.

304. Chemical Synthesis.  
Cr. 1-2. Consists of conducting experiments involving the synthesis and characterization of complex organic or inorganic compounds demonstrating a variety of synthetic techniques. Prerequisite: Chemistry 222.

305. Elementary Biochemistry.  
4+0, Cr. 4. The chemistry of proteins, carbohydrates, fats and nucleic acids, and the changes these undergo during processes of digestion and metabolism. This course is designed for premedical arts students needing a one-semester survey of biochemistry. Prerequisite: Chemistry 222 or consent of the instructor.

311. Elementary Physical Chemistry.  
3+3, Cr. 4. A one-semester course in physical chemistry covering elementary thermodynamics and kinetics, together with their applications to various chemical systems. Prerequisites: Chemistry 221 and 230 or equivalent. Not open to students who have taken Chemistry 321.

315. Biochemistry I.  
Cr. 3. Structure and function of proteins, carbohydrates and lipids with particular stress on physical biochemistry and enzyme kinetics. Overview of metabolism with an emphasis on integration and control. Prerequisite: Chemistry 121 or 122 (or 111 and 112) may be earned through the College Level Examination Program subject examination in General Chemistry.

#Credit for Chemistry 121 and 122 (or 111 and 112) may be earned through the College Level Examination Program subject examination in General Chemistry.
Continuation of Chemistry 381. (may be concurrent) or consent of instructor.

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

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

321. Physical Chemistry I.
3+3, Cr. 4. A theoretical study of chemistry involving thermodynamics, kinetics and modern structural concepts. Prerequisites: Chemistry 221 and 230; 230 may be taken concurrently; Mathematics 152 or equivalent, Physics 142.

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

332. Analytical Chemistry.
2+4, Cr. 3. A study of the theory and practice of instrumental techniques including computerized data acquisition and analysis. Prerequisite: Chemistry 322 (may be taken concurrently).

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.

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

390. Topics in Chemistry.
Cr. 3-4. A study of various topics in chemistry. Prerequisite: dependent upon the topic.

393. Seminar in Chemistry.
Cr. 0. (Concurrent with 493-494). Recommended for all junior 40-credit-hour majors. They are expected to participate in discussions but are not required to present a report. Interested freshmen and sophomores are invited to attend. S/U grade.

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: Chemistry 222 and 311 or 321 (may be taken concurrently).

440. Polymer Chemistry.
Cr. 3. An introduction to the study of macromolecules: their preparation, properties, reaction and uses. Emphasis is on synthetic macromolecules. Prerequisite: Chemistry 222.

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: Chemistry 222 and 322.

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: Chemistry 322 or consent of the instructor.

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

489. The Teaching of Natural Sciences.
Cr. 2. (See Education 489.) A study of the methods of teaching natural sciences in the secondary schools. Lectures, demonstrations and projects. This course may not be counted toward a major or minor in chemistry. Prerequisite: admission to Supervised Teaching.

493. Seminar in Chemistry.
Cr. 1. Recommended for all senior 40-credit-hour chemistry majors. Each student must prepare and present a report on a special topic in chemistry. Participation in discussion of other topics is expected. S/U grade.

494. Seminar in Chemistry.
Cr. 1. Recommended for all senior 40-credit-hour chemistry majors. A continuation of Chemistry 493. S/U grade.

495. Special Problems in Chemistry.
Cr. 1-2. 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. Prerequisite: consent of Chair of the Department.

496. Special Problems in Chemistry.
Cr. 1-2. A continuation of Chemistry 495. Prerequisite: Chemistry 495.

497. Honors Work in Chemistry.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Chemistry.
Cr. 3. See Honors Work, page 41.
Communication

Professor Flahive; Associate Professors Galow, Kocher (Chair), N. Meyer, Paul, Pick; Assistant Professors Guse, Nantau, Serpento; Instructor S. Venturelli; Adjunct Instructors R. Paul, Wignall, and Wolfe.

The Department of Communication focuses on teaching the process of communication as it applies to the several fields it represents: journalism, public relations, theatre, speech, and communicative disorders. 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.

The Communication major allows specialization in several areas at the junior and senior levels, including print and broadcast journalism and public relations. Core course and sequencing requirements permit flexibility in arranging a program which focuses on individual student interests in communication.

Major. The Communication major consists of 36 credit hours selected as follows; All students must complete a minimum of 30 credit hours in one of the concentration areas as follows:

Required core: Communication 101, 201, 369, 386 and 460; at least 6 hours and no more than 10 from the following, normally taken during the sophomore year: 243, 250, 251, 252, 261, and 265; 6 to 9 credit hours, normally taken during the junior and senior years, selected from the following: 290, 342, 338, History 390: American Journalism, and Political Science 390: Propaganda; and 6 credit hours taken during the junior and senior years, selected from the following: 247, 262, 263, 266, 344, 353, 354, 356, 357, 358, 367, 368, 374, and 390.

The Department also administers two self-standing programs, each requiring 30 credit hours:

Program in Theatre and Television Arts. Required courses are Communication 141, 149, and 460. Also must include Communication (130 or 131), (135 or 236), two from (238, 239, or 337), (250 or 251), and two from (357, 358, or 431).

Program in Communicative Disorders. Required courses are Communication 145, Communicative Disorders 120, 121, 122, 123, 225, and 228; seven credit hours from 226, 227, 320, 321, 322, 326, 427, and 429.

For both programs, a projected course sequence plan of study should be submitted to the program adviser in the department by the first semester of the junior year. Total credit hours in the department may not exceed 48. Students may not double major in either Theatre and Television Arts or Communicative Disorders and Communication.

Minor. A Communication minor is 18 credit hours consisting of Communication 101, 201, 261, and nine hours of Communication electives approved by the Chair of the department. A minor in Theatre and Television Arts must include Communication 130, 131, 135, 141; one from (238, 239, or 337), and one from (251, 357, or 431). A minor in Communicative Disorders consists of Communicative Disorders 120, 121, 122, 123, 225, and 228.

Students may not count a minor in the Department of Communication for purposes of graduation if they are majoring in Communication, Theatre and Television arts, or Communicative Disorders or if they declare one of those majors later.

Teaching Programs. Students who plan to teach journalism or speech communication and theatre in secondary schools with a major or minor in Communication 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 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 42.)

**Degree.** Students completing the Communication major or either of the department programs, together with the degree requirements of the College of Arts and Sciences, fulfill requirements for the Bachelor of Arts degree.

**Approval of Schedules.** All students pursuing a major or minor in Communication must have their schedules approved by their adviser at the beginning of each semester.

**SPECIAL OPPORTUNITIES**

**Television/Radio Studio.** The Department teaches all television and radio classes in its new studio. The studio is fully equipped for all levels of production and provides a quality laboratory experience. Students are also placed as interns in television and radio studios in the area.

**The University Theatre.** Additional training and experience in acting and in dramatic production are provided by the University Theatre. (Further information about the University Theatre can be found on page 24 of this bulletin.) Since the University Theatre serves as a laboratory for courses in theatre, theatre students are required to work a minimum number of hours on productions each year. The number of hours is determined by the departmental faculty.

**Speech, Language and Hearing Clinic.** The clinic is a service offered by the Department to persons in the University and the community with communicative disorders. It also serves as a laboratory for the courses in Communicative Disorders. Anyone interested in remedial speech, language, and hearing work should consult the Clinic Coordinator.

Students enrolling in any of the department's laboratory or technical courses are financially responsible for breakage or damage to equipment.

**Student Organizations.** Students with an interest in journalism are invited to join the Society for Collegiate Journalists. Those with an interest in communicative disorders are invited to join the National Student Speech, Language, and Hearing Association.

**COMMUNICATIVE DISORDERS**

120. **Introduction to Communicative Disorders.** Cr. 3. An introductory study of the nature and treatment of disorders of speech, language and hearing.

121. **Anatomy and Physiology of Speech and Hearing.** Cr. 3. A study of the neurology of speech and language and hearing; the systems of respiration, phonation and articulation; the endocrine gland system.

122. **Phonetics.** Cr. 2. A study of the international phonetic alphabet, the perception and the production of speech sounds.

123. **Speech and Hearing Science.** Cr. 2. An introduction to the processes of respiration, phonation, acoustics, source filter theory and speech and hearing perception.

124. **Sign Language.** Cr. 3. An introduction to the history, terminology, and basic skills of manual communication.

125. **Language Development.** Cr. 3. The study of developmental psycholinguistics including transformational grammar.

126. **Language Disorders.** Cr. 2-3. The nature, assessment and treatment of the delayed onset of speech and language development.

127. **Articulation and Phonological Disorders.** Cr. 2-3. The diagnosis and treatment of functional and organic disorders of articulation.

128. **Audiology.** 3+2, Cr. 4. An introductory study of basic techniques of puretone and speech audiometry, anatomy and physiology of hearing, pathologies of the ear and acoustics. Laboratory training with clinical audiometer simulators for diagnosing hearing disabilities and assessing treatment.

320. **Aphasia.** Cr. 2-3. The diagnosis and treatment of the impairment of symbolization caused by brain damage.


322. **Fluency Disorders.** Cr. 2-3. The nature and treatment of stuttering and cluttering.
Cr. 1.
0+2. Students observe and study actual therapy. This course is an orientation in procedures of the Speech, Language, and Hearing Clinic and preparation for 427. Clinical Practice. It should be taken in the semester immediately preceding the course in Clinical Practice.

427. Clinical Practice.
Cr. 1 or 0+4.
0+2. Supervised clinical experience in the evaluation and treatment of communicative disorders. Prerequisites: consent of Clinic Director and 3.0 average in Communicative Disorders courses. May be repeated for credit. Students will complete a senior presentation to fulfill course requirements prior to graduation.

429. Diagnostic Practice in Communicative Disorders.
Cr. 1-2.
The study and practical use of many contemporary tests used by the speech-language pathologist. Includes articulation and language tests, voice, stuttering and speech mechanism evaluations. Includes formal and informal evaluation procedures. Prerequisite: Communicative Disorders 427. May be repeated for credit.

COMMUNICATION

101. Media Presentation.
Cr. 3.
An introduction to a variety of media writing contexts, including news, public relations, and writing for public speaking. Students will also be expected to make oral presentations. Primarily intended for Communication majors as preparation for more advanced coursework in the department.

130. Makeup and Costume.
Cr. 3.
2+2. An introduction to the design and practice of stage and studio costumes and makeup, with discussion of materials, equipment and historical background.

131. Scenery and Lighting.
Cr. 3.
2+2. An introduction to the design and practice of scenery building, lighting for the stage and studio, and production management.

133. Theatre Practicum.
Cr. 3.
0+2. Creative work in the backstage production of plays in the University Theatre. This course may be taken more than once for a maximum of six credit hours.

135. Acting I.
Cr. 3.
2+2. A basic course in the theory and technique of acting.

140. Public Speaking.
Cr. 2.
Fundamental principles of organization, generation of argument, use of language and components of delivery for effective construction and performance of messages in a variety of speechmaking experiences.

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.

145. Interpersonal Communication.
Cr. 3.
A study of human communication dealing with intrapersonal, dyadic, small group and non-verbal areas. Students participate in a variety of semi-structured and pre-structured communication events.

149. Introduction to Mass Media.
Cr. 3.
A course in the history, development and functions of mass media in society. Offered for the last time in Spring 1991.

201. Historical Development of Communication.
Cr. 3.
This course surveys the contexts and development of print, public relations, electronic media, and rhetorical history. Developments in each area will focus on the larger governmental, economic, and social contexts within which each operates. Prerequisites: Communication 101 and sophomore standing.

236. Acting II.
Cr. 3.
A continuation of study in the theory and technique of acting. Prerequisite: Communication 135.

238. World of Theatre I.
Cr. 3.
An introduction to the history and literature of the theatre from the ancient Greeks 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.

239. World of Theatre II.
Cr. 3.
An introduction to the history and literature of the theatre from 1700 to the present. 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.

Cr. 3.
A study of public communication in a variety of structured settings. Students participate in public interviews as well as deliver informative speeches, persuasive speeches, special occasion speeches and rhetorical criticism.

246. General Semantics.
Cr. 3.
A non-Aristotelian consideration of the relationships between language and human behavior, including an examination of pathological language usage.

247. Persuasion.
Cr. 3.
A study of motivational communication. This course includes theories of persuasion and offers structured experiences for the producer and consumer in the persuasive process.

250. Radio Production.
Cr. 3.
A practical course in radio production. Production planning, scripting, using sound effects, recording, mixing, editing and performing. Prerequisite: Communication 101 or 149.
251. Television Production. Cr. 3. A practical course in television production. Students produce programs and acquire experience in all facets of production, including scripting, shooting, editing and performing. Prerequisite: Communication 101 or 149.

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: English 100 or consent of the instructor.

261. News Writing. 2+4, Cr. 4. A course in the fundamentals of news writing and news gathering. Practice in writing various types of news stories; problems of in-depth writing and reporting; introduction to newspaper organization and methods. Laboratory and field work. Prerequisite: English 100 or equivalent.

262. Copy Editing. Cr. 2. A course in copy editing, headline writing and newspaper make-up. Basic principles of news evaluation, photo editing and introduction to newspaper layout. Laboratory practice. Prerequisite: Communication 261 or consent of the instructor.

263 (formerly 370). Advanced News Practice. Cr. 3. A course for the advanced journalism student, comprising in-depth reporting, opinion and editorial writing, specialized writing. Prerequisite: Communication 261 or consent of the Chair of the Department.

265. Principles of Public Relations. Cr. 3. Survey of the history, development, principles and practices of public relations; investigation of public relations ethics, relationships and role in mass media and society; case studies and experiments in public relations practices. Prerequisite: Communication 101 or 149.

266. Feature Writing. Cr. 3. A course in human interest writing. Creative news writing emphasizing originality of style and imaginative treatment in composition of news features and the personality sketch. Laboratory practice. Prerequisite: Communication 261 or consent of the Chair of the Department.

290. Topics in Communication Cr. 3. Specific topics based on interests of students and faculty. Topics may vary from one semester to another. May not be repeated for credit. Prerequisite: sophomore standing.

335 /535. Theatre as Art. Cr. 3. A survey of theatrical spectacle as an art form paralleling developments in architecture, landscaping, painting, sculpture and interior design from the Middle Ages to the present. Class lectures and discussions are centered around slides and pictorial displays. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements. Prerequisite: junior standing or consent of the Chair of the Department.

337 /537. American Theatre. 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 and Albee, and musical theatre is given special emphasis. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements. Prerequisite: junior standing or consent of the Chair of the Department.

342. Rhetorical Thought. Cr. 3. A study of the theories of rhetoric as a force in the political and intellectual development of Western cultures. This course includes selected theorists from Plato and Aristotle to Kenneth Burke.

344. Argumentation. Cr. 3. A study of advocacy through logical discourse. This course includes structured experiences in the research and development of argument, case construction, refutation and evidence. The Lincoln-Douglas, cross-examination and traditional debate formats are used.

353. Broadcast Programming. Cr. 3. Theories of programming, current program forms, examination of the structure and function of television and radio programming practices, including relationships to entertainment, information and the audience. Prerequisite: Communication 101 or 149 and junior standing.

354. Broadcast News. Cr. 3. A course in the fundamentals and special requirements of radio and television news reporting, writing and editing. Laboratory and field work. Prerequisite: Communication 251 or consent of the Chair of the Department.

356 /556. Design for Stage and Television. 2+2, Cr. 3. The translation of written and verbal concepts into scenic elements of line, form, space, texture and color. The actor/audience relationship is examined with regard to design for the various forms of theatre and television.

357. Performance 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.

358. Advanced Television Production. Cr. 3. Workshop format emphasizing advanced production and program practices. Projects include preparation of television materials for possible off-campus usage. Prerequisite: Communication 251 or consent of the Chair of the Department.

367. Editorial and Opinion Writing. Cr. 3. A course in structure, style and principles of editorial, column, commentary and critical review writing. Laboratory practice. Prerequisite: Communication 261 or consent of the Chair of the Department.

368. Public Relations Copywriting. Cr. 3. Persuasive and effective copywriting. Prerequisites: Communication 261 and 265.

369. Mass Media Law and Ethics. Cr. 3. Discussion of major legal and ethical issues which affect the mass media. Prerequisite: junior or senior standing or consent of the Chair of the Department.
Communication

374. Advanced Public Relations.
Cr. 3. Advanced study with emphasis on practical work, problem solving and case studies.
Prerequisite: Communication 265 or consent of the Chair of the Department.

381. Cooperative Education in Communication I.
Cr. 0.5-3. Professional work experience with a cooperating employer. Written report required.
Prerequisite: approval of the Chair of the Department.

382-383. Cooperative Education in Communication II-III.
Cr. 0.5-3. Continuation of Communication 381.
Prerequisite: Communication 381 and approval of the Chair of the Department. May be repeated beyond 383 for additional credit.

386. Internship.
Cr. 3. Internships in which students may intensively study a particular area of communication. May not be repeated.
Prerequisite: consent of the department Internship Coordinator.

390. Topics and Projects.
Cr. 1-3. Individual or group. Specific topics or projects based on special interests of students and faculty. Topics and projects vary from one semester to another. May not be repeated.
Prerequisites: consent of the Chair of the Department.

431. Play Directing.
2+2, Cr. 3. A study of the art of directing, the problems of choosing a play, methods of casting and rehearsal procedures. Prerequisites: Communication 130 or 131, and 135 or consent of the Chair of the Department.

433 /533. Theatre for Children.
2+2, Cr. 3. University students work with children in a laboratory context and survey the literature and theory of theatre for children. Prerequisites: Communication 130 or 131, and 135, or consent of the Chair of the Department.

460. Communication Research Seminar.
Cr. 3. Application of communication research techniques to selected topics, such as censorship in the arts, libel law, and media sensationalism. Research techniques may include content analysis, surveys, experiments, and historical methods. Prerequisite: senior standing or consent of the Chair of the Department.

475. Mass Media in Modern Society.
Cr. 3. Study of interaction between mass media and society. Freedom of the press theories, communication theory and relationships in the role of mass media with government, business, the courts and other segments of society. Open to juniors and seniors.

492. Supervision of Student Publications.
Cr. 3. Problems and practices of supervision of secondary school student newspapers, magazines, yearbooks and other school publications. Includes examination of state-adopted texts, the role of the high school press, budgeting and financial responsibilities, organizing staffs, working with school administration, establishing curriculum, reviewing other school publications and basic journalistic styles. May not be counted toward a major or minor in this Department. Field Trip. Prerequisite: admission to Supervised Teaching and Communication 262, or consent of the designated adviser.

497. Honors Work in Communication.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Communication.
Cr. 3. See Honors Work, page 41.
East Asian Studies

Administrative Committee:
Professor Schoppa (History, Chair); Professors Juneja (English), Ludwig (Theology), and Trost (Political Science); Associate Professor Bernard (Economics); Assistant Professors Kavanagh (Foreign Languages and Literatures), McGuigan (College of Arts and Sciences), and Zhang (Geography).

Students completing the program in East Asian Studies will have fulfilled major field requirements for the Bachelor of Arts degree under the interdisciplinary program option. Students majoring in another field may fulfill the major field requirements by completing a second major or a minor in East Asian Studies.

Objectives. Programs in East Asian Studies provide an opportunity for students to focus their study on this important area of the world, by examining the history, culture, and religions of China and Japan, in addition to developing some proficiency in the Japanese language. It provides essential background 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 Hangzhou University and at various universities in Japan.

Program Requirements. A minimum of 53 credit hours, selected from the following list of courses approved by the Administrative Committee. A number of these courses may also be counted toward fulfillment of the general education requirements for the Bachelor of Arts degree.* 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 History 240, History 241, Japanese 101, Japanese 102, Theology 363, one additional course in History, and East Asia 493, plus 24 credits in elective courses."

Second Major. A student fulfilling major field requirements under a Major Option in another field may present as a second major an area major in East Asian Studies. 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 History 240, History 241, Japanese 101, Japanese 102, Theology 363, one additional course in History, and East Asia 493, plus 12 credits in elective courses.

Minor. A student fulfilling major field requirements under a Major Option in another field may present an area minor in East Asian Studies for the required minor. The requirement for the minor is a minimum of 18 credit hours selected from the following list. Courses must include History 240, History 241, and Theology 363. It is strongly recommended that the student also complete Japanese 101 and Japanese 102.

East Asian Studies 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: East Asian Topics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Communications 390</td>
<td>Topics and Projects: East Asian Topics</td>
<td>1-3 Cr.</td>
</tr>
<tr>
<td>Economics 390</td>
<td>Topics in Economics: East Asian Topics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Geography 314</td>
<td>Regional Geography of Asia</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 240</td>
<td>Traditional East Asian Civilization</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 241</td>
<td>Modern East Asian Civilization</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 341</td>
<td>History of Modern China</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 342</td>
<td>History of Modern Japan</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 390</td>
<td>Topics in History: East Asian Topics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 492</td>
<td>Reading and Discussion Seminars: East Asian Topics</td>
<td>2-3 Cr.</td>
</tr>
<tr>
<td>Japanese 101</td>
<td>Beginning Japanese</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Japanese 102</td>
<td>Beginning Japanese</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Japanese 203</td>
<td>Intermediate Japanese</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Japanese 204</td>
<td>Intermediate Japanese</td>
<td>4 Cr.</td>
</tr>
</tbody>
</table>

*Japanese 101 and Japanese 102 may fulfill the Foreign Language requirement; any of the Theology courses may fulfill the Theology Level II requirement; any of the History courses of Philosophy 200 or 310 may fulfill the Philosophical and Historical 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.

**One year of Chinese, transferred from another institution, may be substituted for Japanese 101 and Japanese 102.
Japanese 250—Topics in Japanese Literature and Fine Arts 3 Cr.
Japanese 305—Advanced Japanese I 4 Cr.
Japanese 306—Advanced Japanese II 4 Cr.
Japanese 251—Introduction to Japanese Literature 3 Cr.
Japanese 495—Supervised Reading and Research in Japanese 1-4 Cr.

Music 421—Pro-Seminar in Music: East Asian Topics 2-3 Cr.

Philosophy 290—Philosophic Topics: East Asian Topics 3 Cr.
Philosophy 310—Non-Western Philosophy 3 Cr.

Political Science 335—Politics of Developing States 3 Cr.

Political Science 490—Seminars in Political Science: East Asian Topics 2-3 Cr.

Theology 390—Topics in Theology: East Asian Topics 3 Cr.
Theology 363—Religions of China and Japan 3 Cr.
Theology 364—The Buddhist Tradition 3 Cr.

East Asia 109—Intensive Chinese (Elementary) 10 Cr.
East Asia 209—Intensive Chinese (Intermediate) 10 Cr.
East Asia 395—Chinese Culture and Civilization 3 Cr.
East Asia 493—East Asian Senior Seminar 3 Cr.
East Asia 497—Honors Work in East Asian Studies 3 Cr.
East Asia 498—Honors Candidacy in East Asian Studies 3 Cr.

East Asia 495—I-4 Cr.

Approval of Schedules. All students taking a major in East Asian Studies must have their schedules approved by the Chair of the Administrative Committee at the beginning of each semester.

Cr. 10. A course designed to give the student the essentials of Chinese. Students attend classes approximately 15 hours per week. These credits may apply towards the foreign language requirement and the East Asian Studies major or minor. Offered only in China.

Cr. 10. This course is intended for students who have prior knowledge of Chinese. Students attend classes approximately 15 hours per week. These credits may apply towards the foreign language requirement and the East Asian Studies major or minor. Offered only in China.

East Asia 395. Chinese Culture and Civilization.
Cr. 3. An interdisciplinary study of key aspects of Chinese culture and civilization. Taught in English by Chinese professors with the tutorial assistance of the VU resident director. This course will satisfy general education requirements as follows: either 1) Fine Arts/Fine Arts Literature and non-Western/Third World or 2) University Course and non-Western/Third World. NOTE: Students using this course to complete a major in East Asian Studies may not use it for University Course requirement. Offered only in China.

East Asia 493. East Asian Senior Seminar.
Cr. 3. Research in the basic cultural themes of East Asia and their impact on the world today. Prerequisite: consent of the Chair of the Committee.

East Asia 495. Supervised Reading and Research.
Cr. 1-3.

East Asia 497. Honors Work in East Asian Studies.
Cr. 3. See Honors Work, page 41.

East Asia 498. Honors Candidacy in East Asian Studies.
Cr. 3. See Honors Work, page 41.
Economics

Professor Henderson; Associate Professors Bernard, Heinze (Chair); Assistant Professor Shingleton; Visiting Assistant Professor Duda.

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.

Major. Requirements for the major in Economics may be fulfilled by completion of one of the following programs.

General Economics Major. A minimum of 33 credit hours in Economics constitutes this major. Courses must include Economics 221, 222, 321, 322, 325, and one from among 360, 365 or 370. In addition, Mathematics (122 or 132) and either GBUS 205 or Mathematics 240 are required.

Economics and Computer Analysis Major. A minimum of 27 credit hours in Economics is required. Courses must include Economics 221, 222, 321, 322, 325 and one from among 360, 365 or 370. Computer science courses which must be completed are 157, 225, and 325. Also required is a minor in Mathematics including courses (124, 131, or 151), (122, 132, or 152), 240 and 320 (or an approved alternative).

Minor. A minimum of 18 credit hours in economics constitutes a minor. Courses must include Economics 221, 222, and 12 hours of elective course work in economics. In addition, either GBUS 205 or Mathematics 240 is required.

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.

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

221. 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.

222. Principles of Economics—Macro.#
Cr. 3. An introduction to macro-economic analysis with emphasis on national income, consumer spending, investment, government and monetary aspects.

Cr. 3. A study of the theoretical concepts and analytical techniques which economists employ to interpret the process of resource allocation under various systems of economic organization. Prerequisites: Economics 221 and 222.

Cr. 3. A critical examination of theories of national income determination and of techniques for measuring and analyzing aggregate economic activity. Prerequisites: Economics 221 and 222.

323. Economic Fluctuations and Forecasting.
Cr. 3. Techniques of forecasting, utilizing national income and financial market statistics. Use of trend analysis techniques, multiple regression and econometric model building. Emphasis on applications of macroeconomics to both government and business policy making over time. Prerequisites: Economics 221 and 222.

324. Managerial Economics.
Cr. 3. A course in applied economics which emphasizes the use of microeconomics, statistics and mathematics in the process of making managerial decisions. Using problems and short case studies, topics such as estimating demand, cost, productivity and pricing policies are discussed. Prerequisites: Economics 221 and 222 and GBUS 205 or equivalent.

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: Economics 221 and 222, Mathematics 112 or 122 or 132 and GBUS 205 or equivalent.

#Credit for Economics 221 and 222 may be earned through the College Level Examination Program subject examination in Introductory Economics.
326. **International Economics.**  
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: Economics 221 and 222.

330. **Industrial Organization.**  
Cr. 3. The analysis of the economic factors underlying the structure, conduct and performance of American industry. Prerequisites: Economics 221 and 222.

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: Economics 221 and 222.

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. Prerequisites: Economics 221 and 222.

335. **Urban Economic Problems.**  
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. Prerequisites: Economics 221 and 222.

336. **Economics of Developing Nations.**  
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. Prerequisites: Economics 221 and 222 or consent of the instructor.

337. **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. Prerequisites: Economics 221 and 222.

339. **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. Prerequisites: Economics 221 and 222.

346. **Comparative Economic Systems.**  
Cr. 3. A comparative analysis of political theories and the economic systems that derive from those theories. The course focuses on those ideological assumptions that result in capitalism, socialism, anarchism, etc. as the solution to economic problems. Prerequisite: Economics 221 and 222 or consent of the instructor.

360. **Economic History of the United States.**  
Cr. 3. The history of the economic development of the United States from the colonial period to the present. Prerequisites: Economics 221 and 222.

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. Prerequisites: Economics 221 and 222.

370. **The History of Economic Thought.**  
Cr. 3. Economic thought in its historical development from the Mercantilists to the present day. Prerequisites: Economics 221 and 222 or consent of the instructor.

375. **History of Socialist Economic Thought.**  
Cr. 3. The historical development of the economic ideas of the important socialists and schools of socialist thought.

390. **Topics in Economics.**  
Cr. 3. A course in which a special topic in economics is given intensive study. The topic varies from year to year. Prerequisites: Economics 221 and 222. Recommended for senior students.

495. **Independent Study in Economics.**  
Cr. 1-3. Independent study to be approved by the Chair and the economics adviser.

497. **Honors Work in Economics.**  
Cr. 3. See Honors Work, page 41.

498. **Honors Candidacy in Economics.**  
Cr. 3. See Honors Work, page 41.
All secondary education students have an academic major in another department. They will also have a teaching major. The two are not necessarily the same. The teaching major consists of the area of concentration leading to certification and may include courses not applying to the academic major. For the specific requirements of the teaching major, consult the Secondary Education Adviser.

Minor. Only students preparing to meet secondary education certification requirements may minor in education. University degree requirements call for a major outside the field of education. Normally this academic major is in the primary teaching field. Such students may also have teaching minors, which are in subject matter areas outside the field of education, and which are not necessarily the same as academic minors. For specific requirements of a teaching minor, consult the Secondary Education Adviser.

ELEMENTARY EDUCATION
Completion of the degree requirements of the College of Arts and Sciences with a major in 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. This does not in itself qualify a student for a teacher's certificate or license in any given state.

Course work must include the following as a minimum:

1. Language Arts:
   16 credit hours. Must include nine credit hours in written and oral communication and a course in children's literature, i.e., English 478.

2. Social Studies:
   12 credit hours. Must include History of Western Thought and Society 100, a course in United States history, a course in world civilization and a course in Social Analysis selected from economics, geography, political science or sociology.

3. Conservation:
   3 credit hours. One course; see Geography 160 or Biology 490: Human Environmental Biology.

4. Science:
   8 credit hours. Must include a course in biology and one course in physical science selected from chemistry, physical geography or physics.
5. Mathematics:
9 credit hours. Must include mathematics course work specifically designed for elementary teachers, i.e., Mathematics 211/213 and 212/214.

6. Arts:
6 credit hours. Must include one course in music appreciation or methods of teaching music and one in art appreciation or art history or methods of teaching art.

7. Other subjects:
8 credit hours. Must include Psychology 101 or 102, 1 credit hour of Physical Education 101-105 and Special Education 340.

8. Freshman Seminar 100:
3 credit hours.

9. General Education Electives:
Elect from the above categories further courses to a total of 70 credit hours.

10. Theology:
9 credit hours.

11. University Course:
3 credit hours. Appropriate topics in this course may be counted toward meeting the requirements in conservation, arts or the general education electives.

12. Education:
37 credit hours. Must include 201, 321, 322, 323, 324, 325, 326, 329, 431, 432, and (439 or SPED 449).

13. Other electives:
In addition to the above requirements, the student must present sufficient electives to achieve the 124 credit hours required for graduation.

Endorsements for teaching in junior high/middle school, special education, reading and special subjects can be completed through special programs with requirements in addition to the above. Specific requirements should be obtained from the Education Department.

Freshman students are advised by the Pre-Education Adviser. A recommended course program follows:

First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 100 or Freshman Seminar 100</td>
<td>3</td>
</tr>
<tr>
<td>History 100 or Theology 100</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>4</td>
</tr>
<tr>
<td>Social Analysis or U.S. History</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 101-149</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 14 Cr.

Second Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 100 or Freshman Seminar 100</td>
<td>3</td>
</tr>
<tr>
<td>History 100 or Theology 100</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>4</td>
</tr>
<tr>
<td>Social Analysis or U.S. History</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 101-149</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 17 Cr.

A foreign language may be started in the freshman year by students who wish to concentrate in this area. Consult the Pre-Education Adviser for adjustments in schedule.

Sophomore students are advised by the Pre-Education Adviser. They should complete Education 201 and Communication 141, 243, or 145 during this year. Application for admission to the Teacher Education Program should be made during the first month of the second semester of the sophomore year.

Junior students who are admitted to the Teacher Education Program are advised by the Coordinator of Elementary Education. Application for admission to supervised teaching must be filed by March 1 of the junior year.

SECONDARY EDUCATION

Programs in visual arts, physical education, and music can be taken as all-grade (1-12); all other programs are taken for senior-junior high/middle school licensing.

Advising. Before admission to the Teacher Education Program, secondary school teacher candidates are asked to consult the Pre-Education Adviser of the Education Department concerning programs leading to recommendations for teacher certification. Once formally admitted to the Teacher Education Program, the student should periodically consult the Coordinator of Secondary Education.

Requirements. Undergraduate students preparing to teach in secondary schools should complete requirements for appropriate degrees in their academic majors as well as those for the teaching major field.

General Education certification requirements for all secondary teacher candidates, regardless of the degree sought, are given below. Students are responsible for meeting these General Education requirements as well as the University degree requirements.

1. Humanities—
22 credit hours
Written and oral communication, 9 Cr.
Literary studies or the equivalent, 4 Cr.
Foreign Language, Fine Arts-Literature, or other Humanities, 6 Cr.
Theology, 3-9 Cr.

2. Life and Physical Sciences—
8 credit hours
The 8 Cr. are to be selected from at least two of the following areas: biology, chemistry, mathematics, physical geography and physics.

3. **Social and Behavioral Sciences**— 9 credit hours
   The 9 Cr. are to be selected from at least two of the following areas: economics, geography, history, political science and sociology. Some states require all teachers to have a course in United States history; therefore, it is recommended that prospective teachers take at least one such course.

4. **Psychology** 101 (3 Cr.) or 102 (4 Cr.).

**Professional Education requirements include:**

1. **Education 201**, 3 Cr. (preferably taken in the sophomore year).

2. **Formal application and admission** to the Teacher Education Program in the first month of the second semester of the sophomore year (see below).

3. **Education 350**, 3 Cr.

4. **Education 356**, 3 Cr.

5. **Education 475**, 3 Cr. (preferably taken in the junior year).

6. **Special Education 341**, 1 Cr., or **Special Education 340**, 3 Cr. Some states require a three-credit course in learning exceptionalities; therefore, students are advised to check the certification requirements of states where they plan to teach before choosing between 341 and 340.

7. **Formal application and admission** to the Professional Semester before March 1 of the year before the academic year in which the Professional Semester is to be taken.

8. **Completion of the Professional Semester**.
   Courses included are:
   - Education 455, 3 Cr.
   - Education 459, 10 Cr.
   - Education 460, 3 Cr.
   - Education 489, 2 Cr.

**Teaching Major and Teaching Minor Requirements.** A teaching major, or all-grade major, is required of all secondary teacher candidates. A teaching minor is highly recommended. Students are strongly urged to take or audit the Special Methods 489 course in a teaching minor or a second teaching major. Note that a teaching major is not the same as an academic major in that it may have additional requirements; similarly, a teaching minor may have requirements beyond those of an academic minor.

Credits earned by passing the appropriate examinations and noted on a student's transcript may be used to meet certification requirements.

Specific requirements for teaching majors and minors can be obtained from the Pre-Education Adviser, the Coordinator of Secondary Education or the major adviser.

**Admission to the Teacher Education Program.** To be admitted to this program, a student must submit a written application to the Education Department. This application should be made in the first month of the second semester of the sophomore year. Applications are accepted only in January and September.

Action on each application (acceptance, conditional acceptance or denial) is taken by the Admissions Committee of the Education Department and is based on the following criteria:

1. **Grade point average.**
   Normally an applicant must have a standing of 2.5 or higher in all course work taken at Valparaiso University, a minimum of 12 credit hours at this University, and at least 2.00 in all course work taken in the Education Department. Post-baccalaureate students must have a standing of 2.75 in all course work (12 credit hours minimum) taken at Valparaiso University after earning the bachelor's degree.

2. **Basic skills.**
   An applicant must have obtained a grade point average of 2.25 or better in required composition courses and speech course at Valparaiso University. No course may be used to meet this requirement if the course grade is below a C—. The applicant must also pass basic skills proficiency tests. (A fee may be charged for this testing. Check with the Department about details and procedures.) Students are expected to maintain acceptable standards in communication skills; proficiency is monitored by professors in education courses. If deficiencies in written or oral communication are noted, the applicant must take remedial steps under the direction of the Department.

3. **Health.**
   An applicant shall be free of serious mental or physical health problems that might impair future teaching effectiveness.

4. **Character.**
   An applicant must have shown the social and emotional maturity, moral character, responsibility and dependability necessary for success in the teaching profession.

5. **Speech and hearing test.**
   An applicant must complete a speech and hearing screening examination.

6. **Faculty recommendations.**
   Positive recommendations from two faculty members must be obtained by each applicant. One of these must be obtained from the Foundations of Education instructor. The other should be obtained from the major adviser. A
third recommendation must also be received from a field experience cooperating teacher.

When applicants are noted as questionable on any of these criteria, they may be asked to meet with an admissions subcommittee before final action is taken. Appeals from the decisions of the Admissions Committee should be submitted in writing and directed to the Education Department through its Chair.

**Professional Semester.** This semester is required of all candidates who wish to be recommended for an initial teaching certificate. This semester includes the methods, principles and student teaching courses required to meet standards for certification. During this semester the student should enroll only in courses approved for the Professional Semester.

**Admission to the Professional Semester.** Preliminary application for admission to the Professional Semester (including Supervised Teaching) must be filed and completed in person with the Coordinator of Elementary Education or the Coordinator of Secondary Education by March 1 of the spring semester before the academic year in which the student teaching is to be done. To be eligible for supervised teaching, the student must meet the following criteria:

1. Official admission to the Teacher Education Program.
2. The cumulative grade point average must be at least 2.5. A grade point average of 2.4 or better must be obtained in all teaching fields.
3. Continued demonstration in class of facility in oral and written communication. The applicant must have obtained a grade point average of 2.25 or better in courses used to meet this requirement.
4. Completion of at least 12 credit hours at Valparaiso University of which 3 credit hours must be in education.
5. Senior standing. The applicant must be within two semesters and one summer of graduation.
6. Evidence of the social and emotional maturity, moral character, responsibility and dependability necessary for success in the teaching profession.
7. Secondary student teaching candidates must have completed Psychology 101 or 102, have earned a standing of 2.4 or higher in all education courses completed and have received a written recommendation from the major adviser to take the Professional Semester. If a teaching minor is to be obtained, written recommendation from the Chair of the department in which the minor is taken must be received. Students are strongly urged to take or audit the Special Methods 499 course in the teaching minor area.
8. Elementary student teaching candidates must have earned a standing of 2.4 or higher in all course work in education.
9. Obtain a "C" or better in each of the professional education courses taken in the professional semester prior to supervised teaching to be eligible to begin supervised teaching.
10. To be eligible for recommendation for certification, students must maintain the above requirements through the completion of the degree and the teacher education program.

**Placement of Student Teachers.** The placement and the direction of supervised teaching experiences are the responsibilities of the Coordinator of School Field Experience. Approved elementary and secondary student teachers are assigned to selected schools in Northwest Indiana. Students are responsible for arranging for their own transportation.

**Placement of Graduating Teachers.** The Teacher Placement Office gives assistance to beginning and experienced teacher candidates who have completed requirements for certification. All candidates must file their credentials with this office before graduation. Students who complete their undergraduate training at Valparaiso University are entitled to use the Teacher Placement services at no cost until September 30 after completion of the certification program. A twenty dollar fee is charged per year if a teacher candidate wishes to use the Teacher Placement service after this time.

**Note:** No undergraduate student is admitted to any course beyond Education 209 unless admitted to the Teacher Education Program or permitted to do so by the Chair of the Education Department.

**201. Foundations of Education.**
Cr. 3. A study of the historical, sociological and philosophical foundations of American Education. Current issues and trends in education. Readings and activities to increase cultural and ethnic awareness. Field activities.

**209. Educational Psychology.**
Cr. 3. A course relating the principles and theories of psychology and the results of research to teaching and learning. Prerequisite: Psychology 101 or 102. Not open to majors or minors in education.

**321. Principles of Elementary Education.**
Cr. 3. This course is designed to (1) study the organization of instruction, classroom assignment, measurement and evaluation and the legal rights and responsibilities of the teacher, (2) become reacquainted with elementary classrooms from varied perspectives and (3) re-examine the purposes of education, schooling, instruction and the role of the professional teacher. Includes a field component.
322. Methods of Teaching Language Arts in the Elementary School.
Cr. 3. A study of the principles, content, curriculum, methods and techniques involved in teaching the language arts in the elementary school. Includes a field component.

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 the methods used for science instruction: Discovery Model, Inquiry Model, and Experiential Model. Includes a field component.

Cr. 2. A study of techniques and instructional materials for teaching mathematics in the elementary school. Topics include sequencing, diagnosis and remediation of errors, and use of concrete materials. Includes a field component.

325. Psychological Foundations of Elementary Education.
Cr. 3. A study based on psychological research and theory to aid teachers in guiding the learning, development and evaluation of children. Includes physical, mental and emotional development of the child through adolescence and motivation, retention and transfer of learning. Involves directed classroom observation. Prerequisite: Psychology 101 or 102.

326. Introduction to Reading in the Elementary School.
Cr. 4. An introductory course in which lectures, demonstrations and discussions place emphasis on the reading process, reading skills and teaching techniques. Practice in diagnosis and teaching reading. Includes a field component.

329. Computers in Education.
Cr. 1. A course designed to prepare elementary teachers to use micro-computers in the classroom setting. Students will survey fundamental computer terminology and operations. In addition, students will critically evaluate tutorial, simulations, problem solving and tool programs (word process, authoring systems, test makers, etc.) and experience several programming languages currently used in elementary schools. Includes a field component.

350. Orientation to Secondary Teaching.
Cr. 3. A course designed to provide some of the knowledge and skills necessary for the successful secondary (Senior-Junior High/Middle School) teacher. Topics include management and discipline, curriculum, media (including computers in education), and issues in secondary education. Prerequisites: Education 201 and application for admission to the Teacher Education Program.

356 (formerly 456). Psychological Foundations of Secondary Education.
Cr. 3. A course based on psychological research and theory to aid teachers in guiding the learning and development of children and adolescents. Prerequisite: Psychology 101 or 102.

361 /561. Foundations of Language and Reading.
Cr. 3. This course of lectures includes the interrelationship between thought and language processes, the basic elements of the reading process, diagnostic tools in reading assessment and sociocultural implications of the reading process.

Cr. 2. This course is designed to (1) study the historical development and present trends of the subject area of 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.

432. Methods of Teaching Reading in the Elementary School.
Cr. 2. A study of the organization and techniques of teaching reading in the elementary school. Includes a field component.

Cr. 12. This course gives the student opportunities for observation, actual classroom teaching and participation in related activities in elementary schools under the direction of the supervising teacher and the University supervisor. Students are expected to give full time to this course for a minimum of nine weeks of the semester. 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 18 credit hours. S/U grade.

455. Principles and General Methods of Teaching in the Secondary Schools.
Cr. 3. A study of the principles, methods, materials and testing involved in teaching in the secondary and middle schools and the development of human relation skills. This course is restricted to students enrolled in the Professional Semester in Secondary Education.

Cr. 10. Each student is assigned to a middle or secondary school for laboratory experiences, which includes at least ten weeks of full-time classroom observation, 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 19 credit hours. S/U grade.

460 /560. Reading in the Content Areas.
Cr. 3. This course is designed to enable prospective teachers of subject matter content to acquire knowledge, skills, and behaviors necessary to help pupils "read to learn" in middle school through high school. Specific techniques to develop competencies in explicit instruction, textbook evaluation, and student assessment are emphasized. This course is restricted to students in the secondary professional semester or to graduate students.
Education

462 /562. Reading Disabilities.
Cr. 3. Lectures and demonstrations on the general nature of identification, diagnosis and classification of individuals with reading problems at all ages and levels of instruction. Prerequisite: six credit hours of course work in reading.

463 /563. Practicum in Corrective Reading.
Cr. 3. A laboratory experience which provides practice with primary, elementary, middle and junior high school children whose reading disabilities are mild to moderate. Training in evaluating reading performance, planning appropriate programs and implementing instructional strategies. Prerequisite: Education 462 or equivalent.

470 /570. Introduction to Educational Media.
2+2. Cr. 3. An introduction into the ways of effective selection and utilization of media, both material and equipment. The course includes laboratory experience in the production of materials and equipment operation in different media.

471 /571. Kindergarten Education.
Cr. 3. This course deals with the curriculum, teaching techniques and materials used in the nursery school and kindergarten. Special emphasis is given to the education needs of the pre-school child.

Cr. 3. A course dealing with theory of measurement, interpretation of measurement data and testing in relation to pupil achievement and guidance.

475 /575. The Junior High/Middle School.
2+3. Cr. 3. A study of the development, organization and curriculum of junior high and middle schools with emphasis on the unique societal and educational roles played by these institutions, and the programs and methods appropriate for students at this level. Field experiences include a minimum of forty hours of practical involvement in activities in the schools.

477 /577. Practicum in Junior High/Middle School.
Cr. 3. Each student is assigned a minimum of 80 hours of supervised field experiences in a junior high or middle school. The experience includes working with students individually and in small and large groups. Must be taken concurrently with Education 475/575.

489. Special Methods in the Academic Courses in Secondary Education.
Cr. 2. This course is administered by the Education Department. It is given in the various departments of the College of Arts and Sciences under the following titles:
The Teaching of English
The Teaching of Foreign Languages
The Teaching of Mathematics
The Teaching of Music
The Teaching of Natural Sciences
The Teaching of Physical Education
The Teaching of Social Studies
The Teaching of Visual Arts

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

495. Independent Study in Education.
Cr. 1-3. Independent work to be done in a specific area of education as agreed upon by the student and faculty adviser. Proposals must be approved by the Chair of the Department.

497. Honors Work in Education.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Education
Cr. 3. See Honors Work, page 41.

SPECIAL EDUCATION

Cr. 3. A course designed to introduce the special needs of exceptional students and the techniques of educating them in the least restrictive environment. Required of all elementary education students.

Cr. 1. A course designed to introduce the student to the needs of exceptional adolescents and to appropriate methods of teaching these students. Required of all Secondary Education students unless they choose 340 instead. Students should check the requirements of the state in which they plan to teach.

342 /542. Special Education Methods and Materials.
Cr. 3. This course focuses upon methods and materials for effective instruction of readiness and developmental processes, and skills in language arts, mathematics, social and natural sciences, and vocational education for exceptional students at all grade levels. Offered in alternate years.

343 /543. Learning Disability Theory.
Cr. 3. This course will focus on increasing knowledge of multidisciplinary educational models in the learning disabilities field. It will also emphasize the learning disabled student's psycho-educational characteristics and individual learning style. Prerequisite: admission to teacher education or graduate standing.

346 Practicum in Learning Disabilities.
Cr. 3. This course is designed to provide a minimum of 80 hours of field experience to prospective special education (learning disabilities) teachers to inform them about teaching in this area of exceptionality. This practicum emphasizes directed observation of diagnostic, teaching and management techniques. Prerequisite: admission to teacher education. S/U grade.

444 /544. Assessment in Special Education.
Cr. 3. This course will develop test administration and interpretation competencies in identification and diagnosis of exceptionalities. Psychometric research, acuity screening, individualized diagnostic and achievement tests, learning capacity and aptitude instruments will be analyzed in case study/I.E.P. contexts. Prerequisite: Education 343/543 or concurrent enrollment.
445 / 545. Teaching the Mildly Disabled Student.
Cr. 3. This course will provide various compensatory, enrichment, and corrective instructional strategies, further develop diagnostic-prescriptive teaching methods, and improve individual educational planning techniques for mildly disabled students in multidisciplinary team settings. Prerequisite: Education 444/544 or concurrent enrollment.

449. Supervised Teaching in Elementary and Special Education Classrooms.
Cr. 12. This course combines into one semester the experience of observation, classroom teaching and participation in related activities in both elementary school settings and special education (learning disabilities) classrooms. Under the direction of the cooperating teachers and University supervisors, the students student-teach for six weeks in an elementary classroom followed by six weeks in the special education (learning disabilities) classroom. Prerequisites: senior standing, SPED 445, and admission to the professional semester. S/U grade.

490 / 590. Current Problems in Special Education.
Cr. 1-3. An intensive study of an area of special education. Subtitles, amount of credit and content depend on instructor's choice and student interest.

495. Independent Study in Special Education.
Cr. 1-3. Independent work to be done in a specific area of special education as agreed upon by the student and faculty adviser. Proposals must be approved before registration by the Chair of the Department.
English

Professors Feaster, Gilbertson, Juneja, A. G. Meyer, Sommer, Sponberg, Wegman; Associate Professors Byrne, Cunningham, G. Eifrig, Hall, Maxwell, Mullen, Uehling (Chair); Assistant Professor Sandock; Instructor Olsen, Pappas, Ruff.

The English Department offers a wide variety of courses for both English majors and other students. These courses help students use the English language effectively and sensitively and help them develop their capacity to enjoy and understand imaginative literature. Many non-English majors enroll in upper division courses and, as a consequence, students can expect any given class to display a broad spectrum of interests and backgrounds. Relatively small class size allows students to develop a close relationship with professors and allows them to develop their analytical and expressive skills through writing and discussion. In addition to preparing a student for graduate work or for teaching in the secondary schools, an English major also provides excellent training for numerous careers and professions. Many schools of medicine, law and theology report that an English major provides a highly desirable background for acceptance into their programs. Business and government annually employ English majors for positions in personnel, sales and marketing, public relations, systems analysis and advertising, as well as editing and writing. The ability to read and understand complex material, to write and speak precisely, to think clearly and thoroughly remains in high demand in all sections of our society.

Students with an interest in English are invited to join the English Club.

Major. A major requires a minimum of 27 credit hours in English courses beyond the general education requirements and numbered 321 or above. Courses must include either English 408 or 493; one course selected from 409, 410, 420, 430, 450, or 456; one selected from 460, 470, 475; and either 401 or 402.

Minor. A minor requires a minimum of 15 credit hours in English courses beyond the general education requirement and numbered 321 or above. Courses must include either English 408 or 493; one course selected from 409, 410, 420, 430, 450, or 456; one selected from 460, 470, 475; and either 401 or 402.

Minor in Writing. Students who elect a minor in writing must complete a total of at least 15 credit hours in writing or language-related courses. Courses must include either English 257 or 258; 431; 441 or 442 or 443; two of the following: 321, 408, 423, 424, 495, Communication 252. Students who elect to take both 321 and 431 must take 321 first. In some instances students may apply internships and cooperative education toward fulfillment of requirements for the minor in writing.

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 taking a major or a minor in English should make an appointment with the Chair of the Department. Students should bring their cumulative grade report copies (from the registrar's office) and their current adviser's files. The Chair will explain the offerings and programs of the Department and give each student a bulletin which provides more detail about courses and faculty than is possible in this catalog.

All students taking a major or minor in English must have their schedules approved by their English advisers at 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 professor who will be their adviser as long as they remain a major in the Department. It is the student's responsibility to confer regularly with the adviser about course selection, career planning and related matters. It is the adviser's responsibility to help students make a frank and realistic assessment of academic options and their consequences.

Cooperative Education. In cases where it will clearly augment their classroom education, qualified students may engage in paid work experiences which will also receive credit. No 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, p. 39.)

100. Exposition and Argument.#
Cr. 3. An intensive course in the writing of expository and argumentative prose with emphasis upon coherent organization, the logical progression of thought and the effective use of language.

3+1, Cr. 3. A course in English grammar and basic composition skills open only to students whose native language is not English.

200. Literary Studies. *
Cr. 4. Core readings are based on several major units corresponding to significant periods of literary history. Presented with their historical setting and supplemented by numerous shorter pieces, these readings build on and extend the students' awareness of their cultural tradition. General lectures by professors from various disciplines demonstrate the contexts from which literature arises. The course provides instruction and practice in the writing of careful critical analyses of texts. Prerequisite: English 100 or 101.

231. Film Aesthetics.
Cr. 3. This course considers the possibilities and limitations of aesthetic valuation of film. Films are studied intensively from the viewpoint of narrative technique, image, camera movement, sound, social ideology and historical significance. Aesthetic impact is weighed against ethical issues. Representative films studied are Renoir's "Rules of the Game," Ford's "The Searchers" and Riefenstahl's "Triumph of the Will." Offered in alternate years. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of general education requirements.

Note: English (100 or 101) and 200 are prerequisites for all literature and language courses numbered 401 or above; English (100 or 101) is the prerequisite for other writing courses (257, 258, 321, 423, 424, 431).

Cr. 3. A detailed study of business communication. Includes analysis and practice in a variety of messages used to communicate in business and industry: letters, oral reports and informal reports. Emphasizes the fundamentals of appearance, style and language, tone and psychology of effective business communication.

258. Technical Communication.
Cr. 3. This course trains engineering and science students to write and talk about their 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. Students prepare and present a series of short explanatory papers, some letters and oral presentations leading up to a final formal report and oral presentation.

265. Studies in Literature and the Other Arts.
Cr. 3. Courses offered under various titles will examine the relationships between literature and the fine arts. Topics might include the examination of a particular theme or concept as it is treated in the various arts or the analysis of parallel technical developments in the arts during a specific historical period. Fulfills the Fine Arts or Fine Arts-Literature requirement.

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 English 431.

401. American Literature I.
Cr. 3. A study of selected works of major American writers from the Colonial period to the Civil War.

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.

405. Masterpieces of World Literature.
Cr. 3. A study of major works of the Occident and Orient from ancient times to the present day.

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 literature 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.

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.

410 /510. Shakespeare.
Cr. 3. Close readings of representative plays: histories, comedies and tragedies.

#Credit for English 100 may be earned through the College Level Examination Program general examination in English or the subject area examination in English Composition, or through the Advanced Placement examination offered by the College Entrance Examination Board. Students with SAT Verbal scores of 600 or above or the equivalent ACT score may receive credit for English 100 upon submission of a writing sample judged acceptable by the Department.

*Credit for English 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.
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 More, Sidney, Spenser, Jonson, Donne, and Milton.

423. Short Story Writing.  
Cr. 3. A workshop in the various techniques of writing short fiction. English majors, as well as other students, may take this course on the S/U basis.

424. Poetry Writing.  
Cr. 3. A workshop in the various techniques of writing poetry. English majors, as well as other students may take this course on the S/U basis.

430 / 530. Literature of the Restoration and Eighteenth Century.  
Cr. 3. An intensive survey of English poetry, fiction, non-fiction 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.

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.

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.

442 / 542. Modern English Grammar.  
Cr. 3. An introduction to such recent linguistic developments as structural grammar and transformational-generative grammar.

443 / 543. Introduction to Linguistics.  
Cr. 3. A general 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.

450 / 550. 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.

456 / 556. The Novel.  
Cr. 3. A study of representative English novels of the eighteenth and nineteenth centuries, with discussion of the social background.

460 / 560. Modern Drama.  
Cr. 3. A study of plays typical of the various phases of the development of British and American drama after 1870, with some attention to related Continental drama.

Cr. 3. A study of a significant movement in American literature, such as Transcendentalism, Romanticism, Naturalism and Realism, or a group of writers related regionally, ethnically or in some other special way.

470 / 570. Modern 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.

475 / 575. Modern 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.

478. Literature for Children.  
Cr. 3. A survey, by types, of distinguished literature for children, with emphasis on developing analytical and evaluative techniques. Introduction to bibliographical aids, review media and research. Required of elementary education majors.

479 / 579. Literature for Adolescents.  
Cr. 3. A survey, by types, of distinguished literature suitable for students in secondary schools. Emphasis on the reading of selected books representing the wide range of literature for adolescents, and the developing of analytical and evaluative techniques. Introduction to bibliographical aids, review media, and current research in the field.

481. Cooperative Education in English I.  
Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisites: English 431 and approval of the Chair of the Department.

482-483. Cooperative Education in English II-III.  
Cr. 0.5-3. Continuation of English 481. Prerequisite: English 481. May be repeated beyond 483 for additional credit.

489. The Teaching of English.  
Cr. 2. (See Education 489.) A study of methods of teaching English in secondary school. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in English.

*All courses in English marked by an asterisk (*) may vary in content and in writers assigned, depending on the instructor and the year given. Such courses may be taken twice for credit, provided that the topics are different or that there is no significant overlapping in the reading lists.
490 /590. Topics in Literature.*
Cr. 2 (seven week course) -3. An open-topic course, which may concern a single writer or group of writers; a literary type or theme; a contemporary art form (e.g., development of the cinema), or an aspect of modern popular culture (e.g., science fiction and fantasy).

493. Seminar in English
Jane Austen in Context
Jonathan Swift
Tragedies of Revenge
Baldwin and Morrison
Enrollment limited to 15 students. Required for English majors.

495. Independent Study in English.
Cr. 3. Designed to provide advanced students an opportunity to do serious research on a topic which is not covered in any regularly scheduled course offered by the English Department. In advance of the semester in which the student plans to undertake his project, he must arrange for a tutor to direct that project and secure approval for it from the English Department Committee on Honors and Independent Study.

497. Honors Work in English Literature.
Cr. 3. See Honors Work page 41.

498. Honors Candidacy in English Literature.
Cr. 3. See Honors Work page 41.

*All courses in English marked by an asterisk (*) may vary in content and in writers assigned, depending on the instructor and the year given. Such courses may be taken twice for credit, provided that the topics are different or that there is no significant overlapping in the reading lists.
Film Studies

Administrative Committee:
Associate Professor Maxwell (English, Chair); Professors Combs (Political Science), Falkenstein (Foreign Languages), Juneja (English), Schoppa (History), Sommer and Sponberg (English), and Trost (Political Science); Associate Professor Byrne (English).

A minor in Film Studies may be presented in partial fulfillment of the major field requirements for the Bachelor of Arts degree under a Major Option.

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.

Area requirements:

English 231                      3 Cr.

At least one course from each of the following three 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. Other options are Art 263 (3 Cr.), or a special topics course (e.g. Film and Religion) approved by the Chair of the Committee.

Film and Literature Area. Offered by the Department of English and the Department of Foreign Languages and Literatures:

   English 490, French 250, German 250, Greek 250, Latin 250, Spanish 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 the 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:

   History 492, Political Science 490.

   Recent topics dealt with in these courses are The Vietnam War through Film and Literature, 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:

   German 260, History 390, Christ College 340, Christ College 365.

   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.
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, para-legal 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, understanding 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 those who plan to teach or those who would use foreign language in their careers.

Through University programs and affiliations, an opportunity to study abroad is afforded students of any of the foreign languages. See pages 11-13 for details. The Department of Foreign Languages and Literatures cooperates with the Departments of Economics, Geography, History and Political Science in a program in International Economics and Cultural Affairs designed for students considering careers in the fields of international commerce or government service. See page 97 for details.

Foreign Language House. Residency in the Foreign Language House helps prepare students for study-abroad experiences and help alleviate "re-entry culture shock" for those returning. Residents are committed to speaking their foreign language and to providing culturally-relevant social and educational activities to non-residents studying the same language.

The language of the Foreign Language House may vary according to student interest. Students must have completed their freshman year.

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.

Students who have completed a second year of a foreign language in high school will not be granted credit for level 101 in that language.
Students who are placed directly into level 103 of a language shall receive 4 credit hours for level 102 and 4 credit hours for level 103 by passing course 103. Students who are placed directly into a 200-level course in a language shall receive 4 credit hours for level 102, 4 credit hours for level 103 and the credit hours for the 200-level course by passing the 200-level course.

**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.** Foreign students whose native language is not English and who are studying on a non-immigrant visa are exempt from the foreign language general education requirement provided that they fulfill the general education requirements in English.

**Degree.** Completion of the degree requirements of the College of Arts and Sciences with a major in Classics, French, German, Greek, Latin or Spanish leads to the degree, Bachelor of Arts.

**Cooperative Education.** Qualified students may participate in the Cooperative Education program, subject to the availability of suitable positions. During the time of their employment, students are financially reimbursed by the cooperating employer and also receive credit toward the Foreign Language major. Eligible students are junior or senior Foreign Language majors who have completed 12 credits beyond the third semester of their language with a cumulative grade point average of 3.000 in their foreign language courses. Cooperative Education may be repeated for up to a total of 12 credit hours, only 3 of which may be counted toward meeting the minimum requirements of the major. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 42.)

**Approval of Schedules.** All students who take a major or minor in the Department and all students who plan to teach a foreign language must have their schedules approved by the Chair of the Department at the beginning of each semester. A list of specific courses required of teaching majors and minors is available from the Chair of the Education Department.

**French**

**Major.** A minimum of 24 credit hours in French beyond French 103 constitutes a major. Courses must include French 204, 221, 222, 231, and 232.

**Minor.** A minimum of 11 credit hours beyond French 103 constitutes a minor. Courses must include French 204 and one course in either French civilization or literature.

**Teaching Programs.** Students who plan to teach French in secondary schools with a major or minor in French should consult the Chair of the Department and the Education Department for specific requirements.

**The Roger and Hazel Guillaumant Award.** See page 21 for details.

101. **First Semester French.**
   Cr. 4. A course designed to give the student the essentials of French. Credit may not be counted for graduation by a student who has completed a second year French course in high school.

102. **Second Semester French.**
   Cr. 4. A continuation of French 101. Prerequisite: French 101 or equivalent.

103. **Intermediate French.**
   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: French 102 or equivalent.

204. **French Composition and Conversation I.**
   Cr. 4. Practice in speaking, understanding and writing everyday French. Use of practical vocabulary and common idioms. Prerequisite: French 103 or equivalent. May be repeated for credit at the Paris Center or similarly accredited programs.

205. **French Composition and Conversation II.**
   Cr. 4. A continuation of French 204 with work of increased difficulty. Prerequisite: French 204 or 220. May be repeated for credit at the Paris Center or similarly accredited programs.

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: French 204.

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: French 204.
231. French Civilization to 1870.  
Cr. 3. A historical survey of the French cultural heritage in the fields of history, sociology and the fine arts to the beginning of the Third Republic. Prerequisite: French 204.

232. French Civilization from 1870 to the Present.  
Cr. 3. A study of the Franco-Prussian War, the two world wars, decolonization and participation in the European Community and their impact on the politics, social development, economy and thought of France today. Prerequisite: French 204.

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: French 103 or equivalent.

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 and films are used as a basis to build more advanced language skills and to familiarize the student with modern-day France. Prerequisite: French 204.

307. Professional French.  
Cr. 2-3. A study of the French language as it is used in the international business world, including writing of business letters and general commercial terminology. Prerequisite: French 204.

409. Advanced French Composition and Conversation.  
Cr. 4. A course to build on French language skills; includes the finer points of grammar as well as the practice of French from the colloquial to the scholarly. May be repeated for credit at the Paris Center or similarly accredited programs. Prerequisite: French 205 or 306.

481. Cooperative Education in French I.  
Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond French 103 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in French II-III.  
Cr. 0.5-3. Continuation of French 481. Prerequisites: French 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

489. The Teaching of Foreign Languages.  
Cr. 2. (See Education 489.) A study of the methods of teaching foreign languages in secondary schools. May not be counted toward a major or minor in the Department of Foreign Languages and Literatures. Prerequisite: admission to Supervised Teaching. Given upon sufficient demand.

490. Seminar in French Literature or Civilization.  
Cr. 3. A study of selected topics in literature or civilization. May be repeated provided there is no duplication of material. Prerequisite: French 221 and 222 or French 231 and 232 respectively.

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.

497. Honors Work in French.  
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in French.  
Cr. 3. See Honors Work, page 41.

German  

Major. A minimum of 24 credit hours in German beyond German 103 constitutes a major. Courses must include German 204, 221, 222, 231, and 232.

Minor. A minimum of 11 credit hours beyond German 103 constitutes a minor. Courses must include German 204 and one course in either German civilization or literature.

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

The Walther M. Miller Memorial Prize. See page 21 for details.  

Reutlingen Semester Scholarship. See page 208 for details.

101. First Semester German.  
Cr. 4. A course designed to give the student the essentials of German. Credit may not be counted for graduation by a student who has completed a second year German course in high school.

102. Second Semester German.  
Cr. 4. A continuation of German 101. Prerequisite: German 101 or equivalent.

103. Intermediate German.  
Cr. 4. Reading, writing and discussion in German on the intermediate level; review of German grammar. Upon demand a special reading section will be offered. Prerequisite: German 102 or equivalent.

204. German Composition and Conversation I.  
Cr. 4. Practice in speaking (general conversation beyond survival needs), understanding (standard German spoken at a normal rate), reading (non-specialized texts), and writing (paragraphs). Prerequisite: German 103 or equivalent. May be repeated for credit at Reutlingen Center.

205. German Composition and Conversation II.  
Cr. 4. A continuation of German 204, with work of increased difficulty. Prerequisite: German 204.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>221</td>
<td>Selected Readings in German Literature to 1800.</td>
<td>3</td>
<td>Representative examples from different genres of German literature through the end of the 18th century.</td>
</tr>
<tr>
<td>222</td>
<td>Selected Readings in German Literature since 1800.</td>
<td>3</td>
<td>Representative examples from different genres of German literature from the age of Goethe to the present.</td>
</tr>
<tr>
<td>231</td>
<td>German Civilization to 1800.</td>
<td>3</td>
<td>A historical and interdisciplinary survey of German culture to the end of the 18th century.</td>
</tr>
<tr>
<td>232</td>
<td>German Civilization since 1800.</td>
<td>3</td>
<td>A historical and interdisciplinary survey of German culture in the 19th and 20th centuries.</td>
</tr>
<tr>
<td>250</td>
<td>Topics in German Literature and the Fine Arts.</td>
<td>3</td>
<td>Study of selected works of German literature in English translation and of their correlates in the visual arts and/or music. Knowledge of German required. May not be counted toward a major or minor in German.</td>
</tr>
<tr>
<td>306</td>
<td>Contemporary German Language in the Mass Media.</td>
<td>4</td>
<td>The contemporary German language as used in radio broadcasts, newspapers, magazines and other sources from German-speaking countries. Prerequisite: German 204.</td>
</tr>
<tr>
<td>307</td>
<td>Professional German.</td>
<td>3</td>
<td>A study of the German language primarily for participants in the Program in International Economics and Cultural Affairs. The course is adjusted to the career needs of the individual class. Prerequisite: German 204.</td>
</tr>
<tr>
<td>341</td>
<td>History of the German Language.</td>
<td>3</td>
<td>A historical study of the development of the German language. Prerequisite: German 204.</td>
</tr>
<tr>
<td>409</td>
<td>Advanced German.</td>
<td>3</td>
<td>Practice in speaking on all time levels, basic understanding of native speakers, reading of texts on unfamiliar subjects, and writing of page-length compositions. Prerequisite: German 205.</td>
</tr>
<tr>
<td>481</td>
<td>Cooperative Education in German I.</td>
<td>0.5-3</td>
<td>Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond German 103 and approval of the Chair of the Department. S/U grade.</td>
</tr>
<tr>
<td>482-483</td>
<td>Cooperative Education in German II-III.</td>
<td>0.5-3</td>
<td>Continuation of German 481. Prerequisites: German 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.</td>
</tr>
<tr>
<td>489</td>
<td>The Teaching of Foreign Languages.</td>
<td>2</td>
<td>(See French 489 and Education 489.) Prerequisite: admission to Supervised Teaching.</td>
</tr>
<tr>
<td>490</td>
<td>Seminar in German Literature or Civilization.</td>
<td>4</td>
<td>A study of selected topics in literature or civilization. May be repeated provided there is no duplication of material. Prerequisite: German 221 and 222 or German 231 and 232 respectively, or instructor's permission.</td>
</tr>
<tr>
<td>495</td>
<td>Supervised Reading and Research in German.</td>
<td>1-4</td>
<td>Intended for students capable of doing independent study in German language, civilization and literature. Research paper required. Prerequisite: consent of the Chair of the Department.</td>
</tr>
<tr>
<td>497</td>
<td>Honors Work in German.</td>
<td>3</td>
<td>See Honors Work, page 41.</td>
</tr>
<tr>
<td>498</td>
<td>Honors Candidacy in German.</td>
<td>3</td>
<td>See Honors Work, page 41.</td>
</tr>
</tbody>
</table>

### The Classics

**Major.** A minimum of 16 credit hours in Greek and 12 credit hours in Latin beyond Latin 103 constitute a major in classics.

**Greek**

**Major.** A minimum of 24 credit hours in Greek constitutes a major.

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

- **The Reverend and Mrs. Arthur L. Reinke Memorial Scholarship.** See page 207 for details.
- **The John and Dorothea Helms Endowed Scholarships.** See page 203 for details.
- **Delta Upsilon Chapter of Eta Sigma Phi Scholarship.** See page 202 for details.

**101. First Semester Greek.**

**102. Second Semester Greek.**

**203. Intermediate Greek.**

- **220. Hellenistic Greek.**
  - Cr. 2-4. Readings from the Greek Septuagint and subsequent Hellenistic literature. Prerequisite: Greek 203.

**221. Plato.**

- Cr. 2-4. Reading of representative dialogues. Study of Plato as philosopher and of the personality of Socrates. Prerequisite: Greek 203.
Foreign Languages and Literatures

250. Topics in Greek Literature and the Fine Arts.
Cr. 3. Study of selected works of Greek literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Greek required. May not be counted toward a major or minor in Greek.

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. May not be counted toward a major or minor in Greek or Latin.

322. Homer.
Cr. 2-4. Selections from the Iliad and Odyssey. Study of the literary qualities of the early epic and of life in the Heroic Age. Prerequisite: Greek 203.

323. Greek Drama.
Cr. 2-4. Selected plays of Aeschylus, Sophocles, Euripides and Aristophanes, with supplementary lectures on the Greek theatre. Prerequisite: Greek 203.

409. Greek Composition.
Cr. 1-2. Greek writing of moderate difficulty, including translation into Greek of passages of connected English prose; review of grammar and syntax. Prerequisite: Greek 203.

424. Greek Orators.
Cr. 2-4. Selections from the Attic orators; study of oratory in Athenian democracy. Prerequisite: Greek 203.

425. Greek Historiography: Selected Readings from Greek Historians.
Cr. 2-4. A study of contrasting philosophies of history. Prerequisite: Greek 203.

481. Cooperative Education in Greek I.
Cr. 0.5-3. Work experience with a cooperative employer. Written report required. Prerequisites: 12 credits beyond Greek 203 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in Greek II-III.
Cr. 0.5-3. Continuation of Greek 481. Prerequisites: Greek 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

495. Supervised Reading and Research in Greek.
Cr. 1-4. Intended for students capable of doing independent study in Greek language and literature. Scholarly paper required. Prerequisite: consent of the Chair of the Department.

497. Honors Work in Greek.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Greek.
Cr. 3. See Honors Work, page 41.

Hebrew

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

101. First Semester Hebrew.
Cr. 4. Elements of Hebrew grammar stressing oral and reading ability. Credit may not be counted for graduation by a student who has taken two years of high school Hebrew.

102. Second Semester Hebrew.
Cr. 4. A continuation of Hebrew 101, with reading of simpler prose sections of the Old Testament. Prerequisite: Hebrew 101 or equivalent.

Cr. 4. Selected reading of Old Testament prose and poetry, with attention to increased vocabulary and linguistic structure. Prerequisite: Hebrew 102 or equivalent.

220. Selected Readings in Hebraic Literature.
Cr. 2-4. Readings for advanced students from the Old Testament and rabbinic literature. Prerequisite: Hebrew 203 or consent of the Chair of the Department.

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.

101. Beginning Japanese I.
Cr. 4. An introduction to the basic grammar of Japanese.

102. Beginning Japanese II.
Cr. 4. A continuation of Japanese 101. Prerequisite: Japanese 101 or equivalent.

203. Intermediate Japanese I.
Cr. 4. Reading, writing, and discussion in Japanese on the intermediate level, with a review of Japanese grammar. Prerequisite: Japanese 102 or equivalent.

204. Intermediate Japanese II.
Cr. 4. A continuation of Japanese 203. Prerequisite: Japanese 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.

251. Introduction to Japanese Literature.
Cr. 3. Readings of representative works of Japanese literature in English from the medieval period to the present. No knowledge of Japanese required. May be used to fulfill the Non-Western/Third World component of the general education requirements.

305. Advanced Japanese I.
Cr. 4. Continuation of Japanese 204. Introduction of extended prose readings. Simple conversation and composition in everyday Japanese. Prerequisite: Japanese 204 or equivalent.

306. Advanced Japanese II.
481. Cooperative Education in Japanese I.
Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond Japanese 203 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in Japanese II-III.
Cr. 0.5-3. Continuation of Japanese 481. Prerequisites: Japanese 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

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

Major. A minimum of 20 credit hours beyond Latin 103 constitutes a major.

Minor. A minimum of 10 credit hours beyond Latin 103 constitutes a minor.

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

Scholarships. See Greek for list of scholarships in Classical Languages.

101. First Semester Latin.
Cr. 4. A course designed to give the student the essentials of Latin. Credit may not be counted for graduation by a student who has completed a second year Latin course in high school.

102. Second Semester Latin.
Cr. 4. A continuation of Latin 10, followed by easy selections from Latin prose. Prerequisite: Latin 101 or equivalent.

103. Intermediate Latin.
Cr. 4. Introduction to Latin epic poetry; readings from the Aeneid of Virgil and the Metamorphoses of Ovid. Prerequisite: Latin 102 or equivalent.

220. Roman Oratory.
Cr. 2-4. Selected political and judicial speeches of Cicero; study of Roman oratory during the Republic and Empire. Prerequisite: Latin 103.

221. Roman Philosophy.
Cr. 2-4. Study of representative essays of Cicero and of selections from the De Rerum Natura of Lucretius; study of the various schools of Greco-Roman philosophy. Prerequisite: Latin 103.

222. Latin Lyric and Elegiac Poetry.
Cr. 2-4. Roman society in the last years of the Republic and in the Augustan Age as reflected in Catullus, Horace, Tibullus and Propertius. Prerequisite: Latin 103.

223. Roman Comedy.
Cr. 2-4. History of Roman drama. Readings and translation of representative plays of Plautus and Terence. Prerequisite: Latin 103.

250. Topics in Latin Literature and the Fine Arts.
Cr. 3. Study of selected works of Latin literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Latin required. May not be counted toward a major or minor in Latin.

324. Roman Historians.
Cr. 2-4. Selections from the works of Caesar, Sallust, Livy and Tacitus; study of Roman historiography. Prerequisite: Latin 103.

325. Roman Satire and Epistolography.
Cr. 2-4. Selections from the poetry of Juvenal and Martial and from the Letters of Cicero and Pliny. Life and manners of the late Republic and early Empire. Prerequisite: Latin 103.

326. Patristic and Medieval Latin.
Cr. 2-4. Readings in the Vulgate and the Fathers and in religious prose and poetry of the Medieval period. Prerequisite: Latin 103.

Cr. 3. Analysis of English vocabulary, including scientific terms, derived from Latin and Greek. No knowledge of Latin or Greek required. May not be counted toward a major or minor in Latin or Greek.

409. Latin Composition.
Cr. 2-4. Latin writing of moderate difficulty, including translation into Latin of passages of connected English prose; review of grammar and syntax. Prerequisite: Latin 103.

427. Survey of Latin Literature I.
Cr. 2-4. Latin poetry and prose of the Roman Republic. Prerequisite: Latin 103.

428. Survey of Latin Literature II.
Cr. 2-4. Latin poetry and prose of the Roman Empire. Prerequisite: Latin 103.

481. Cooperative Education in Latin I.
Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond Latin 103 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in Latin II-III.
Cr. 0.5-3. Continuation of Latin 481. Prerequisites: Latin 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

489. The Teaching of Foreign Languages.
Cr. 2. (See French 489 and Education 489.) Prerequisite: admission to Supervised Teaching.

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.

497. Honors Work in Latin.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Latin.
Cr. 3. See Honors Work, page 41.
Spanish

Major. A minimum of 24 credit hours beyond Spanish 103 constitutes a major. Courses must include Spanish 204, 220, 230 or 231, and 321 or 322.

Minor. A minimum of 11 credit hours above Spanish 103 constitutes a minor. Courses must include Spanish 204 and one course in either Spanish civilization or literature.

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

101. First Semester Spanish.  
Cr. 4. A course designed to give the student the essentials of Spanish. Credit may not be counted for graduation by a student who has completed a second year Spanish course in high school.

102. Second Semester Spanish.  
Cr. 4. A continuation of Spanish 101. Prerequisite: Spanish 101 or equivalent.

103. Intermediate Spanish.  
Cr. 4. Reading, writing, and discussion in Spanish on the intermediate level. Prerequisite: Spanish 102 or equivalent.

204. Spanish Composition and Conversation.  
Cr. 4. Practice in speaking, writing, and understanding Spanish beyond survival needs. Prerequisite: Spanish 103 or equivalent.

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 criticism and the problems of analyzing literature in a second language. Prerequisite: Spanish 204.

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: Spanish 204.

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: Spanish 204.

250. Topics in Hispanic Literature and the Fine Arts.  
Cr. 3. Study of selected works of Spanish literature in English translation and of their correlates in the visual arts and/or music. No knowledge of Spanish required. May not be counted toward a major or minor in Spanish. The topic, Spanish America in Literature and the Arts, may be used to fulfill the Fine Arts/Fine Arts-Literature and the Non-Western Third World component of the general education requirements.

306. Contemporary Hispanic Society through Communications.  
Cr. 4. Utilization of newspapers, magazines, radio, television and essay as a basis for conversation, composition and grammar study. Prerequisite: Spanish 204.

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: Spanish 204.

321. Spanish Literature.  
Cr. 3. A study of representative works of the literature of Spain from the Middle Ages to the present. Prerequisite: Spanish 220.

322. Spanish American Literature.  
Cr. 3. A study of representative works of the literature of Spanish America from the Conquest to the present. Prerequisite: Spanish 220.

341. The Spanish Language.  
Cr. 3. An introduction to the development and usage of the Spanish language through the study of linguistics, particularly phonetics and philology. Prerequisite: Spanish 204.

409. Advanced Spanish.  
Cr. 4. A course in advanced language skills including the study of the finer points of grammar and intensive speaking and writing. Prerequisite: Spanish 204 and junior standing.

481. Cooperative Education in Spanish I.  
Cr. 0.5-3. Work experience with a cooperating employer. Written report required. Prerequisites: 12 credits beyond Spanish 103 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in Spanish II-III.  
Cr. 0.5-3. Continuation of Spanish 481. Prerequisites: Spanish 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

489. The Teaching of Foreign Languages.  
Cr. 2. (See French 489 and Education 489.) Prerequisite: admission to Supervised Teaching.

490. Seminar in Hispanic Literature.  
Cr. 3. The examination of selected themes, movements or authors in Spanish and Spanish-American literature. This course may be repeated provided there is no duplication of material. Prerequisite: Spanish 220.

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.

497. Honors Work in Spanish.  
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Spanish.  
Cr. 3. See Honors Work, page 41.
Geography

Professor Janke, (Chair), Kallay; Assistant Professors Kimsey, Zhang.

Geography is a diverse subject which 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, teaching of geography.

Student interest 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 constitutes a major. Courses must include 101, 102, 103, 104, 201, at least one course from the 310-318 series and one course numbered above.

Students who are contemplating professional or graduate work in geography should take at least 35 credit hours in the Department. For this professional major, students are required to take 101, 102, 103, 104, 201, 220, and at least four of the following systematic or technical courses: 230, 320, 331, 330, 360, 361, 385, 466, 490, and 495.

The Department emphasizes five professional career phases of the field: environmental management/land use analysis; meteorology/weather forecasting; urban and regional planning; cartography/map making, and tourism. In addition to the specified courses to be taken in the Department of Geography, certain cognate courses, which most closely correlate with each program of geographic concentration, are recommended.

Minor. A minimum of 17 credit hours in geography constitutes a minor. Geography 101, 102, 103, and 104 must be included plus one more geography course.

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

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 (V.U.).
5. Grades earned shall be recorded at the student's 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 geology. Degrees are awarded by the home institution.

Geography 103. Cr. 4. (VU)  
Geography 104. Cr. 4. (VU)  
G-104 Evolution of the Earth 3. (IUN)  
G-221 Introductory Mineralogy. Cr. 4. (IUN)  
G-222 Introductory Petrology. Cr. 3. (IUN)  
G-323 Structural Geology. 3. (IUN)  
G-333 Principles of Sedimentation and Stratigraphy. 3. (IUN)  
G-406 Introduction to Geochemistry. Cr. 3. (IUN)  
G-411 Principles of Invertebrate Paleontology. Cr. 3.  
G-420 Regional Geology Field Trip. Cr. 1-3. (IUN)  
Geob 490 Undergraduate Seminar. Cr. 1-2. (IUN)

Additional Indiana University course offerings open to Valparaiso University students majoring in geology are G-350, G-410 and G-413. See the IUN catalog.

Completion of the degree requirements of the College of Arts and Sciences with a major in geology leads to the Bachelor of Arts degree or the Bachelor of Science degree.

Approval of Schedules. All students taking a major or minor in geography or the VIGGA major in geology, and all students planning to teach geography must have their schedules approved by the Chair of the Department at the beginning of each semester.

For Natural Science Credit:  
One of these courses may be used to fulfill part of the Natural Science requirement.

103. Meteorology.  
2+4, Cr. 4. An introductory course designed to give the student a broad view of the principles of earth and atmospheric science, emphasizing meteorology. This course may be used to fulfill four credit hours of the Natural Science component of the general education requirements.

104. Geomorphology.  
2+4, Cr. 4. An analysis of natural landscapes emphasizing the interrelationships among landscape components: climate, vegetation, soils, hydrology and geomorphology Field trip. This course may be used to fulfill four credit hours of the Natural Science component of the general education requirements.

204. Surface Geology.  
2+4, Cr. 4. A treatment of the evolution of landforms and their relationship to the structure and character of the rocks. Field trip. This course may be used to fulfill four credit hours of the Natural Science component of the general education requirements.

For Social Science Credit:

Cr. 3. A regional analysis of the industrialized lands of the world, particularly the United States, Canada, Europe, the Soviet Union, Japan, Australia and New Zealand. The emphasis is on analysis of how human institutions and behavior, interacting with the physical environment, shape the organization of space. This course may be used to fulfill a part of the Social Analysis component of the general education requirement.

102. Geography of the Non-Industrialized World.  
Cr. 3 regional survey of the so-called "Third World." The emphasis on cultivation of a cosmopolitan sensitivity to and respect for cultures other than our own. This course may be used to fulfill a part of the Social Analysis component and the Non-Western or Third World component of the general education requirements.

160. Conservation of Natural Resources.  
Cr. 3. A study of the problems of American resources, especially energy; the institutions and attitudes which lead to these problems, and solution for correcting them.

Cr. 3. Regional treatment of the past and current conditions of North American Indian land use and settlement from the Columbian to the Reservation periods. Special attention is given to the regional analysis of native cultural areas and the impact of federal policy on contemporary social issues. This course may be used to fulfill the Non-Western/Third World component of the general education requirements.

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.

Cr. 2-3. This course is designed to examine current geographic topics. A different theme selected each time the course is offered. Such topics as settlement patterns, ethnic communities, poverty, landscape in literature, diffusion and perception studies, as well as problems associated with the physical environment may be considered. A student may repeat the course for credit as each new theme is investigated. The three-credit course extends throughout the semester; the two-credit course for seven weeks. Prerequisite: sophomore standing or above.
220. Cartography.
2+2, Cr. 3. An introduction to cartographic techniques and the compilation and construction of maps. Prerequisite: sophomore standing or above.

2+2, Cr. 3. An introduction to aerial photographs and data from remote sensors including their use for land use planning. Prerequisite: Geography 204 or consent of the instructor. May be of interest to students in biology, political science and civil engineering.

Note: In each of the courses 310-318 below, a geographic interpretation of the physical, social, political, industrial and commercial processes and patterns of a particular region is given. Prerequisite for each of these is junior standing or the consent of the Chair of the Department.

310. Regional Geography of the United States and Canada.
Cr. 3.

311. Regional Geography of Latin America.
Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

312. Regional Geography of Europe.
Cr. 3. Recommended for students planning to participate in the Cambridge, Paris or Reutlingen Overseas Study Program.

313. Regional Geography of Africa.
Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

314. Regional Geography of Asia.
Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

315. Regional Geography of the Soviet Union.
Cr. 3.

316. Regional Geography of the Near East.
Cr. 3. May be used to fulfill the Non-Western or Third World component of the general education requirements.

317. Regional Geography of Australia-Oceania.
Cr. 3.

318. Field Study in European Geography.
Cr. 3. Overseas Study Program only.

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.

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.

330. Communicating with Maps.
Cr. 3. The construction and analysis of maps as a form of communication are undertaken. Prerequisite: Geography 220 or its equivalent.

360. Statistical Analysis in Geography.
Cr. 3. A course designed to teach the techniques of data collection and quantitative analysis. Prerequisite: junior or senior standing.

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 Northwestern Indiana. The results of the class research frequently contribute to the solution of the problem studied. Prerequisite: junior or senior major or permission of the instructor.

364. The Profession of Geography.
Cr. 3. The nature of geography as a professional field of endeavor is treated in the context of the ethical responsibilities of the practicing geographer. Opportunities to explore various aspects of geographic professionalism are offered. Open to junior and senior majors and minors.

385 /585. Field Study.
0-4, Cr. 2-3. A course designed to develop methods and techniques of geographic 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.

466 /566. History of Geography.
Cr. 3. Readings, papers and discussion on the development of geographic thought especially in the nineteenth and twentieth centuries; on basic concepts of the field; on the place of geography within thought and value systems, and on the contributions of major geographers, past and present, to the discipline and to the intellectual world at large. Prerequisite: junior or senior standing.

470 /570. Political Geography.
Cr. 3. An investigation of the relations among political activities and organizations and the geographic conditions within which they develop. Political power is discussed in terms of spatial, human, cultural and ethnic geography. May be of interest to political science majors.

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 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.

Cr. 3. A workshop course to develop the technique of interpreting current world events in the geographic framework in which the events occur. Prerequisite: junior or senior standing.
486. Internship in Geography.
Cr. 1-6. Students gain experience by work in public or private agencies, such as planning firms, national parks and map companies. Prerequisites: junior or senior geography major and application for an internship in writing the Chair of the Department.

490 /590. Selected Topics in Physical Geography.
Cr. 2-3. Advanced studies in physical geography. Such topics as weather forecasting, applied climatology, landform analysis and the development of environmental impact statements are considered. May repeated when the topic is different. Prerequisites: Geography 103 or 104 or the equivalent and consent of the instructor.

495. Independent Study.
Cr. 2-3. Individual research readings on a topic in geography agreed upon by a student and a faculty member of his choice from the Geography Department. Prerequisites: junior or senior standing and consent of the Chair of the Department.

497. Honors Work in Geography.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Geography.
Cr. 3. See Honors Work, page 41.
History

Professors Boyd, Engelder, Krodel, Schoppa (Chair), Startt; Associate Professors Berg, Kohlhoff; Assistant Professor Rubchak.

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 is present-minded, convinced that illumination of the past is of fundamental importance in today's decision-making and for 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 time to explore a variety of subjects.

Major. A minimum of 30 credit hours in history constitutes a major. Courses must include History 100, 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 History 100 and 210. Six of the remaining twelve hours must be in courses numbered 300 or above, divided into two areas (see fields under 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. Pre-law students who are taking a major in history should consult their adviser about appropriate course selections and about the selection of a second major or a minor.

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.

100. History of Western Thought and Society.#

Cr. 3. A study of the thought and social development that has characterized Western society from ancient to modern times. Special attention is given to identifying the basic traditions of Western culture and to examining the process of historical change. Required of all freshmen as part of the general education requirements.

Note: The survey courses, 210 through 241, may be used to fulfill the Philosophical and Historical Studies component of the general education requirements. Courses 230, 231, 240 and 241 may be used to fulfill the Non-Western or Third World component of the general education requirements.

210. Introduction to the Contemporary World.#

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.

220. United States History to 1865.†

Cr. 3. A study of the various aspects of American civilization from the age of discovery to the end of the Civil War, with emphasis on the development of democratic ideas and institutions.

221. United States History since 1865.†

Cr. 3. A study of various aspects of American civilization from the Civil War to the present, with emphasis on the development of industrial and world power against a background of social and cultural tensions.


Cr. 3. A survey of the major periods of Latin American history to 1825, with emphasis on the

#Credit for History 100 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 History 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.
pre-Columbian Indian cultures, Africa's contribution and the Iberian heritage.

231. Contemporary Latin American Civilization.  
Cr. 3. A survey of the republics from independence to the present, relating contemporary Latin American problems to underdevelopment and unrest in the current world scene.

240. Traditional East Asian Civilization.  
Cr. 3. A survey of the traditional cultures of China, Japan, Vietnam and Korea before the impact of Western civilization.

241. Modern East Asian Civilization.  
Cr. 3. A survey of the modern history of China, Japan, Vietnam and Korea, with emphasis on the meeting of East and West and the struggle for development and self-expression in our times.

Note: Courses 351 and 352 are available in Overseas Study Centers only.

351. Survey of English History and Culture.  
Cr. 3. A survey of English life from Roman times to the present, emphasizing broad movements, themes and institutions. Cambridge Center.

352. Problems in Modern German History.  
Cr. 3. An examination of modern German history emphasizing selected problems. Reutlingen Center.

Note: The courses listed below require at least sophomore standing or consent of the Chair of the Department.

EUROPEAN HISTORY

311 /511. Greek and Roman Civilization.  
Cr. 3. A study of the Greek and Roman political, social and intellectual development from the Mycenaean period to the fourth century A.D.

312 /512. Europe in the Age of the Reformation.  
Cr. 3. A study of the political, socio-economic and religious conditions in Europe under the impact of the Protestant Reformation.

Cr. 3. A study of English history in the eighteenth, nineteenth and twentieth centuries. Stress is on understanding the political, cultural and industrial development of England as a great power and its position in the contemporary world.

314 /514. The British Imperial Experience.  
Cr. 3. A study of the British empire in history, film, and literature. Particular attention is given to an introduction to the Old Dominions (Canada, Australia, New Zealand and South Africa), to the British in India, to Imperial persuasion, and to theories of imperialism.

315 /515. Contemporary Europe.  
Cr. 3. A study of twentieth century Europe emphasizing the rise and impact of Nazi Germany, the Second World War, and major themes of the post-1945 period.

HISTORY OF THE AMERICAS

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 post-war problems culminating in the adoption of the Constitution.

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.

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.

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.

Cr. 3. An examination of the post-war American response to the prospect of living in an uncertain world.

326 /526. American Constitutional History.  
Cr. 3. An examination of the growth of the American constitution from its colonial origins to the present. Emphasis is placed on such developments as the Constitution's formation, its testing in the Civil War and its adjustment to the problems of twentieth century society.

Cr. 3. A study of the development of American political parties from their appearance in the eighteenth century to the present. Emphasis is placed on the evolution of political leadership, the creation of coalitions and political campaign behavior.

331 /531. History of Mexico.  
Cr. 3. A study of the struggle for political, economic and cultural identity in America's southern neighbor.

NON-WESTERN HISTORY

341 /541. History 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.

Cr. 3. A study of Japan's rise to its position as a world power with emphasis on the consequent social dislocations in the twentieth century.
SPECIALIZED OFFERINGS

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 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.

476 / 576. The Interpretation of History.
Cr. 2. An introduction to selected major historians and their approaches to problems of interpretation faced by students of history. Prerequisite: at least six credit hours of history.

489. The Teaching of Social Studies.
Cr. 2. (See Education 489.) A study of methods of teaching social studies in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in the Department.

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, Revolutionary Russia, Vietnam War through Film and Literature, 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.

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 the topics are different. Prerequisites: junior or senior standing and the consent of the Chair of the Department.

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.

497. Honors Work in History.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in History.
Cr. 3. See Honors Work, page 41.
Home Economics

Associate Professors Evans (Chair), Antommaria; Assistant Professor Davis; Instructor Nathlich.

The Department of Home Economics offers programs of study which provide professional preparation for students in the areas of dietetics, fashion merchandising, foods merchandising, and interior design. Courses offered by the Department are designed to develop students intellectually and to prepare them professionally. The major in Home Economics may be applied in business, education and consultation, while working with individuals, families and organizations. Some representative careers are restaurant management, catering, food sales, management or clinical dietetics, fashion buying and retail management, and positions in residential or contract interior design.

Departmental Organizations. Students are encouraged to join the Valparaiso University Student Home Economics Association (SHEA). Membership in the national and state home economics associations are also available for all students. Professional programs are presented regularly. SHEA members may also elect to join the Student Dietetic Association, The Couture Fashion Association or the student chapter of the American Society of Interior Designers (ASID).

The Gamma Tau Chapter of the national home economics honor society, Kappa Omicron Phi, was installed at Valparaiso in 1975. Students with outstanding scholarship, a minimum of eight credit hours in home economics, and membership in SHEA are invited to join.

Cooperative Education. Qualified students may participate in a paid, professional work experience which provides knowledge and experience in a specialized vocational area. Since Cooperative Education normally involves full-time, off-campus employment, participating students will usually extend the length of time required to complete their degree program. A maximum of six credits may be used to meet the minimum major requirements. Approval of the Department Chair is required. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 42.)

General Major. To fulfill the requirements for the major, students must complete one of the four departmental programs: dietetics, fashion merchandising, foods merchandising, or interior design. Several departmental core courses are required of all programs. Those students following a merchandising program must also complete the courses for a Liberal Arts Business Minor. In addition, the programs in Fashion Merchandising and Interior Design offer recommended extended field experiences. Students should consult their advisers to determine additional requirements, if any, for professional certification.

Minor. A minimum of 15 credit hours in Home Economics constitutes a minor. Within the minor, students may concentrate courses in Foods and Nutrition, Fashion, or Interior Design. The plan of study for a minor must be preapproved by the Department Chair.

Degree. Completion of the degree requirements of the College of Arts and Sciences with a major in one of the programs in Home Economics, leads to the degree Bachelor of Science in Home Economics. Completion of requirements for the program is noted on the transcript in addition (e.g., Home Economics: Dietetics).

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

Dietetics

This program is for students in Home Economics preparing for careers in the field of dietetics. The curriculum meets the American Dietetic Association requirements for a Plan IV undergraduate general emphasis program. In addition to this plan of study, students must complete a postgraduate accredited internship or equivalent approved preprofessional practice program and pass a national examination to become a Registered
Dietitian. Details may be obtained from the program adviser. A minimum of 37 credit hours in Home Economics is required, which must include Home Economics 140, 160, 162, 260, 262, 360, 362, 364, 366, 460, and 462. Other requirements are Accounting 205, Biology 151, 152 and 210, General Business 301, Chemistry 111, 112 and 305, Computer Science 115 or 117, Economics 221, Education 209, English 257, Mathematics 124, Psychology 101, Sociology 110, and one of the following: Psychology 201, Biology 490 (Biostatistics) or Mathematics 240.

Students who enter this program after their freshman year may find that one or more additional semesters are required to complete the program.

**Fashion Merchandising**

This program is for students in Home Economics preparing for careers in an area of the fashion business. **Requirements.** A minimum of 32 credit hours in Home Economics is required, which must include Home Economics 120, 124, 140, 160 or 214, 222, 324, 330, 392, 420, 422, and one of the following 242, 341, or 342.

Other Arts and Science courses required are Chemistry 111 and 112, Economics 221, English 257, Psychology 102, and Sociology 110.

The following courses from the College of Business Administration must also be completed:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GBUS 206 Legal Environment of Business</td>
<td>3 Cr.</td>
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<tr>
<td>ACC 205 Financial Accounting</td>
<td>3 Cr.</td>
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<tr>
<td>FIN 301 Principles of Finance</td>
<td>3 Cr.</td>
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<tr>
<td>GBUS 301 Principles of Management</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MKT 301 Principles of Marketing</td>
<td>3 Cr.</td>
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<tr>
<td><strong>Total</strong></td>
<td>15 Cr.</td>
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**Foods Merchandising**

This program is for students in Home Economics preparing for careers in an area of foods in business and the food service industry. **Requirements.** A minimum of 32 credit hours in Home Economics is required, which must include Home Economics 140, 160, 162, 214 or 260, 262, 360, 362, 364 and 366.

Other Arts and Sciences courses required are Biology 125, Chemistry 111 and 112, Economics 221, English 257, Psychology 101, and Sociology 110.

The following courses from the College of Business Administration must also be completed:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>GBUS 206 Legal Environment of Business</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 205 Financial Accounting</td>
<td>3 Cr.</td>
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<tr>
<td>FIN 301 Principles of Finance</td>
<td>3 Cr.</td>
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<tr>
<td>GBUS 301 Principles of Management</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MKT 301 Principles of Marketing</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15 Cr.</td>
</tr>
</tbody>
</table>

**Interior Design**

This program is for students in Home Economics preparing for careers in an area of the interior design field. A minimum of 32 credit hours in Home Economics is required, which must include Home Economics 140, 160 or 214, 242, 243, 244, 330, 341, 342, 343, 441 and 442.

Also required are the following art courses which constitute a major in art: Art 101, 102, 121, 132, 221, 231, 232, 251 and 321.

Other requirements are Chemistry 111 and 112, Accounting 205, Economics 221, English 257, Marketing 301, Psychology 102 and 335, and Sociology 110.

**120. Apparel Production, Evaluation and Selection.**

2+3, Cr. 3. Fundamentals of mechanics of apparel production including raw materials analysis, cutting and production analysis, and assembly and finishing processes. Study of factors that influence the selection of apparel. Field trip required.

**124. Introduction to Apparel Industry.**

Cr. 3. Study of the interrelationships of various industries and services that compromise the fashion industry. Seminar discussions and presentations focus on further broadening professional preparation. Field trip may be arranged.

**140. Art in the Human Environment.**

Cr. 3. A study of design elements and principles in relation to our human environment, with an emphasis on interior spaces and their impact on the physical and sociopsychological needs of people. Field trip.

**160. Foods.**

Cr. 3. A course covering the history of food from ancient to modern times, the food market structure, international aspects and those factors which affect human food habits.
162. Principles of Food Science and Preparation.
2+4, Cr. 3. A course in food science theory and preparation using sensory and objective methods for evaluation of food products.

190. First Aid, Health and Safety.
(Also offered as Physical Education 190.) Cr. 2.
Seven weeks course. A study of health concerns as they relate to the needs of the family: the prevention and emergency care of sudden illness and injury.

Cr. 3. A study of the basic principles of human nutrition with emphasis on practical application.

222. Cultural and Historical Aspects of Clothing.
Cr. 3. An interdisciplinary approach to the study of the social, psychological, historical, cultural, economic and aesthetic forces that affect clothing behavior. (Field trip may be arranged.)

1+3, Cr. 2. A course to acquaint the student with the graphic techniques of lettering and line work, scale drawing and size description, and orthographic projection. Emphasis is on architectural drawings. A survey of methods, practices and techniques of home construction is included. (Not open to engineering students.) Ordinarily offered in alternate years.

243. Residential Interiors I.
1+3, Cr. 2. An introduction to the methodology of space planning for residential environments. Both physical and psychological aspects concerning user requirements and human factors will be emphasized. Prerequisite: Home Economics 242 or consent of the Chair of the Department.

244. Residential Interiors II.
1+3, Cr. 2. Study of advanced residential space planning criteria and selection of furnishings, equipment, materials, and finishes. Design considerations for special populations such as aged and disabled will be examined. Introduction to lighting design, principles, and application in residential settings. Prerequisite: Home Economics 243 or consent of Chair of the Department.

Cr. 3. Basic principles of human nutrition including the functions, requirements and food sources of nutrients. Prerequisite: Chemistry 111 and Biology 151 and 152 or consent of the Chair of the Department.

262. Meal Management and Production.
1+6, Cr. 4. The fundamentals of planning, production and service of meals with emphasis on the control of time, money, energy and equipment. Ordinarily offered in alternate years. Prerequisites: Home Economics 162 and 214 or 260.

290 / 490 Topics in Home Economics.
Cr. 3. A study of selected topics of current interest in home economics. May be repeated for credit provided the topics are different. Prerequisite: may vary depending upon specific course requirements.

324. Fashion Promotion.
Cr. 3. A fashion marketing foundation for advertising and promotion. Includes practical experience in display work, advertising, sales techniques and production of special events, such as fashion shows and fashion videos. A field trip is required. Prerequisites: Home Economics 140 and 222; junior standing or consent of the Chair of the Department.

330. Textiles.
Cr. 3. Study of basic textile fibers, yarns, and fabric construction and finishes including their origin, processing, and properties. Emphasis on textile terminology, selection and care related to the fields of fashion and interior design. Prerequisites: junior standing or consent of the Chair of the Department; Chemistry 112.

341. Theory, Resources, and Application in Interior Design.
1+3, Cr. 2. Concentration on behavioral patterns, perceptions, needs and usage of space of individuals and families. Conceptual solutions concerning interior environments will be developed through the processes of theory, research, analysis and synthesis. Prerequisites: Art 132 or consent of the Chair of the Department.

342. History of Interiors.
Cr. 2. Study of the design movements from antiquity to the present and the significance of their contribution to the arts and furnishings of the interiors of today. Field trip.

343. Contract Interiors I.
1+5, Cr. 3. Introduction to large scale public and social spaces with an emphasis on interior systems. Exposure to design of historic restoration, renovation and adaptive methodology. Field trip. Prerequisite: Home Economics 243 or consent of the Chair of the Department.

360. Experimental Foods.
1+5, Cr. 3. Research methods applied to the experimental study of foods. Includes recipe development to meet special needs with applications to health and the food industry. Prerequisites: Home Economics 162 and Chemistry 112. Ordinarily offered in alternate years.

362. Quantity Food Purchasing and Production.
2+4, Cr. 3. A study of quantity food purchasing, production and service. Consideration is given to menu planning, production and service methods, storage facilities, equipment and sanitation necessary for institutional food service. Field trips and laboratory arranged to observe and study various types of food service operations. Prerequisite: Home Economics 262 or consent of the Chair of the Department.

364. Cultural Aspects of Food.
2+3, Cr. 3. A global study of the historical, social, psychological, economic, religious and aesthetic significance of food customs in selected international cultures. Ordinarily offered in alternate years. Prerequisite: junior standing and consent of the Chair of the Department.
Cr. 2 A study of nutrition services and intervention programs in national and international communities. Methods of communicating nutrition information included. Field trips will be required. Prerequisite: Home Economics 214 or 260.

381. Cooperative Education in Home Economics I.  
Cr. 0.5-3. Professional work experience with a cooperating employer in a specialized vocational area. Written report required. Prerequisites: junior standing and approval of the Chair of the Department. S/U grade.

382-383. Cooperative Education in Home Economics II-III.  
Cr. 0.5-3. Continuation of Home Economics 381. Prerequisites: Home Economics 381 and approval of the Chair of the Department. S/U grade. May be repeated beyond 383 for additional credit.

392. Practicum in Home Economics.  
Cr. 1. Practicums in which students may intensively study a particular area of Home Economics. May be repeated for up to 2 credits. Prerequisite: consent of the Chair of the Department.

420. Behavioral Influences in Apparel Merchandising.  
Cr. 2. Analysis of acquisition and consumption of apparel focused on current psychological, sociological, cultural, and economic influences. Prerequisite: Psychology 101 or 102.

422. Fashion Merchandising and Buying.  
Cr. 3. The study of planning, buying and selling of apparel, including stock turnover, markdowns, obsolescence factors, and the difficulty of evaluating and predicting consumer merchandise preferences. Field trip required. An additional credit may be earned through an internship. Prerequisite: Home Economics 324 or consent of the Chair of the Department.

441. Contract Interiors II.  
1+5, Cr. 3. A study of the design, specifications and construction involved in large scale interior projects, using the team approach. Emphasis on building codes, and the various building systems, including mechanical, electrical and structural. A continuation of the study of illuminating principles, and design criteria as applied to architectural interiors in public spaces. Prerequisite: Home Economics 343 or consent of Chair of the Department.

442. Problems in Interior Design.  
1+5, Cr. 3. Study and design of complex, multi-use environments, emphasizing problem-solving, programming, and facility planning. Also included is the study of business procedures and the professional office in interior design with emphasis on administration of projects, contracts and documents. Prerequisite: Home Economics 441.

460. Advanced Nutrition.  
Cr. 3. An advanced study of the metabolism of nutrients and nutrient requirements during the life cycle. Techniques for the evaluation of nutritional status are included. Ordinarily offered in alternate years. Prerequisites: Home Economics 260, Biology 151 and 152, and Chemistry 112 and 305 or consent of the Chair of the Department.

462. Diet Therapy.  
3+2, Cr. 4. Application of the principles of human nutrition to the dietary treatment of acute and chronic disorders. Ordinarily offered in alternate years. Prerequisites: Home Economics 260, Biology 151 and 152, and Chemistry 112 and 305 or consent of the Chair of the Department.

495. Independent Study.  
Cr. 1-3. Independent work in a specialized area of home economics as agreed upon by the student and faculty adviser. Prerequisite: senior standing or consent of the Chair of the Department.

497. Honors Work in Home Economics.  
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Home Economics.  
Cr. 3. See Honors Work, page 41.
International Economics and Cultural Affairs

Administrative Committee:
Professor J. Peters (Foreign Languages, Chair); Professors Falkenstein (Foreign Languages), Schoppa (History), and Trost (Political Science); Assistant Professors Singleton (Economics) and Zhang (Geography)

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 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 consider the following Cooperative Education courses: French 381, German 381, and Spanish 381.

Requirements. A minimum of 53 credit hours in courses approved by the Administrative Committee. Courses must include Foreign Language and Literature, 17-18 credit hours beyond course number 103 (or 19 credit hours in Japanese); Economics, 15 credit hours; Geography, History and Political Science, 18 credit hours. See below for specific courses.

A senior research project earning 3 credit hours in course IECA 495 is required. The proposal for the special senior research project must be submitted no later than March 1st of the student's junior year.

Honors Work may be undertaken in International Economics and Cultural Affairs with appropriate approval. Students should register for International Economics and Cultural Affairs (IECA) 497, Honors Work in International Economics and Cultural Affairs, and 498, Honors Candidacy in International Economics and Cultural Affairs (see page 41).

Any departmental major or departmental minor may be added to the International Economics and Cultural Affairs program, with the exception of an Economics major or minor and a Foreign Language minor.

Foreign Language and Literature.
One of the following language options:

French
204 ........................................ 4 Cr.
French Composition and Conversation I
232 .................................. 3 Cr.
French Civilization from 1870 to the Present
250 or 222 .................................. 3 Cr.
Topics in French: Literature and the Fine Arts or French Literature from 1800 to the Present
306 ........................................ 4 Cr.
Contemporary French-Language and Communication
307 ........................................ 3 Cr.
Professional French

German
204 ........................................ 4 Cr.
German Composition and Conversation I
232 .................................. 3 Cr.
German Civilization since 1800
250 or 222 .................................. 3 Cr.
Topics in German: Literature and the Fine Arts or Selected Readings in German Literature since 1800
306 ........................................ 4 Cr.
Contemporary German Language in the Mass Media
307 ........................................ 3 Cr.
Professional German

Japanese
101 ........................................ 4 Cr.
Beginning Japanese I
102 ........................................ 4 Cr.
Beginning Japanese II
203 ........................................ 4 Cr.
Intermediate Japanese I
204 ........................................ 4 Cr.
Intermediate Japanese II
250 or 251 .................................. 3 Cr.
Topics in Japanese Literature and the Fine Arts or Introduction to Japanese Literature

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<table>
<thead>
<tr>
<th><strong>Spanish</strong></th>
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<tr>
<td>204</td>
<td>4 Cr.</td>
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<tr>
<td>Spanish Composition and Conversation</td>
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<tr>
<td>230 or 231</td>
<td>4 Cr.</td>
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<td>Spanish Civilization or Spanish-American Civilization</td>
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<td>250 Topics in Spanish:</td>
<td>3 Cr.</td>
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<tr>
<td>Literature and the Fine Arts</td>
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<tr>
<td>306</td>
<td>4 Cr.</td>
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<tr>
<td>Contemporary Hispanic Society Through Communications</td>
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<td>307</td>
<td>3 Cr.</td>
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<tr>
<td>Professional Spanish</td>
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<tr>
<td><strong>Economics</strong></td>
<td>6 Cr.</td>
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<tr>
<td>221 and 222</td>
<td>3 Cr.</td>
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<tr>
<td>Principles of Economics</td>
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<td>326</td>
<td>3 Cr.</td>
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<tr>
<td>International Economics</td>
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<tr>
<td>336</td>
<td>3 Cr.</td>
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<tr>
<td>Economics of Developing Nations</td>
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<td>346</td>
<td>3 Cr.</td>
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<tr>
<td>Comparative Economic Systems</td>
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<td><strong>Political Science</strong></td>
<td>3 Cr.</td>
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<tr>
<td>130 or 230</td>
<td>3 Cr.</td>
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<tr>
<td>Comparative Politics or International Relations</td>
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<tr>
<td>330 or 335</td>
<td>3 Cr.</td>
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<tr>
<td>Politics of Industrialized States or Politics of Developing States</td>
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<tr>
<td><strong>Geography</strong></td>
<td>3 Cr.</td>
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<tr>
<td>201</td>
<td>3 Cr.</td>
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<tr>
<td>Economic Geography</td>
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<tr>
<td>The appropriate course from 311-318</td>
<td>3 Cr.</td>
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<tr>
<td>Regional Geography</td>
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<tr>
<td><strong>History</strong></td>
<td>6 Cr.</td>
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<tr>
<td>230 and 231</td>
<td>6 Cr.</td>
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<tr>
<td>Origins of Latin American Civilization and Contemporary</td>
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<tr>
<td>Latin American Civilization or 210 and 315</td>
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<tr>
<td>Introduction to the Contemporary World and Contemporary Europe or 341 and 342</td>
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<tr>
<td>History of Modern China and History of Modern Japan</td>
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</table>
Mathematics and Computer Science

Professors Foster, D. Johnson, Mundt, Sanford, Sorenson; Associate Professors Caristi, Carlson, Hughes, Hull, Krebs, J. Lehmann, Marion (Chair), Reynolds, Treanor, Wagenblast; Assistant Professors Gillman, Hume, Sullivan.

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 28 credit hours in Mathematics constitutes a major. Courses must include those in one of the following programs.

Program 1. (Emphasis on Mathematical Analysis): Mathematics (131 or 151), 152, (233 or 253), either 260 or (267 and 268), 264, 240, 322, 344, 422, 399, and 499.

Program 2. (Emphasis on Operations Research): Mathematics (131 or 151), 152, (233 or 253), either 260 or (267 and 268), 264, 240, 322, 344, 422, 399, and 499.

Majors from both programs must also complete Computer Science 157. Mathematics majors are strongly encouraged to take Computer Science 158 and 225.

Completion of the degree requirements of the College of Arts and Sciences with a Program 1 or Program 2 major in Mathematics leads to the degree Bachelor of Arts or Bachelor of Science. A student seeking the Bachelor of Science degree with a major in Mathematics must complete at least 32 credit hours in Mathematics.

A student having a Mathematics major in view should begin mathematics in the freshman year. A Mathematics major should elect French or German to satisfy the foreign language component of the general education requirements. Anyone in either program planning to do graduate work in Mathematics should include Mathematics 452 and 462.

Minor. A minimum of 15 credit hours in Mathematics, including one of the courses 122, 132, or 152 constitutes a minor. No more than two of the following courses may be included: Mathematics 104, 122, 124, 131, 132, 151, 152, 213, 214.

Teaching Programs. Students who plan to teach mathematics in secondary schools with a major or minor in Mathematics should 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
Mathematics courses taken prior to participation in the program qualify, students must possess a minimum 2.5 grade point average in the Mathematics Chair of the Department or his designated representative before registration each semester and one for each summer. These credits may not be counted toward the minimum required for the major and cannot replace a required course, with the exception of Mathematics 399/499. To qualify, students must possess a minimum 2.5 cumulative grade point average and a 2.5 grade point average in all required Mathematics courses taken prior to participation in the program.

Placement Examination. All students entering Valparaiso University should take the Mathematics Placement Examination during orientation. Before registration, the Department of Mathematics and Computer Science will recommend which course(s) each student should take. A student who is recommended for Mathematics 104 or 114 may not take a course numbered above 114 without the consent of the Chair of the Department or his designated representative.

Approval of Schedules. All students taking a major or minor in the Department must have their schedules approved by the Chair of the Department or his representative before registration each semester.

104. Mathematical Ideas.
Cr. 4. (See paragraph on Placement Examination.) A one-semester course intended primarily for students majoring in the humanities. Important concepts in mathematics are studied from a non-technical point of view.

114. Precalculus.
Cr. 1-4. (See paragraph on Placement Examination.) 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.

122. Intuitive Calculus of One or More Variables.
Cr. 4. (See paragraph on Placement Examination.) 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: Mathematics 114 or the equivalent.

124. Finite Mathematics.
Cr. 4. (See paragraph on Placement Examination.) A course for students with a good foundation in mathematics who are interested in

131. Analytic Geometry and Calculus I.
Cr. 5. (See paragraph on Placement Examination.) A first course in the calculus sequence designed for students who plan to major in mathematics, engineering or a physical science. In contrast to Mathematics 151, more time is devoted to the precalculus aspects of the material and to comprehensive treatment of trigonometric functions. Topics include an extensive review of set theory, the real number system, inequalities, absolute value, elementary functions and their graphs, and continue to limits, continuity and derivatives; applications of the derivative; an introduction to the theory of the integral.

132. Analytic Geometry and Calculus II.
Cr. 5. A continuation of Mathematics 131. Topics include techniques of integration, applications of the definite integral; exponential, logarithmic and inverse trigonometric functions; indeterminate forms and improper integrals; sequences and series. Prerequisite: Mathematics 131 or 151.

151. Calculus I.
Cr. 4. (See paragraph on Placement Examination.) A first course in the calculus sequence designed for students who plan to major in mathematics, engineering or a physical science. Topics include a brief review of precalculus mathematics (set theory, the real number system, inequalities, absolute value, algebraic and trigonometric functions); limits, continuity and derivatives; applications of the derivative; an introduction to the theory of the integral; techniques of integration.

152. Calculus II.
Cr. 5. A continuation of Mathematics 151. Topics include applications of the definite integral; additional techniques of integration; exponential, logarithmic and inverse trigonometric functions; an introduction to differential equations; indeterminate forms and improper integrals; sequences and series. Prerequisite: Mathematics 151.

211. Laboratory in Elementary Mathematics I.
0+1, Cr. 0. This course is designed to provide an opportunity for prospective elementary school 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 Mathematics 213. Enrollment is restricted to students majoring in elementary education. Prerequisite: concurrent registration in Mathematics 213. S/U grade.

212. Laboratory in Elementary Mathematics II.
0+1, Cr. 1. A continuation of Mathematics 211. Topics correspond to those in Mathematics 214. Prerequisite: concurrent registration in Mathematics 214. S/U grade.

*Credit for Mathematics 151 may be earned through the College Level Examination Program subject examination in Introductory Calculus.*

*Credit for Mathematics 151 and 152 may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.*
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.

214. Mathematics for Elementary Teachers II.  
Cr. 4. A continuation of Mathematics 213. Topics include two-and three-dimensional geometry, measurement, functions, graphing, probability and statistics. Prerequisite: Mathematics 213.

233. Analytic Geometry and Calculus III.  
Cr. 4. A continuation of Mathematics 132. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: Mathematics 132 or 152.

Cr. 4. Elementary and linear differential equations, applications of differential equations, matrices and systems of linear equations, eigenvalues and eigenvectors, introduction to systems of linear differential equations. Prerequisite: Mathematics 132 or 152.

240. Statistical Analysis*  
Cr. 3-4. 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: Mathematics (124 and 122) or 132 or 152.

253. Calculus III.  
Cr. 4. A continuation of Mathematics 152. Topics include conic sections, vector algebra, space curves, calculus of functions of several variables, multiple integration, calculus of vector fields. Prerequisite: Mathematics 152.

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: Mathematics (122 and 124) or 132 or 152 or the equivalent.

262. Vectors and Linear Algebra.  
Cr. 3. Vectors in 2-space and 3-space, systems of linear equations and matrices, determinants, vector spaces, eigenvalues and eigenvectors, applications. Prerequisite: Mathematics (122 and 124) or 132 or 152.

264. Linear Algebra.  
Cr. 3. Systems of linear equations and matrices, determinants, vector spaces, linear transformations, inner products, eigenvalues and canonical forms. Prerequisite: Mathematics 232 or 253.

267. Algebraic and Discrete Structures I.  
Cr. 3. An introduction to mathematical reasoning and to the concepts that provide a mathematical foundation for computer science. Topics are selected from propositional and predicate calculus, algorithms, mathematical proof techniques, discrete probability, recurrence relations, Boolean algebra, graph theory and applications. Prerequisite: Mathematics (122 and 240) or 132 or 152.

268. Algebraic and Discrete Structures II.  
Cr. 3. A continuation of Mathematics 267. Prerequisite: Mathematics 267.

290. Topics in Mathematics.  
Cr. 1-3. Topics may include problem solving techniques, computer applications or topics from finite mathematics. Prerequisite: consent of the instructor.

312. History of Mathematics.  
Cr. 3. A survey of the development of mathematics from the earliest times to the present. Special emphasis on topics in geometry, algebra and elementary calculus which are related to secondary school mathematics. This course may not be counted toward a major or a minor in Mathematics. Prerequisite: Mathematics 114 or the equivalent. Given in alternate years.

314. Elements of Geometry.  
Cr. 4. Logic, axiom systems and models; consistency, independence and completeness, consideration of the foundations of Euclidean geometry, topics from projective geometry. Prerequisite: Mathematics 260.

320. Mathematical Models in the Life and Social Sciences.  
Cr. 3. Topics are chosen according to the interests of the class. These may include utility and measurement, graph theory, game theory, learning models, models of growth processes, simulation. Prerequisites: a statistics course and one of the following: Mathematics 122, 132, or 152. Offered in alternate years.

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: Mathematics 260 and 264. Offered in alternate years. First offered in Fall, 1989.

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: Mathematics 132 and 240, or 152 and 240.

Cr. 3. This is a course in statistics based upon the probability background of Mathematics 341. Topics include sampling theory, estimation, tests of hypotheses, analysis of variance, and non-parametric statistics. Prerequisite: Mathematics 341. Offered upon sufficient demand.

*Credit for Mathematics 240 may be earned through the College Level Examination Program subject examination in Statistics.
Cr. 3. A survey of probabilistic models used in decision theory. Topics include stochastic processes, queueing theory, forecasting, Bayesian decision theory, reliability, and simulation. Prerequisites: Mathematics 240 and (234 or 262 or 264). Offered in alternate years. First offered in Spring 1991.

Cr. 3. Elementary and linear differential equations, systems of equations, series solutions including the method of Frobenius, Laplace transforms, applications. Prerequisites: Mathematics (233 or 253) and (234 or 264).

(Also offered as Computer Science 370). Cr. 3. 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 non-linear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisites: Computer Science 225 or its equivalent and one of the following: Mathematics 350; Mathematics (233 or 253) and 234; Mathematics 152 and 264; Mathematics 223 and 262.

381. Cooperative Education in Mathematics I.
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. Prerequisites: Mathematics 234 or 350 or approval of the Chair of the Department. S/U grade.

382-383. Cooperative Education in Mathematics II-III.
Cr. 1-2. Continuation of Mathematics 381. Prerequisite: Mathematics 381. S/U grade. May be repeated beyond 383 for additional credit.

399. Mathematics Colloquium.
Cr. 0. All mathematics majors with at least sophomore standing are expected to register for this course. Students are required to attend sessions of Mathematics 499 and to participate in the discussion of topics presented by faculty and students. S/U grade.

422. Graphs and Networks.
Cr. 3. A theoretical study of applied graph theory and network theory. Topics include graph colorings, Hamiltonian and Eulerian graphs, trees, assignment problems, and max-flow/min-cut problems. Prerequisite: Mathematics 322. Offered in alternate years. First offered in Spring, 1990.

430. Fourier Series and Boundary Value Problems.
Cr. 3-4. Fourier series and orthogonal functions, Bessel and gamma functions. Sturm-Liouville systems, initial and boundary value problems involving partial differential equations, and other selected topics. Prerequisite: Mathematics 350.

434. Introduction to Complex Variables.
Cr. 3. Analytic functions, derivatives, power and Laurent series, integrals, residues, conformal mapping, complex inversion formula for the Laplace transform, applications to partial differential equations. Prerequisite: Mathematics (233 and 234) or 264. Offered upon sufficient demand.

451. Analysis I.
Cr. 3. Differentiation and convergence in real n-space, implicit and inverse function theorems, topology of real n-space, and uniform convergence. Prerequisites: Mathematics 260 and (233 or 253) and (234 or 264). First offered Fall, 1990.

452. Analysis II.
Cr. 3. Theory of integrals, multiple integration and the Jacobian, line and surface integration, metric spaces and their topology. Prerequisite: Mathematics 451. Offered upon sufficient demand.

461. Abstract Algebra I.
Cr. 3. A study of mathematical structures: groups, rings, and fields. Properties of groups; substructures, quotient structures, and homomorphisms. Prerequisite: Mathematics 260 and 264. First offered Fall, 1990.

462. Abstract Algebra II.
Cr. 3. A continuation of Mathematics 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: Mathematics 461. Offered upon sufficient demand.

489. The Teaching of Mathematics.
Cr. 2. (See Education 489.) A study of the methods of teaching mathematics in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or a minor in Mathematics.

491. Advanced Topics in Mathematics.
Cr. 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.

492. Research in Mathematics.
Cr. 3. Each student must undertake a research problem in mathematics under the direction of a faculty member. Written and oral reports are required. Prerequisite: consent of the Chair of the Department.

495. 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.

497. Honors Work in Mathematics.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Mathematics.
Cr. 3. See Honors Work, page 41.
Computer Science

Major. A minimum of 28 credit hours in Computer Science constitutes a major. Courses must include Computer Science 157, 158, 235, 246, 355, 375, 493. Of the remaining credits all must be from Computer Science courses numbered above 120, including at least 6 credits from Computer Science courses numbered above 300.

Majors must complete the following mathematics courses: Mathematics 122 or 132 or 152; Mathematics 240; Mathematics 267; and Mathematics 268. 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 Computer Science 358. The minimum number of credits in Computer Science for the Bachelor of Science degree is 32.

Computer Science majors who elect to or who must satisfy the foreign language component of the general education requirements should take German or French.

A student planning to major in Computer Science should begin both Computer Science and Mathematics in the freshmen year.

Minor. Two minors are offered.

A Computer Science minor consists of a minimum of 15 credit hours in computer science. Courses must include Computer Science 157, 158, 235, 246, and one 3 credit Computer Science course numbered above 230. In addition, the student must complete Mathematics (122 and 267) or (131 and 132) or (151 and 152) and 240.

An Information Systems minor consists of a minimum of 15 credit hours in computer science. Courses must include Computer Science (115 or 117), 157, 158, 226, and 328. In addition, the student must complete one course in accounting and work in mathematics equivalent at least to Mathematics 122 and 124. It is also recommended that the student take one additional course in management.

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 or the Information Systems 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 2.5 cumulative grade point average requirement, students must present a 2.5 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).


Cr. 4. A general survey of computers, including their uses, limitations and effect on society. Specifically, students will be introduced to topics including computer hardware, operating systems, programming languages, word processing, spreadsheets, and other programming packages. This course may be used to fulfill the Natural Science and Mathematics component of the general education requirements. Not open to students who have completed Computer Science 117.

117. Introduction to Computers.

Cr. 3. This course is intended to fulfill the requirements for students in the College of Business Administration and other professional programs. Included are topics regarding computer systems, with emphasis on the use of software packages such as word processing, spreadsheets, data bases, and graphics. This course may NOT be used to fulfill the Natural Science and Mathematics component of the general education requirements. Not open to students who have completed Computer Science 115.
Mathematics and Computer Science

128. BASIC Programming.
Cr. 1-3. (Normally 3 Cr. A 1-Cr. version for science majors is offered as needed.) An introduction to computer problem-solving techniques using the BASIC language. Not open to students who have completed an algorithmic course (Computer Science 155, 157 or General Engineering 102). Prerequisite: proficiency in algebra.

157. Algorithms and Pascal Programming I.
Cr. 3. A fundamental course in algorithm development and problem solving and an introduction to the use of a computer system with special emphasis on the programming constructs in the language Pascal. In order to solve problems in a computer environment, the student designs elementary algorithms and writes, debugs and documents Pascal programs for the implementation of those algorithms. Not recommended for students who have had Computer Science 155 or General Engineering 102.

158. Algorithms and Pascal Programming II.
Cr. 3. (Also offered as Electrical and Computer Engineering 121.) A continuation of Computer Science 157, with emphasis on the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisites: Computer Science 157 or General Engineering 102.

225. The FORTRAN Language.
Cr. 2. An introduction to FORTRAN as a second programming language. Not open to students who have completed Computer Science 125 or 155 or General Engineering 102 (FORTRAN). Prerequisite: Computer Science 157 or General Engineering 102 or permission of the instructor.

226. COBOL Programming.
Cr. 3. An introduction to computer programming in a business environment. Emphasis on the fundamentals of structured program design and development, testing, implementation and documentation of common business-oriented applications using COBOL. Includes coverage of sequential and random access files and the techniques for manipulating them in COBOL. Prerequisite: Computer Science 157 or General Engineering 102.

229. The Pascal Language.
Cr. 2. An introduction to Pascal as a second programming language. Not open to students who have completed Computer Science 157 or General Engineering 102. Prerequisite: Computer Science 156 or the equivalent (may be taken concurrently).

235. Data Structures.
Cr. 3. (Also offered as Electrical and Computer Engineering 221.) A detailed study of various data structures, including stacks, queues, linked lists and trees. The emphasis will be on algorithms to build and manipulate the data structures, various implementations, time analysis of the algorithms and applications, such as garbage collection. Prerequisites: Computer Science 158 and Mathematics 122 or 132 or 152.

Cr. 3. Organization and manipulation of sequential, key-sequential and random access files. External search, sort and merge algorithms. File structures in database management systems. Prerequisite: Computer Science 158.

Cr. 3. (Also offered as Electrical and Computer Engineering 222.) 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. Prerequisite: Computer Science 158.

248. Digital System Design.
(Also offered as Electrical and Computer Science Engineering 220). Cr. 3. Fundamentals of logic design, information transfer and control in a digital system, organization and structure of hardware components of digital computers. Prerequisite: Computer Science 158.

290. Topics in Computer Programming.
Cr. 1 (7 weeks) or 2 (semester). 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: usually equivalent to Computer Science 157. Specific requirements depend on course content.

325 (formerly 265). 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.

Cr. 3. Models of data processing systems, data collection and organization, cost analysis, aspects of system design, file and database design, documentation, testing, implementation and maintenance, security and control, management considerations. Prerequisite: Computer Science 227.

335. Database Management Systems.
Cr. 3. Concepts and structures used in designing and implementing database management systems. Topics include the important data models, normalization, data dictionaries, languages for data definition and manipulation, security, integrity, and reliability. Prerequisite: Computer Science 235.

Cr. 3. Introduction to the concepts of operating system programming and interrelationships between the operating system and machine architecture. Topics include procedures, processes, resource management and interrupt-driven processing. Students program in assembly language. Prerequisites: Computer Science 235 and 246. Offered upon sufficient demand.
355. Organization of Programming Languages. (Also offered as Electrical and Computer Engineering 323.) Cr. 3. Formal language constructs as exhibited in a variety of programming languages. Topics include syntax and basic characteristics of grammars, parsing, data types and structures, run-time considerations. Prerequisite: Computer Science 235. Recommended: Mathematics 267 or 268.

358. Software Design and Development. 3+2, Cr. 4. The specification, design, implementation, documentation and testing of software systems. Principles of project management. Case studies. Intensive work on a group project, directed by the instructor, to design and develop a usable software system. Prerequisites: Computer Science 235.

365. Interactive Computer Graphics. (Also offered as Mechanical Engineering 440). Cr. 3. A study of the fundamentals of interactive computer graphics systems and software. Emphasis is placed on graphics primitives, geometric transformation and projection, methods of creating visual realism, and selected graphics algorithms. Prerequisites: Computer Science 158 (Computer Science 235 is recommended) and Mathematics 234 or 262 or 264.

367. Artificial Intelligence. Cr. 3. Introduction to the techniques used in the field of artificial intelligence. Topics include knowledge representation, search strategies, and heuristic programming, with some discussion of areas such as expert systems, natural language translation, pattern recognition, learning programs, and robotics. Students will program in the LISP programming language. Prerequisite: Computer Science 355.

370. Numerical Methods. (Also offered as Mathematics 370). Cr. 3. 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 non-linear equations and error analysis. Students are expected to solve problems using a digital computer. Prerequisites: Computer Science 225 or the equivalent and one of the following: Mathematics 350, Mathematics 233 or 250, and Mathematics 152 and 264, Mathematics 223 and 262.

375. 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: Computer Science 235 and Mathematics 268. This course will be offered for the first time in the fall of 1991.

381. Cooperative Education in Computer Science I. 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: Computer Science 237 or 328; approval of Cooperative Education Adviser and the Chair of the Department. S/U grade.

382-383. Cooperative Education in Computer Science II-III. Cr. 0.5 - 3. Continuation of Computer Science 381. Prerequisites: Computer Science 381 and approval of the Chair of the Department. S/U grade. May be repeated beyond 383 for additional credit.

445. Principles of Systems Programming. 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: Computer Science 345 and a course in probability and statistics. Offered upon sufficient demand.

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 table manipulation, parsers 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: Computer Science 246 and 355 and Mathematics 360. Offered upon sufficient demand.

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: Computer Science 358, senior standing and a proposal approved by the Chair of the Department.

491. Advanced Topics in Computer Science. Cr. 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.

492. Research in Computer Science. Cr. 3. The student undertakes a research problem in Computer Science under the direction of a faculty member. Written and oral reports are required. Prerequisites: Computer Science 355 and 358 and a proposal approved by the Chair of the Department.

493. Seminar in Computer Science. Cr. 1. Student-staff presentation of selected topics in computer science arising from journal reading and research. Prerequisite: Computer Science 235 and 246. Offered upon sufficient demand.

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.


Music

Professors Bergt, W. Eifrig (Chair), Telschow; Associate Professors Balko, L. Ferguson, Lewis, J. McCall, Trimborn; Assistant Professors Bernthal, Emery, Jean.

Depending on individual interests, students may be admitted to a curriculum which leads to one of three degrees: Bachelor of Arts, Bachelor of Music or Bachelor of Music Education. An interdisciplinary program in Music Enterprises is also available. Students interested in the Deaconess Program Plan 2 combine deaconess training with church music study, see page 40.

Career opportunities in music are many and varied. Teaching in elementary, junior high or high schools and at the college level provide most of the openings for well qualified musician-educators. Church music positions are sometimes combined with school teaching or with private music instruction. Other careers are available in music merchandising, music libraries, music administration and the technical and electronic areas related to music. Music publishing and entertainment fields offer other interesting employment possibilities.

Admission. A student who wishes to enroll in any of the degree programs in music must take a profile exam in musicianship and performance, besides meeting all the general requirements for admission to the College of Arts and Sciences. Information regarding the entrance test, which is given before matriculation, may be obtained from the Chair of the Department.

Approval of Schedules. All candidates for the Bachelor Arts degree taking a major in Music and all candidates for the Bachelor of Music and Bachelor of Music Education degrees must have their schedules approved by their major advisers at the beginning of each semester.

Departmental Requirements. Regulations concerning student performance, concert attendance, ensemble participation and other matters which concern majors and minors within the Department are given in the Department Handbook for Music Students, which is available in the Department Office.

Special Seminars and Workshops. Visiting artists and lecturers are brought to the campus from time to time to conduct seminars and workshops in various fields of music. The Church Music Seminar, instrumental and vocal clinics, master classes by guest artists and other such events give added breadth to the students’ musical education through their observation of a skilled artist or conductor at work.

Bachelor of Arts

Many students come to college with interests and abilities in several areas of study. This degree program is designed to make it possible for such students to earn a basic major in music and majors or minors in other disciplines. A candidate for this degree must meet all the general requirements for the degree.

The combining of arts with technology is a dynamic phenomenon of contemporary society. Music/Business is an innovative program major designed to prepare students for management positions in the manufacturing, publishing, distribution, and retailing aspects of the music industry. Students who complete the Music/Business program fulfill the major requirements for the Bachelor of Arts degree. In addition, “Music Enterprises” is noted on their transcripts.

Major. A minimum of 31 credit hours in Music constitutes a major. Courses must include Music 109, 110, 163, 164, 263; two from Music 317, 318 and 319; six credit hours in the student’s principal performing medium (completion of Music 203) and four credit hours of ensemble music. Students pursuing the 40 credit hour music major option must include Music 209, 264, 317, 318, and 319.

Minor. A minimum of 16 credit hours in Music constitutes a minor. Courses must include Music 109, 110, 163 and 164, and four credit hours of studio instruction (completion of Music 103).

Majors and minors must pass the performance tests set for them by this department.
Music Enterprises. An interdisciplinary concentration in Music/Business requires 37 credit hours in Music and 21 credit hours in Business.

Music/Business' concentration

General Education

For General Education Requirements of the College of Arts and Sciences see page 33.

Among the Academic Area Studies must be included Economics 221 (Studies in Social Analysis), and Mathematics 111 or 124 and Psychology 102 (Natural Science and Mathematics). Three credit hours of Music 317, 318 or 319 may be counted toward the Literature and Fine Arts component. See below.

Total General Education 56-59 Cr.

Music Core

Music 109 and 110 ........................................ 6 Cr.
Music 163, 164 and 263 .................................. 9 Cr.
Music 317, 318 or 319* .................................. 6 Cr.
Music 375 .................................................. 3 Cr.
Music 486 .................................................. 3 Cr.
Performance .............................................. 6 Cr.
Ensemble .................................................. 4 Cr.
Total ................................................................ 37 Cr.

Business Core

ACC 205 Financial Accounting .......................... 3 Cr.
ACC 206 Managerial Accounting ....................... 3 Cr.
GBUS 206 .................................................. 3 Cr.
Legal Environment of Business ......................... 3 Cr.
GBUS 301 Principles of Management .................. 3 Cr.
MKT 301 Principles of Marketing ....................... 3 Cr.
FIN 301 Principles of Finance ........................... 3 Cr.
Business elective ........................................... 3 Cr.
Total ................................................................ 21 Cr.

Also required:

English 257 .................................................. 3 Cr.
Business Communications .............................. 3 Cr.
Economics 222 ............................................. 3 Cr.
Principles of Economics-Macro ......................... 3 Cr.
Computer Science 117 .................................... 3 Cr.
Introduction to Computers .............................. 3 Cr.
Total ................................................................ 9 Cr.

Total required for graduation .......................... 124-126 Cr.

Bachelor of Music Education

The general requirements for this degree are given on pages 35-36. Also required are General Psychology 101 3 Cr. and Communication 141, 145 or 243 (one course) 3 Cr. The music requirements are outlined below:

1. Music Core

Music 109, 110, 209 ........................................ 9 Cr.
Music 163, 164, 263, 264 ................................. 12 Cr.
Music 317, 318, 319 ........................................ 9 Cr.
Music 213, 313 ............................................... 4 Cr.
Ensemble .................................................... 6 Cr.
Total ................................................................ 40 Cr.

2. Music Education Core

Specializations: Vocal Instrumental Combination

Principal Instrument ....................................... 10 8 8
Secondary Instrument** 3 3 3
Music 239 .................................................... 1 1 1
Music 231, 233, 235 ....................................... 237 4 4
Music 312 .................................................... 2 2 2
Music 389 .................................................... 3 3 3
Music 489 .................................................... 2 2 2
Total ................................................................ 21 Cr. 23 Cr. 25 Cr.

Total required for graduation: 138 Cr. 140 Cr. 142 Cr.

Bachelor of Music

For the general requirements for this degree, see page 35. The music requirements are outlined below:

1. Core Curriculum (for all students)

Music 109, 110, 209 ........................................ 9 Cr.
Music 163, 164, 263, 264 ................................. 12 Cr.
Music 317, 318, 319 ........................................ 9 Cr.
Music 213 ................................................... 2 Cr.
Music 463, 464 ............................................... 6 Cr.
Ensemble ..................................................... 8 Cr.
Total ................................................................ 46 Cr.

2. Other Requirements

Program: Church Music Combination

Program: Performance

Music 312 .................................................... —— 2
Music 313 .................................................... 2 2
Music 404 .................................................... 1+2 1+2
Music 415 .................................................... 2 2
Music 454 .................................................... 1 1
Music 471 .................................................... 2 2
Music 474 .................................................... 2 2
Composition ................................................... —— 12
Piano .......................................................... 4 —— 12
Organ .......................................................... 20# 8 ——
Voice .......................................................... 4 20# ——
Instruments ................................................... —— 2
Total ................................................................ 40 Cr. 40 Cr. 28 Cr.
Electives ....................................................... 3 Cr. 3 Cr. 9 Cr.
Total required ................................................ 130 Cr. 130 Cr. 128 Cr.

Program: Performance

Music 314 .................................................... —— 2
Music 210 .................................................... —— 2
Music 404 .................................................... 1+2 1+2
Music 423 .................................................... 2 2
Music 454 .................................................... 1 1
Piano .......................................................... 4 —— 4
Principal instrument ...................................... 20# 20# 20# 20#
Total .......................................................... 30 Cr. 26 Cr. 32 Cr. 26 Cr.
Electives ....................................................... 7 Cr. 11 Cr. 5 Cr. 11 Cr.
Total required ................................................ 128 Cr. 128 Cr. 128 Cr. 128 Cr.

*Six credit hours in History and Literature of Music are required, of which three can be used to fulfill the Literature and Fine Arts component of the general education requirements.

**Piano 2 Cr. and Guitar 1 Cr. if principal instrument is piano, then Voice 2 Cr. and Guitar 1 Cr.

#Completion of Music 453 is required.

##Completion of Music 453 is required. the total may include Music 239.
Master of Music

This program is intended for performers, music teachers in the public and parochial schools, studio teachers, church musicians and others who wish to continue their professional studies at the graduate level. An appropriate bachelor’s degree in music is a prerequisite.

In addition to the admission procedures of the Graduate Division, students must audition in their principal performing media and submit two letters of recommendation, addressed to the Music Department.

Students whose undergraduate degree is not the one specified as a prerequisite to each of the programs may be required to take certain undergraduate courses; such courses do not apply to the M.M. degree.

For further information, consult the Graduate Division bulletin.

THEORY, HISTORY AND METHODS

   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.

109. Basic Musicianship.
   3+1, Cr. 3. A practical course in which basic musicianship is developed through work at the keyboard, sight singing, dictation and guided listening. The course is usually taken concurrently with Music 163.

110. Basic Musicianship.
   3+1, Cr. 3. A continuation of Music 109. Prerequisite: Music 109. Usually concurrent with Music 164.

163. Music Theory.
   Cr. 3. A course in the fundamentals of music which includes the development of analytical and listening skills and deals with vocabulary, notation, melodic and harmonic organization, instrumentation, part writing and style analysis.

164. Music Theory.
   Cr. 3. A continuation of Music 163 including an introduction to stylistic analysis, and the study of seventh chords (dominant and nondominant), secondary dominants, modulation, binary and ternary forms, and American popular song and jazz. Prerequisite: Music 163.

209. Basic Musicianship.
   3+1, Cr. 3. A continuation of Music 110. Prerequisite: Music 110. Usually concurrent with Music 263.

210. Language Diction.
   Cr. 1. This course gives the student a practical knowledge of pronunciation used in singing the four principal languages of music literature: Italian (Latin), French, German and English.

211. Language Diction.

213. Basic Conducting.
   Cr. 2. An introduction to conducting including a study of score reading, beat patterns, acoustics and interpretive principles. Prerequisite: Music 164 or consent of the instructor.

231. Stringed Instructional Methods.
   0+2, Cr. 1. Violin, viola, violoncello and contrabass are studied for the purpose of giving the student a fundamental playing and teaching knowledge of the instruments.

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.

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.

236. Guitar Instructional Methods.
   0+2, Cr. 1. Guitar is studied for the purpose of giving the student the basic playing skills necessary for the use of the guitar in classroom music teaching.

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.

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.

263. Music Theory.
   Cr. 3. A continuation of Music 164 with special emphasis on the harmonic developments (borrowed and altered chords, extended tertian chords) of the Romantic period and the late 19th century musical techniques. The continued development of analytical skills is the primary goal of the course. Prerequisite: Music 164.

264. Music Theory.
   Cr. 3. A course developing the skills analysis, creative writing, and listening in the study of 18th century counterpoint (melodic construction, two-voice writing, canon, invention, and fugue). Also included is a study of larger forms (variations, rondo, and sonata-allegro) and an introduction to later 20th century musical techniques. Prerequisite: Music 263.

290. Topics in Music.
   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.

   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.

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.

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: Music 164.

313. Intermediate Conducting.
Cr. 2. A continuation of Music 213. Includes rehearsal techniques, specific choral and instrumental conducting problems and ensemble conducting experience. Prerequisite: Music 213.

317. History and Literature of Music I.
Cr. 3. The development of musical thought and literature from the ancient world through the early Christian era, the Middle Ages and the Renaissance. Prerequisites: Music 110 and 263. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

318. History and Literature of Music II.
Cr. 3. The development of musical thought and literature from 1600 to the 19th century. Prerequisites: Music 110 and 263. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

319. History and Literature of Music III.
Cr. 3. A study of music and musical thought from the early 19th century to the present. Prerequisites: Music 110 and 263. This course may be used to fulfill the Fine Arts/Fine Arts-Literature component of the general education requirements.

375. Music Enterprises.
Cr. 3. The major objective of this course is to acquaint the student with basic information for successful music merchandising and to help the student understand the place of music in our contemporary society. Areas and principles to be covered include retailing, publishing, manufacturing, performing and recording and managing musical enterprises.

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/middle schools. Prerequisite: Music 164.

404. Recital.

413 /513. Advanced Conducting, Choral/Instrumental.
Cr. 2. A study of instrumental and choral scores, conducting techniques and materials. Prerequisite: Music 313 or the equivalent.

414 /514. Advanced Conducting, Choral/Instrumental.
Cr. 2. A continuation of Music 413/513.

415 /515. Liturgical Organ Playing.
Cr. 2. A practical course in playing hymns 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 and Music 164, or permission of the instructor. Offered in alternate years.

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. Offered in alternate years.

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.

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 Music 453.

Cr. 3. Impressionism, free tonality, atonality, serialism, aleatoric music, and electronic music are investigated and systems of analysis developed by Hindemith and Forte are introduced. Music of Debussy, Hindemith, Stravinsky, Bartok, Schoenberg, Webern, and Penderecki is studied with particular attention given to musical technique and style. Prerequisite: Music 264 or permission of the instructor. For graduate students: Music 264 or equivalent as demonstrated on the graduate Music Theory Examination.

464 /564. Music Theory.
Cr. 3. A study of 16th century counterpoint through creative writing, listening, and analysis. An intensive study of selected musical forms including variations, rondo, sonata-rondo, and sonata-allegro is undertaken as well as an introduction to the analytical method of Heinrich Schenker. Prerequisite: Music 264 or permission of the instructor. For graduate students: Music 264 or its equivalent as demonstrated on the graduate Music Theory Examination.
Music

471 /571. Hymnology.
Cr. 2. A study of the Christian hymn from its earliest sources to the present day. Prerequisites: junior standing and consent of the Chair of the Department. Offered alternate years.

474 /574. History of Church Music.
Cr. 2. A study of the development of church music from the earliest history of the Church in the Old Testament to the present. Prerequisites: junior standing and consent of the Chair of the Department. Offered in alternate years.

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 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. S/U option may be elected. Prerequisite: Music 375.

489. School Music II.
Cr. 2. 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: Music 389 and admission to supervised teaching.

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 adviser. The study results in a written essay on a topic approved by the adviser. Prerequisites: Music 264 and 318.

497. Honors Work in Music.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Music.
Cr. 3. See Honors Work, page 41.

PERFORMANCE

Note: Non-music majors who are candidates for 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.
Cr. 1-3.
A four-year undergraduate and graduate program of studio instruction is offered to students of Valparaiso University in piano, organ, harpsichord, orchestral and band instruments, voice and guitar. 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. Studio instruction is available to all students of the University including the Evening Division. All students may register 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 is supplemented with repertoire classes in the various media which are scheduled to meet one 50-minute period per week.

Students will register for one of the following levels in their studio instruction medium: 003, 103, 203, 303, 403, 453, 503, 603.
Students with no prior or minimal study should register for Music 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.

Voice
Flute
Piano and Jazz Piano
Oboe
Harp
Clarinet
Harpsichord (by audition only)
Bassoon
Organ (by audition only)
Saxophone
Organ improvisation
French Horn
(by audition only)
Trumpet
Violin
Trombone
Viola
Bartone Horn
Violoncello
Tuba
Contrabass
Percussion
Classical Guitar

Composition. A program of study dealing creatively with the problems of musical form. Prerequisites: consent of the instructor.

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 0.5 credit hour. If a student has earned eight credit hours in ensemble music, any additional enrollments are graded on the S/U basis.

The following are considered major ensembles: Chapel Choir, Concert Choir, Kantorei, Symphonic Band, Jazz Band, University Symphony Orchestra. All other ensembles listed here are considered minor ensembles.

All ensemble courses are available for graduate credit at the 500 level. Enrollment 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.

050, 550. Choirs.
Chapel Choir, Concert Choir, Kantorei, admission by audition only. Also Choral Society, audition not required.

See page 192 for appropriate fees
052, 552. University Bands.
Symphonic Band, Jazz Band, admission by audition only. Marching Crusaders Band and University Band, audition not required.

054, 554. University Symphony Orchestra.
Admission by audition only.

056, 556. Opera Scenes Workshop.
Admission by audition only

058, 558. Chamber Music.
Collegium Musicum, Brass Ensemble, Percussion Ensemble, Jazz Workshop, Jazz Combo, accompanying or other assigned chamber ensemble. Admission by approval of the Chair of the Department.
Philosophy

Professor Klein (Chair), Associate Professor Bachman; Assistant Professors Geiman, Kennedy.

Courses in philosophy offer students the opportunity to examine the 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 key role they 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 and teaching, and enhances careers in medicine, business, education, writing, and public service.

**Major.** A minimum of 27 credit hours in philosophy constitutes a major. Courses must include Philosophy 150, 215, 225, and one course from each of the following: 1) 300-355, 2) 360-370, and 3) 400-490. The remaining three courses should be selected in consultation with the a member of the Department, taking into account one's total academic program and professional plans. The Department recommends specific plans of study for those preparing for entrance into law school, seminary or graduate 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 15 credit hours in philosophy constitutes a minor. Courses must include Philosophy 150, 215 and 225.

**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 a member of the Department at the beginning of each semester.

**Prerequisites.** Courses numbered under 300 are considered to be foundational courses and have no course prerequisites. Courses numbered 300 and above are considered to be upper level courses and have, as prerequisite, any one course numbered under 300, or sophomore standing in Christ College, or consent of the instructor. Majors and others planning to take 360-level courses and above should take Philosophy 150 and 225 before taking upper level courses.

**General Education.** Any course in philosophy will satisfy the general education Philosophical and Historical Studies requirement, but students will usually be best served by choosing Philosophy 115, 125, or 150. From time to time certain philosophy courses are cross-listed with Level III Theology courses and thus may satisfy that requirement under the Theology number. Philosophy 260 will satisfy the non-Western or Third World Studies requirement. Any philosophy course numbered 300 or above will satisfy the Integrative Studies (University Course) requirement, but students will usually be best served by choosing a course from those numbered 300-355.

**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 the following semester. Copies are available at the departmental office and before every registration.

115 (formerly 120). Introduction to Philosophy: Fundamental Questions.

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.

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.

150 (formerly 130). 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.

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.

225. History of Renaissance and Enlightenment Philosophy.
Cr. 3. An introduction to major thinkers and themes of sixteenth-through eighteenth-century Europe: Descartes, Leibniz, Locke and Hume. Emphasis will be placed upon the Rationalist and Empiricist traditions and their synthesis in Kant. Primary documents are read throughout.

250. Political Philosophy.
(Also offered as Political Science 250.) Cr. 3. 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.

260 (formerly 310). 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 Non-Western/Third World General Education Requirement.

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.

305. Aesthetics.
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.

320. 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.

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. Course prerequisite can be satisfied by any Level II Theology course instead of a philosophy course.

341. Biomedical Ethics.
(May also be offered as Theology 341.) Cr. 3. A study of moral issues raised in health-care and biological research (e.g., abortion, euthanasia, genetic engineering and resource allocation). Attention is given both to ethical theory and to practical issues. Course prerequisite can be satisfied by any Level II Theology course instead of a philosophy course.

345 (formerly 430). 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: Philosophy 150 or its equivalent.

355. Problems in Political Philosophy.
(May also be offered as Political Science 350.) Cr. 3. The study of one or more specific problems or philosophers in modern political philosophy. Prerequisites: Philosophy 250 or Political Science 250 or the consent of the instructor.

360 (formerly 350). Existentialism and Contemporary Continental Philosophy.
Cr. 3. A sampling of representative contemporary British and American figures in the analytic tradition of philosophy, such as Moore, Russell, Wittgenstein, Ayer, Strawson, Quine, Davidson and Rorty. Primary documents are read throughout. Prerequisite: Philosophy 225 or the consent of the instructor.

Cr. 3. A sampling of representative contemporary British and American figures in the analytic tradition of philosophy, such as Moore, Russell, Wittgenstein, Ayer, Strawson, Quine, Davidson and Rorty. Primary documents are read throughout. Prerequisite: Philosophy 225 or the consent of the instructor.

390 / 490. Advanced Topical Seminar.
Cr. 3. An examination of the work of one major philosopher, such as Hume, Kant or Kierkegaard or of a single philosophical approach such as positivism, Augustinianism or phenomenology. This course may be repeated for credit if the topics are different.

400 (formerly 340). 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.
410. **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.

420. **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.

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.

497. **Honors Work in Philosophy.**
Cr. 3. See Honors Work, page 41.

498. **Honors Candidacy in Philosophy.**
Cr. 3. See Honors Work, page 41.
Physical Education

Professor Steinbrecher; Associate Professors Amundsen, Koch, Stieger (Chair); Instructor Salm; Part-Time Assistant Professor Criswell; Part-Time Instructors Daugherty, Moore, 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 life-long 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, athletic training, sports writing and broadcasting, and sports management. Students can select courses from the departmental curriculum to reflect these new areas.

Major. A minimum of 28 credit hours in Physical Education constitutes a major. Courses must include Physical Education 150, 190, 230, 235, 350, 410, 240, 370, and 440. In addition, students must complete Biology 151 and 152, Chemistry 111, Home Economics 214 and Psychology 101.

Minor. A minimum of 18 credit hours in Physical Education constitutes a minor. Courses must include Physical Education 150, 190, 230, and 370.

Teaching Programs. Students who plan to teach physical education in elementary or secondary schools with a major or minor in Physical Education should consult the Chair of the Department and the Education Department for specific requirements.

Athletic Training Concentration. A minimum of 40 credit hours in physical education and athletic training is required. Courses must include Physical Education 150, 190, 220, 230, 235, 285, 310, 335, 340, 355, 360, 370, 385, 410, 440, and 486 (3 credit hours). In addition, students must complete Biology 151 and 152, Chemistry 111, Home Economics 214, Psychology 101 and 130, and Communication 145. Completion of this concentration plus 1500 hours of athletic training experience should qualify a student to take the NATA Certification Examination.

Sports Management Concentration. A minimum of 30 credit hours in physical education is required. Courses must include Physical Education 150, 220, 233, 240, 310, 320, 333, 343, 410, 473, 486 (3 credit hours). Either the Senior Project or the Internship must be an off-campus experience. In addition, student must complete Communication 101 and 265, and the 21-credit Liberal Arts Business Minor.

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 Athletic Training concentration and Sports Management concentration are noted on a student's transcript as Physical Education: Athletic Training or Physical Education: Sports Management.

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 approved by the Chair of the Department or a departmental adviser before each registration period.

Basic Courses in Physical Education.* No more than four credit hours earned in Physical Education 100-149 may be counted toward any degree.

All students must take one credit hour of Fitness Principles and Activities courses 101-105. Each section meets twice a week for fourteen weeks.

101. Individual Exercise.
0+2, Cr. 1. Principles and physiology of physical fitness with topics such as resistive exercise training, nutrition and aerobic conditioning. A personalized exercise program is developed.

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.

*Anyone who has served in the Armed Forces for at least one year is exempted from this requirement, except a National Guard member.
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.

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.

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.

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.

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, or sports management as fields of study.

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: Intermediate Swim, instructor’s approval.

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: Physical Education 160 or approval of instructor.

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.

190. First Aid, Health and Safety.  
(Also offered as Home Economics 190.) 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 and Community CPR.

220. Coaching Theory.  
Cr. 1-2. Seven weeks course. A study of the methods and principles of coaching interscholastic and intercollegiate sports. Because the course is divided into sections, each dealing with a specific sport, no section may be repeated for credit.

Cr. 3. A study of the human body in health and disease. Included are discussions of major American health concerns, their incidence and prevention.

Cr. 3. This is the foundations course for the Sports Management concentration. The course includes a study of the sports enterprise and the management function within these settings. Students are exposed to basic organizational and problem-solving techniques.

235. Prevention and Care of Athletic Injuries.  
2+2, Cr. 3. An investigation of principles pertaining to the prevention and care of athletic injuries. Prerequisite: approval of the instructor.

240. Philosophical, Historical and Organizational Perspectives in Physical Education.  
Cr. 3. A study of the philosophical, historical, organizational and administrative aspects of physical education.

250. Dance Patterns and Forms.  
2+2, Cr. 3. A study of dance with emphasis on modern, folk, social and square dance forms as well as teaching techniques.

260. Gymnastics.  
1+2, Cr. 2. This course consists of methods and teaching cues of apparatus and tumbling techniques. May meet three times a week.

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.

1+1, Cr. 1. The practical application of techniques used in dealing with injuries. Prerequisite: Physical Education 235 and approval of the instructor.

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).

310. Psychology of Sport.  
Cr. 3. A study of the competitive sports experience, with emphasis on the multi-dimensional factors involved in the psychology of sport. Prerequisite: Psychology 101 or 102.

320. Sport and Society.  
Cr. 3. A study of the role of sports in society and the effects of culture and society on sports.

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. Prerequisite: Physical Education 233 or approval of the Chair of the Department.

335. Advanced Athletic Training.  
Cr. 3. An investigation and application of advanced athletic training, emphasizing the
prevention and evaluation of athletic injuries. Field trip to a sports medicine/physical therapy clinic. An additional 5-10 hours per week will be required in the Athletic Training facility. Prerequisite: Physical Education 235 and approval of the instructor.

2+2, Cr. 3. A study of the place of movement in the life of the child and the ways in which various types of activity can affect the development of the child.

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. Prerequisite: Physical Education 233 or approval of the Chair of the Department.

350. Methods of Physical Education.
1+2, Cr. 2. Analysis and application of teaching techniques and organizational methods for the instruction of physical education, with emphasis on indoor/outdoor activities and team/individual sports. Meets three times a week.

355. Therapeutic Modalities/Exercise.
2+1, Cr. 3. The study and application of the use of heat, cold, electricity and selected modalities and the principles and practices of therapeutic exercise. Field trip to a sports medicine/physical therapy clinic. An additional 5-10 hours per week will be required in the Athletic Training facility. Prerequisite: Physical Education 235 and approval of the instructor.

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.

370. Kinesiology.
2+2, Cr. 3. A study and application of the kinesiological and biomechanical principles of movement. Prerequisite: Biology 151.

385. Practicum in Athletic Training.
1+1, Cr. 1. The practical application of techniques used in dealing with injuries. Prerequisite: Physical Education 335 and approval of the instructor.

410. Measurement and Evaluation in Physical Education.
Cr. 3. An analysis of evaluation techniques for activities and an investigation of the measure of central tendency, statistical designs, computer use and empirical research for physical education.

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: Biology 152.

473. Sports Management Senior Project.
Cr. 3. A personal investigation of a specific area in the field of Sports Management. 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.

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 Chair of the Department 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.

489. The Teaching of Physical Education.
Cr. 2. (See Education 499.) 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 Supervised Teaching.

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.

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.

497. Honors Work in Physical Education.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Physical Education.
Cr. 3. See Honors Work, page 41.
Physics

Professors Koetke (Chair), Naumann; Associate Professors Hrivnak, Manweller; Assistant Professors Fisk, Zygmunt; Visiting Assistant Professor Jones.

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 predictive and encompasses a realm from the submicroscopic particles of the atomic nucleus to the distant constituents of the universe.

In this context, the Physics Department offers a program of study to prepare students for graduate study in physics, astronomy or astrophysics or for immediate employment after graduation. Those students preparing for other professional careers in engineering, secondary education, law, medicine, mathematics, computer science or business may find an undergraduate major or minor in physics to be supportive and a sound intellectual preparation. The physics program emphasizes both the fundamental physical laws of nature and the application of such laws to challenging problems confronting society today. Physics students pursue research projects under the direction of members of the physics faculty in such diverse subjects as nuclear reactor physics, solar energy, astronomy and astrophysics.

The Department is well equipped, having a subcritical nuclear reactor, a 300 KeV particle accelerator, a planetarium and an astronomical observatory, and extensive computer resources. 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.

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, Physics 481-483, 489 or 497 may be substituted for Physics 445. (For further information, refer to Cooperative Education, College of Arts and Sciences, page 42.)

Major. A minimum of 28 credit hours in Physics (32 credits for a Bachelor of Science degree) constitutes a major. Courses must include Physics 243, 245, 250, 256 and 258 (or approved ECE substitute), 310, 345, 371, 445 and 499.

Three emphases within the physics major have been designed to meet students' educational and career goals: emphasis in (1) Fundamental Physics—for students primarily interested in pursuing a career in physics, applied physics, or physics education, and who may anticipate graduate study in physics; (2) Computational Physics—for students interested in physics and computer applications to physics problems. This emphasis includes courses in computer science and computer engineering and is most useful to students who will seek employment after graduation. (3) Astronomy or Astrophysics—for students interested in careers in astronomy or related fields and who might pursue graduate studies in astronomy or astrophysics. This emphasis includes Astronomy 221, 252, 390, and 445, the latter substituted for Physics 445. The Physics Adviser or Chair will assist students in selecting the most appropriate physics major emphasis and the courses which apply within the emphasis.

One year of chemistry is strongly recommended. Students preparing for graduate work should also take Physics 360, 372, 381, 421, 422, 430 and 440 as well as Mathematics 430. It is assumed that students majoring in Physics will acquire competency in computer programming (FORTRAN). Courses in astronomy may be taken as electives.

Minor. A minimum of 16 credit hours in Physics constitutes a minor. Physics 243 and 245 must be included.

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.
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 physics adviser or Chair of the Department.

ASTRONOMY

101. Astronomy.
3+3, Cr. 4, or 3+0, Cr. 3. A study of the history of man'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 model may also be examined. Weekly laboratories are designed to give students personal experience with basic astronomical equipment and analysis of astronomical data. Only elementary mathematics is required. This course may be taken with or without the lab. This course, with lab, may be used to fulfill the natural science component of the general education requirements.

221. Observational Astronomy.
0+3, Cr. 1. Practical observational experience using the 12.5 inch reflecting telescope and other instrumentation. Prerequisite: Astronomy 101 or 252 or consent of the instructor.

252. Introduction to Astrophysics.
3+0, Cr. 3. or 3+3, Cr. 4. A study of modern astronomy and the physical principles involved. Topics to be studied are the same as those in Astronomy 101, and include the planets, sun, stars, and galaxies. Special topics such as quasars, black holes, and the big bang model will also be discussed. The tools and techniques of the modern astronomer will be studied, and problems illustrating the quantitative nature of modern astronomy will be solved. The mathematical level of this course is higher than Astronomy 101, requiring familiarity with algebra but not calculus. When taken for 4 credits, this course may count towards the fulfillment of the general education requirements. Not open to students who have taken Astronomy 101.

390. Topics in Astronomy.
Cr. 1-4. The study of various topics of current interest in astronomy and astrophysics. Prerequisites are dependent on the topic. Interested students are urged to consult the instructor or the Department Chair for specific information.

Cr. 1-2. Each student undertakes an experimental research problem. A written report and an oral presentation at the Physics Colloquium are required. Student research problems must be approved by the Department. Prerequisite: consent of the Chair of the Department or the physics adviser.

PHYSICS

111. Essentials of Physics. #
3+3, Cr. 4. 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, sound and heat. Not open to students who have taken Physics 141. This course may be used in fulfillment of the Natural Science component of the general education requirements.

112. Essentials of Physics. #
3+3, Cr. 4. This course is a continuation of Physics 111. Specific topics include the study of electricity and magnetism, wave phenomena, optics, relativity, atomic and nuclear physics. Not open to students who have taken Physics 142. Prerequisite: Physics 111 or consent of the instructor. This course may be used in fulfillment of the Natural Science component of the general education requirements.

120. Musical Acoustics.
3+2, Cr. 4. A study of the physical nature of sound waves, the production and measurement of sound and the physical and psychophysical 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.

141. Principles of Physics: Mechanics and Heat. #
3+3, Cr. 4. A study of classical mechanics, including static and dynamic systems, and of thermal physics for students of physics and chemistry and for students in pre-medical arts programs. The mathematical level of this course is primarily that of simple algebra, but relations between physics and calculus are discussed where appropriate, so that students should have taken a course in differential calculus or to be taking one concurrently. Not open to students who have taken Physics 111. This course may be used in fulfillment of the Natural Science component of the general education requirements.

142. Principles of Physics: Electricity, Magnetism and Waves. #
3+3, Cr. 4. A continuation of Physics 141 which treats electricity, magnetism, wave motion and optics. Prerequisite: Physics 141 or advanced placement by permission of the Chair of the Department. Not open to students who have taken Physics 112. This course may be used in fulfillment of the Natural Science component of the general education requirements.

#Credit for Physics 111, 112, 141, or 142 may be earned through the Advanced Placement examinations offered by the College Entrance Examination Board.
223. (formerly GE 307). Waves and Particles.  
Cr. 4. An introduction to waves and modern physics. Topics include oscillations, waves, sound, light (geometrical and physical optics), relativity, quantum mechanics, atomic and solid state physics, nuclear physics, elementary particles.

Cr. 3. An introduction to the special theory of relativity, physics of the atom, Schroedinger wave mechanics, physics of condensed matter, physics of the nucleus including radioactivity, and elementary particles. Prerequisites: Physics 142 and Mathematics 152 (may be taken concurrently).

245. Experimental Physics I.  
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 and techniques such as black body radiation, radioactive decay, and x-ray diffraction. The development of laboratory skills and methods of data analysis are emphasized, using advanced computer analysis and data acquisition techniques. Normally offered in fall semesters.

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: Physics 142 and Mathematics 233 or 253 (may be taken concurrently).

256. Electricity and Electronics.  
Cr. 2-3. This course emphasizes the study of alternating current circuits and solid state electronic devices including transistors and integrated circuits. With the permission of the Chair of the Department of the physics adviser, this lecture course requirement may also be satisfied by completing ECE 206 (3+3, Cr. 4) or ECE 260 (Cr. 3) or ECE 340 (Cr. 3). Prerequisite: Physics 142 or equivalent.

258. Electricity and Electronic Laboratory.  
0+3, Cr. 1. This laboratory course is to be taken concurrently with Physics 256. With the permission of the Chair of the Department or the physics adviser, this laboratory course requirement may also be satisfied by completing ECE 211 or the laboratory part of ECE 206.

260. Linear Circuits.  
Cr. 3. (Also offered as Electrical And Computer Engineering 260.) A study of the fundamental methods and theorems of electric circuit analysis with emphasis on both analytical and computer-aided methods. Topics include steady state analysis of DC and AC circuits, transient and complete response of first and second order circuits, frequency domain analysis and coupled circuits. Prerequisite: Physics 142.

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 on measured and fitted parameters. Extensive use of the computer is expected. Students are required to program in BASIC and FORTRAN. Prerequisites: Physics 245 and Mathematics 253.

345. Experimental Physics II.  
0+3, Cr. 1. Experiments in radiation detection and analysis using modern modular electronics. Prerequisites: Physics 243 and 245 and Mathematics 233 or 253.

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 even numbered years. Prerequisite: Physics 243.

Cr. 3. A study of electric and magnetic fields, their sources and interactions in vacuum and in dielectric and magnetic media. Prerequisites: Physics 250 and Mathematics 234 or 350 or permission of the physics adviser or the Chair of the Department.

Cr. 3. Proceeding from Maxwell's equations, students investigate the wave aspects of electromagnetic fields including propagation, reflection, refraction, polarization, interference and diffraction. Other topics may include lasers, holography, radiating systems, wave guides, thermal radiation and optical spectra. Normally offered in the spring semester of odd numbered years. Prerequisite: Physics 371.

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, perturbation theory and group theory. Normally offered in the fall semester of even numbered years. Prerequisites: Physics 250 and Mathematics 350 (may be taken concurrently).

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.

420. Microprocessor Applications.  
2.7+1, Cr. 3. (Also offered as Electrical and Computer Engineering 420.) The application of microprocessors in engineering design, emphasizing the interconnection of available components into systems and case studies of existing applications. Prerequisites: ECE 321 or CS 246, and ECE 220 or CS 248.
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 Schroedinger 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: Physics 243 and Mathematics 350 (both of which may be taken concurrently), or permission of the instructor.

422. Quantum Mechanics II.
Cr. 3. A continuation of Physics 421, with further development and application of quantum theory. Topics may include time independent and time dependent perturbation theory with applications, scattering theory, matrix mechanics, multi-electron and molecular systems, elementary Hartree-Fock theory, superconductivity, and elementary relativistic quantum mechanics. Offered upon sufficient demand in the spring semester of even numbered years. Prerequisite: Physics 421 or permission of the instructor.

430. Nuclear Physics.
3-3. Cr. 4. Nuclear and reactor physics for students with physics or engineering backgrounds. Topics include nuclear models, nuclear reactions, radioactivity, fission, neutron diffusion, neutron moderation, homogeneous thermal reactors, heterogeneous thermal reactors and an introduction to neutron transport theory. Laboratory work includes the study of nuclear reactions using the 300 keV particle accelerator, fundamental particle properties, neutron diffusion and slowing down properties, subcritical reactor studies and pulsed neutron methods using the subcritical light water reactor and neutron generator. Prerequisite: Physics 345.

440. Condensed matter Physics.
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 crystal structure, diffraction, the reciprocal lattice, chemical bonding in molecules and solids, lattice dynamics, phonons, thermal properties, the free electron gas, electrons in a periodic lattice, band structure, semiconductors, magnetic and optical properties, and superconductivity. Normally offered in the spring semester of even numbered years. Prerequisites: Physics 421 or permission of the instructor.

445. Experimental Physics III.
Cr. 1-2. Each student undertakes an experimental research problem. A written report and an oral presentation at the Physics Colloquium are required. Student research problems must be approved by the Department. Prerequisite: consent of the Chair of the Department or physics adviser.

481. Cooperative Education in Physics I.
Cr. 0.5-3. Experience in basic or applied physics with a cooperating employer. Mid-term and final written reports required. Prerequisites: Physics 245 and approval of the Chair of the Department. S/U grade.

482-483. Cooperative Education in Physics II-III.
Cr. 0.5-3. Continuation of Physics 481. Mid-term and final written reports required. Prerequisites: Physics 481 and approval of the Chair of the Department. S/U grade. May be repeated beyond 483 for additional credit.

489. The Teaching of Natural Sciences.
Cr. 2. (See Education 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 Supervised Teaching.

492. Research or Reading in Physics.
Cr. 1-3. Research or reading in physics, under the supervision of a faculty member. Prerequisite: consent of physics adviser or Chair of the Department.

497. Honors Work in Physics.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Physics.
Cr. 3. See Honors Work, page 41.

499. Physics Colloquium.
Cr. 0. All physics majors are expected to register for this course. S/U grade.
Political Science

Professors Baas, Balkema, Combs, Trost (Chair); Assistant Professors Lin, Shearer.

This Department offers courses which provide the student with an understanding of the basic concepts, methods of study and traditions of politics. In consultation with the Chair, the student may wish to concentrate in areas within the discipline such as executive processes, judicial behavior, comparative politics and the like.

A major in Political Science may lead to such careers as law, government service, politics and policy analysis.

Student excellence is recognized through membership in Pi Sigma Alpha, a national political science honorary organization. The Beta Nu Chapter of Pi Sigma Alpha was installed in 1953.

Major. A minimum of 30 credit hours in Political Science constitutes a major.

Courses must include Political Science 120, 220, (130 or 230) 250, and 493.

Minor. A minimum of 18 credit hours in Political Science constitutes a minor.

Political Science 120, 220, and (130 or 230) must be included.

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

Approval of Schedules. Students taking a major or minor in Political Science must have their schedules approved by the appropriate adviser at the beginning of each semester.

Special Programs. For information concerning the Washington Semester see page 14. For information concerning the Semester on the United Nations see page 14.

110. Introduction to Politics.

Cr. 3. Designed as a general education course in social analysis, an introduction to the theories, concepts and issues of politics with applications to the American political system. Available for the Social Analysis component of the general education requirements.

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. Available for the Social Analysis component of the general education requirements.

130. Comparative Politics.

Cr. 3. Comparative study of Western and non-Western political systems. Includes examination of conceptual frameworks for comparative analysis. Available for the Social Analysis component or the Non-Western/Third World component of the general education requirements.

140. The Field of Law.

Cr. 1. A course designed to help students prepare for the professional study of law. Open to all students. This course may not be counted toward a major or minor in Political Science.

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. Available for the Social Analysis component of the general education requirements.

Note: The following courses are not open to freshmen.

230. International Relations.

Cr. 3. The fundamentals of international politics and international organization, particularly the United Nations and its specialized agencies.

250. Political Philosophy.

Cr. 3. (Also offered as Philosophy 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.

260. Strategies of Inquiry.

Cr. 3. An examination of the philosophy, methods and techniques of political inquiry. Recommended to be taken in the sophomore year.

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.

320. Problems in State and Local Politics.

Cr. 3. A study in depth of important contemporary problems on the state or municipal level in the United States. Prerequisite: Political Science 220 or consent of the instructor.

325. 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: Political Science 120 or consent of the Chair of the Department.

*Credit for Political Science 120 may be earned through the College Level Examination Program subject examination in American Government.
326. 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. Prerequisite: Political Science 120 or consent of the Chair of the Department.

327. 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: Political Science 120 or consent of the Chair of the Department. (This course normally includes a field trip.)

330. 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: Political Science 130 or consent of the Chair of the Department.

335. Politics of Developing States.
Cr. 3. A study of the governments and political problems of selected newly independent, underdeveloped states. Areas given in a semester vary across Africa, Latin America, the Middle East and the Far East. Prerequisite: Political Science 130 or consent of the Chair of the Department.

340. Constitutional Law I.
Cr. 3. An analysis of Supreme Court decisions relating to judicial review, the power of national and state governments, federalism, the separation of powers, Presidential and Congressional power and related topics. Prerequisite: Political Science 120 or consent of the instructor.

341. Constitutional Law II.
Cr. 3. A continuation of Political Science 340 focusing on Supreme Court decisions relating to the Bill of Rights, equal protection, due process and related topics. Prerequisite: Political Science 120 or consent of the instructor. Political Science 340 is not required.

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: Political Science 120 or consent of the Chair of the Department.

350. Problems in Political Philosophy.
(May also be offered as Philosophy 355.) Cr. 3. The study of one or more specific problems or philosophers in modern political philosophy. Prerequisite: Political Science 250 or consent of the instructor.

360. Public Administration.
Cr. 3. An introduction to the basic principles of administrative organization and management in government. Prerequisites: Political Science 120 and junior standing.

361. 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.

380. Problems in International Relations.
Cr. 3. An intensive study of topics in international relations (e.g., international organizations). Prerequisite: Political Science 230 or consent of the Chair of the Department.

381. Cooperative Education in Political Science I.
Cr. 0.5-3. Professional work experience which clearly augments the student's classroom education. Written report required. Prerequisites: Political Science 120 and approval of the Chair of the Department.

382-383. Cooperative Education in Political Science II-III.
Cr. 0.5-3. Continuation of Political Science 381. Prerequisites: Political Science 381 and approval of the Chair of the Department. S/U grade. May be repeated beyond 383 for additional credit.

489. The Teaching of Social Studies.
Cr. 2. (See Education 489.) A study in the methods of teaching social studies in secondary schools. Prerequisite: admission to Supervised Teaching. This course may not be counted toward a major or minor in Political Science.

490. Seminar in Political Science.
Cr. 2-3. These are full or half semester courses covering a variety of subject areas, with subtitles and content dependent on instructor choice and student interest. They are of two types, labelled accordingly: (a) reading and discussion seminars or (b) seminars with major papers.

Cr. 3. A topical seminar in a selected area of political science, in which students are required to do guided research within the topic area. Designed for majors but open to other students.

495. Independent Study in Political Science.
Cr. 1-3. Individual research on a specific problem in one of the fields of government under the supervision of a member of the departmental staff. A written report is required. Prerequisite: major with junior or senior standing and consent of the Chair of the Department.

497. Honors Work in Political Science.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Political Science.
Cr. 3. See Honors Work, page 41.
Psychology

Professors Rowland, F. Vance; Associate Professors Arkkelin (Chair), Harris; Assistant Professors Esper, Nelson.

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, therapy, test research and 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.

Major. A minimum of 27 credit hours in Psychology constitutes a major for the Bachelor of Arts degree. Courses must include Psychology (101 or 102) and 201. In addition, courses must be selected from three broad categories: experimental psychology, persons and society, and clinical/applied psychology. Specifically, a minimum of seven credit hours must be taken from the experimental psychology courses (245, 250, 345, 350, 355), one of which must be taken with a laboratory; a minimum of three credit hours must be taken from persons and society courses (125, 130, 230, 235, 332, 335); and a minimum of three credit hours must be taken from the clinical/applied psychology courses (265, 360, 461, 465, 470). A minimum of 32 credit hours constitutes a major for the Bachelor of Science degree. All the course requirements noted above for the Bachelor of Arts degree must be fulfilled. Special Topics in Psychology (390) may be used to fulfill some of these 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 Psychology (101 or 102), 201, and one course, with or without laboratory, chosen from 245, 250, 345, 350, 355, 465, or 470.

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 adviser.

101. General Psychology.*
Cr. 3. An introduction to the general field of psychology with special emphasis upon the scientific study of behavior. Not open to students who have taken Psychology 102.

102. General Experimental Psychology.
3+2, Cr. 4. An introduction to the general field of psychology with an emphasis on experimental procedures and data analysis techniques. Students have the opportunity to study psychological phenomena directly through various laboratory experiments. For natural science credit only. Not open to students who have taken Psychology 101.

Note: Psychology 101 or 102 is a prerequisite for all other psychology courses. Psychology 201 is a prerequisite for Psychology 246, 251, 346, 356, and 470. Psychology 245, 250, 345, and 355 may fulfill part of the natural science requirement when taken with a laboratory.

125. Social Psychology.
Cr. 3. An interdisciplinary approach to the study of social influences on the psychological functioning and behavior of the individual.

130. Human Growth and Development.*
Cr. 3. Life-span approach to human growth and development involving maturational, cognitive and behavioral changes with age. Major empirical findings are reviewed with attention to current theoretical, methodological and practical issues.

201. Statistical Methods.
Cr. 3. An introduction to the fundamentals of descriptive and inferential statistics for the behavioral sciences.

230. Psychology of Childhood and Adolescence.
Cr. 3. Study of the maturational, cognitive, social and behavioral changes associated with the development of the child through adolescence.

235. Abnormal Psychology.
Cr. 3. An analysis of psychopathology within the framework of theory and research.

245. Physiological Psychology.
Cr. 3. A study of the structure and function of the nervous system in relation to motivation, emotion and cognitive function.

246. Laboratory in Physiological Psychology.
0+2.5, Cr. 1. Laboratory to be taken in conjunction with 245. Prerequisite: Psychology 201 or consent of the instructor.

*Credit for Psychology 101 may be earned through the College Level Examination Program subject examination in General Psychology.
**Credit for Psychology 130 may be earned through the College Level Examination Program subject examination in Human Growth and Development.
250. Learning and Behavior.  
Cr. 3. Concepts of learning derived from research with infra-human subjects and the implications for understanding human behavior. Such behavioral patterns are contrasted with those which represent specific adaptations that have evolved over generations.

251. Laboratory in Learning and Behavior.  
0+2.5, Cr. 1. Laboratory to be taken in conjunction with 250. Prerequisite: Psychology 201 or consent of the instructor.

255. Industrial and Organizational Psychology.  
Cr. 3. This course deals with applications of psychological principles, techniques and theories to the work environment. Special emphasis is placed on the issues of leadership, motivation, communication and group problem solving.

332 / 532. Psychology of Adulthood and Aging.  
Cr. 3. Examination of adult development from the end of adolescence to old age from a psychological perspective.

335 / 535. Psychology of Personality.  
Cr. 3. An introduction to various theories of personality, with emphasis on their implications for current psychological applications and research.

345. Sensation and Perception.  
Cr. 3. An introduction to the study of sensory and perceptual phenomena and the physiological mechanisms that underlie them.

346. Laboratory in Sensation and Perception.  
0+2.5, Cr. 1. Laboratory to be taken in conjunction with 345. Prerequisite: Psychology 201 or consent of the instructor.

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.

355. Environmental Psychology.  
Cr. 3. The study of interrelationships between the physical environment and human behavior. Topics include environmental perception, psychological effects of air and noise pollution, personal space, crowding, urbanization, architectural design, and energy consumption.

356. Laboratory in Environmental Psychology.  
0+2.5, Cr. 1. Laboratory to be taken in conjunction with 355. Prerequisite: Psychology 201 or consent of the instructor.

360 / 560. The Exceptional Child.  
Cr. 3. Analysis of the impact of various perceptual, cognitive, physical and social handicaps upon the child. Attention is also given to the study of the gifted, creative child. Prerequisite: Psychology 130 or 230.

390 / 590. Special Topics in Psychology.  
Cr. 1-3. Selected topics based on the special interest areas of students and faculty. These topics have included aging, sex differences, theories and issues, drugs and behavior, community psychology, and altered states of consciousness. Topics and descriptions are announced in advance.

Note: The following courses are restricted to junior and senior level students.

461 / 561. Introduction to Counseling.  
Cr. 3. A review of contemporary counseling theories and processes as they are applied to various problem areas.

Cr. 3. The application of learning principles to the modification of human behavior. Discussions include ethical issues and current research relating to behavior management techniques as utilized in self control, education, institutions, business, social, personal and family interventions. Prerequisite: six credit hours of Psychology or consent of the instructor.

470 / 570. Testing and Measurement.  
Cr. 3. Principles and methods of psychological measurement and evaluation with application to specific testing situations. Course intensification option: 1 Cr. Prerequisite: Psychology 201.

485. Psychology Practicum; Field Experience.  
Cr. 1-3. Emphasis is on functions of social-service and mental-health agencies. Each student spends at least four hours each week in a supervised work activity at an agency in Northwest Indiana and one and one-half hours each week in a classroom-discussion meeting. A written report is required. Prerequisites: psychology major and consent of the Chair of the Department. May be repeated for credit to a maximum of nine credit hours; only three credit hours may be applied toward a major.

495. Independent Research in Psychology.  
Cr. 1-3. Individual research projects under staff supervision. A written report is required. Prerequisite: an advanced laboratory course in psychology or consent of the Chair of the Department. The student must submit a Research Proposal Form before registration. This course may be repeated for credit; maximum: six credit hours.

497. Honors Work in Psychology.  
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Psychology.  
Cr. 3. See Honors Work, page 41.

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

Associate Professor Walton (Chair); Instructor Crumpacker.

Social work is the profession which serves individuals, families and communities who seek preventative and rehabilitative interventions for an improved quality of life. Focused on social and emotional development, the field of social work is national and international in scope. 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 in social work practice settings. 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 foundation curriculum to prepare for child welfare, community mental health, aging, church, urban studies or school social services. Joint academic studies exist between the Department and the Lutheran Deaconess Program, Plan 2.

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 faculty.


Also required are Biology 125, Psychology (101 or 102) and 201, Sociology 110 and 220, one course in political science and one of the following courses: Economics 221 or 222 or Geography 201.

Minor. A minimum of 15 credit hours in Social Work constitutes a minor. These credits may be selected from Social Work 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 Social Work 151 and the completion of admissions procedures. Each Social Work major selects a faculty adviser. A manual is available to all majors as a guide to departmental standards.

Degree. The Department of Social Work is fully accredited by the Council on Social Work Education. It offers an undergraduate professional curriculum. The completion of this curriculum and the requirements of the College of Arts and Sciences, including its General Education Requirements, 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 assigned adviser at the beginning of each semester.

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 major focus of the course includes a historical survey and review of social welfare policies and programs. A descriptive analysis is made of various private, voluntary and governmental welfare programs and agencies. Values, attitudes, political and economic forces are explored in viewing the American response to the needs of welfare consumers. Prerequisite: Social Work 151 (may be taken concurrently by juniors and seniors) or consent of the Chair of the Department.

220. Human Behavior and Social Environment.
Cr. 3. This course explores the human developmental life cycle and its interplay with social values and community functioning. Theoretical approaches to human development and societal influences are critically examined. Prerequisite: Social Work 151 or consent of the Chair of the Department.

240. Strategies of Intervention.
Cr. 3. A beginning study of human intervention theories, models, and methods. Ecosystems and psychosocial models are applied to methods for individual and group interactions. Case material and experiential units are examined. Prerequisites: Social Work 151, 210, 220.
Cr. 3. This course offers a study of the social needs of American people of color in relation to their human rights. Patterns of human development and analysis of social change provide the framework for study of minority rights and lifestyles. This material prepares the student for comprehension and appreciation of current minority issues. Prerequisite: junior standing.

340. Professional Intervention and Human Services.  
3+4, Cr. 4. A course that introduces the student to human systems theory (individual, group, community) and to the variety of social work interventions. A community field experience and classroom laboratory are required. Prerequisites: Social Work 151, 210, 220 and 240.

365. Introduction to Methods of Social Research.  
Cr. 3. This course is an introductory overview of the methods of scientific inquiry in the social sciences, particularly social work. Major topics to be covered are problem formation, research design, measurement, data collection, analysis and interpretation and reporting results. Prerequisite: Social Work 151, 210, 220, 240 and Psychology 201.

Cr. 2-3. A study of selected topics of contemporary concern for the social worker, such as adulthood, clinical methods and techniques for helping professions, housing, ethics, substance abuse, juvenile delinquency, poverty. Listings are announced. Prerequisite: junior standing or consent of the Chair of the Department.

Cr. 1-3. Full- or half-semester courses specializing in particular areas of social work practice or methodology such as administration, current issues in group services, family therapy, new techniques for solving community problems, supervision and children’s services. Prerequisites: junior or senior standing and consent of the Chair of the Department.

395. Independent Study.  
Cr. 2-3. Prerequisite: junior standing and consent of the Chair of the Department.

Cr. 3. An intensive study of social welfare programs, principally in the United States, and a historical review of the contemporary forces, primarily social and economic, that have shaped their development. Areas included are housing, income maintenance and health care services. Prerequisites: senior standing, consent of the Chair of the Department, Social Work 151, 210, 220, 240, 330, 365.

455. Social Work Practice I.  
3+4, Cr. 7. The generic social methods and field instruction course is designed to establish a common base for direct service to people—individuals, family, small group, community—and institutional segments of society. The central theme is that the problems with which the social worker is involved dictate particular social work intervention. The emphasis is on the integration of theories, principles, skills and processes of the various work methods with clients. A professionally directed field practicum is offered each semester. The student works each Tuesday and Thursday in a community social service agency. Prerequisites: senior standing and all previously numbered foundation courses.

456. Social Work Practice II.  
3+4, Cr. 7. Continuation course with primary focus on ethics. Field work is done each Tuesday and Thursday. Prerequisite: Social Work 455.

Cr. 1. This seminar is jointly designed by senior majors and faculty to deal with those issues of concern which currently face clients and practitioners in the social services delivery system. Prerequisite: senior standing or consent of the Chair of the Department.

Cr. 3. See Honors Work, page 41.

Cr. 3. See Honors Work, page 41.
Sociology

Professor Westermann; Associate Professors Martinson, Sederberg, P. Venturelli (Chair); Assistant Professor Gallmeier.

Sociology is the study of the structures and processes of human interaction. Its subject matter ranges from intimate family life to the hostile mob, from crime to religion, from the divisions of social class to the shared beliefs of a common culture.

The Sociology Department seeks to help students achieve an awareness of modern society and of the causes and consequences of human social behavior. Its basic objective is to produce students who understand themselves, the groups in which they participate and their society. By expanding their knowledge of the concepts, theories and research methods of sociology, students develop skills in social analysis, enhance their capacity for self-evaluation and grow in their ability to make informed decisions. In seeking to attain these objectives, the Department has developed a curriculum; grounded in the liberal arts tradition, which is flexible and responsive to student needs. Built around a core of fundamental courses, it provides for a diversity of professional and vocational interests by offering two majors.

The General Major. Intended for students who are interested in graduate study or seek a general foundation in sociology, leading to such careers as leadership in community organizations, recreational leadership, service in governmental agencies, market research, and sales. The general major requires a minimum of 30 credit hours in sociology. Courses must include Sociology 110, 245, 250, 310, and 320. Of the remaining minimum credit hours, not more than three may be taken from the introductory level and not more than three from the foundation level. Students planning to enter careers directly are advised to arrange relevant internships.

A course in statistics is recommended, either Psychology 201 or, preferably, Mathematics 240 (which has as prerequisites Mathematics 122 and 124). Prospective graduate students should consider electing a computer science minor.

Criminal Justice Concentration. Intended for students who wish to enter such fields as law enforcement, probation and parole, corrections, and other criminal justice services, or who wish to prepare for a career in law. The core of the major consists of 33 credit hours in sociology, including Sociology 110, 130, 240, (245 or 250), (260 or 265), 310, 320, two of (350, 360, 445, or 455), and 386. A second internship is recommended.

The department strongly encourages students concentrating in Criminal Justice to include the Chicago Urban Semester in their University experience. The inclusion of this 16-credit program in the Criminal Justice concentration gives a student the equivalent of a 40-credit major.

If Criminal Justice majors are interested in agency administration or in graduate study, the statistics recommendations described for general majors also apply to them.

Work presented for internship credit by transfer students is not automatically accepted but must be evaluated by the Chair of the Department.

Minor. A minimum of 18 credit hours in Sociology constitutes a minor. Courses must include Sociology 110, (245 or 250), 310, 320, and six credit hours taken above the Introductory Level.

Other Options. In addition to these majors and minor, the Department is willing to work with students interested in other areas of service. By the use of the individualized major (page 34) to combine courses in sociology and those of other related disciplines, programs such as leisure and recreation or family life education may be developed. Such programs should be arranged in consultation with the Chair of the Department.

The Department participates in the Cooperative Education program, permitting junior and senior students to engage in paid, professional positions which complement and enhance their academic work. Credits earned through Cooperative Education may, with the approval of the Department Chair, be used to substitute for one or both internship requirements. They may be accumulated through part-time employment. (For further information,
refer to course descriptions and to Cooperative Education, College of Arts and Sciences, page 42.)

**Degree.** Completion of the degree requirements of the College of Arts and Sciences with a general major in Sociology or the Criminal Justice Concentration leads to the Bachelor of Arts degree.

**Approval of Schedules.** All students taking a major or minor in sociology should have their schedules approved by designated departmental advisers.

**Introductory Level.** Courses taught at the elementary level and without prerequisites.

110. **Introductory Sociology.**
Cr. 3. The analysis of the major institutions, structures and processes of American society, as well as an introduction to the basic theoretical and methodological approaches of the discipline.

130. **The Criminal Justice System.**
2+3. Cr. 3. A survey of the operations, functions and interactions of the police, the courts and correction agencies; that is, social organizations which respond to crime. Field trips and observation of selected agencies will be scheduled. Required for the Criminal Justice concentration. Open to other students only by consent of the instructor. Every fall.

150. **Cultural Anthropology.**
3+1. Cr. 3. Study of the development and characteristics of culture, with emphasis upon the comparison of cultures in small-scale preliterate societies.

**Foundation Level.** Courses which build on introductory level courses, providing students with deeper insights into fundamental concepts and theoretical approaches. Prerequisite for all Foundation Level courses (except 240 and 265) is Sociology 110 or 150, or consent of the Chair of the Department. The prerequisite for 240 and 265 is Sociology 130 or consent of the Chair of the Department.

220. **The Family.**
Cr. 3. A study of the family as a basic social unit and institution, with emphasis on the various forms and functions of the family. Special consideration is given to modern influences on the interaction and organization of American family life.

235. **Analysis of Social Issues.**
Cr. 3. Focuses on the ways concerned people propose, support, or oppose claims about social problems. Aims to develop skill in evaluating such controversies with the smallest possible degree of prejudice. Topics selected by students. Normally at least every spring.

240. **Principles of Criminal Law.**
Cr. 3. An examination of the principles of criminal law. Intended for those who wish to work in the criminal justice system or to prepare for the study of law. Required for the Criminal Justice Concentration. Prerequisite: Sociology 130 or consent of the Chair of the Department. Every spring.

245. **Interaction Analysis.**
Cr. 3. Designed to develop fundamental skills in observing and analyzing interaction according to three or more sociological traditions, such as symbolic interaction, dramaturgy, exchange, group process analysis, or ethnomethodology. Normally every fall.

250. **Principles of Social Organization.**
Cr. 3. An examination of the basic principles people use to structure their relationships (e.g., age, gender, shared interest, specialization) and the resulting types of social organization most prevalent in modern societies. Types may include networks, alliances, task groups and bureaucracies. Normally every spring.

260. **Deviance.**
Cr. 3. An analysis of the definition and extent of deviance and an examination of theories of how people become deviants. Surveys the forms of deviation: crime, mental illness, drug or alcohol abuse, sexual deviation, etc. Normally every fall.

265. **Criminology and Juvenile Delinquency.**
Cr. 3. An examination of the definition and extent of crime and delinquency, the theories used to explain crime, and a brief analysis of societal responses to crime and juvenile delinquency. Prerequisite: Sociology 130 or consent of the Chair of the Department. Normally every spring.

290. **Topics in Sociology.**
Cr. 2-3. Topics selected on the basis of student and faculty interest. May be repeated for credit if topics are different.

**Advanced Level.** Courses designed to provide depth of experience and understanding in narrow subject areas. All have as a prerequisite at least Sociology 110 or 150 or consent of the Chair of the Department. Some courses have additional prerequisites.

310. **Development of Sociological Theory.**
Cr. 3. Study of the historical development of sociological thought and the contributions of major theorists, along with an introduction to the logic of scientific inquiry and theory building in the social sciences. Required of all majors and minors. Every fall.

*Credit for Sociology 110 may be earned through the College Level Examination Program in Introductory Sociology.*
Cr. 3. Strategies for developing and testing hypotheses; comparison of basic and applied research goals; methods of generating and organizing data; computer-aided elementary analysis. Skills are taught through small-scale projects whenever possible. Required of all majors and minors. Prerequisite: Sociology 245 or 250 or consent of the Chair of the Department. Every spring.

325 / 525. Urban Sociology.
Cr. 3. An examination of the city as a social system. Emphasis placed upon the historical, demographic, and ecological development of urban areas, along with an exploration of major problems confronting American cities. Development of urban life style is also examined. Required of all majors and minors. Prerequisite: Sociology 245 or 250 or consent of the Chair of the Department. Every spring.

327 / 527. Aging in American Society.
Cr. 3. An examination of the social aspects of aging; this course seeks to explore the demographic, historic, theoretical, and cross-cultural perspectives on aging. Specific emphasis is placed on major problem areas for the elderly in America, including medical care, housing, family relationships, work and leisure, and finances.

330 / 530. Social Structures.
Cr. 1-3. Courses which focus on structured relationships among individuals, groups, processes and sets of beliefs. Topics may range from informal and unplanned relationships to intentionally developed large scale organizations, and may include social class, occupations, and organized sport.

Cr. 1-3. Courses which focus on processes of social influence, differentiation, development, policy making, control or change. Topics may include socialization, specific forms of deviance, death, collective behavior, minority relationships, etc.

Cr. 1-3. Courses which focus on socially shared beliefs and practices developed to deal with major social needs. Possible topics include religion, medicine, education, etc.

Cr. 3. An examination of policing at the local, state and federal levels, from historical and contemporary points of analysis, with emphasis on the relationship between law enforcement and other criminal justice agencies. Prerequisites: Sociology 130 and 260 or 265, or consent of the Chair of the Department. Fall of 1990, then normally spring of even years.

360 / 560. Corrections.
Cr. 3. A critical examination of prisons, jails and community correctional services, including the work of probation and parole officers, with emphasis on both historical development and current trends and issues. Prerequisites: Sociology 130 and 260 or 265 or consent of the Chair of the Department. Normally fall of even years.

386. Internship in Criminal Justice I.
Cr. 3. A student is placed with one criminal justice agency and required to observe and analyze it, using concepts introduced in previous courses. Depending on agency requirements and policies, the student may be assigned a caseload or otherwise expected to assist in agency operations. Required for Criminal Justice majors and limited to them. Prerequisites: Sociology 130 and junior standing or consent of the Chair of the Department.

Cr. 3. The study of the place of law in society, the relationship between law and social change, and the relationships between the law and other social institutions. Normally spring of odd years.

Cr. 3. An examination of adjudicatory processes applied to the criminally accused. This includes pretrial, trial and sentencing practices and procedures, including those in which probation officers participate, with special attention to sociological factors affecting decision making—ideological, discretionary, structural, interactional, etc. Prerequisites: Sociology 130 and 260 or 265, or consent of the Chair of the Department. Normally fall of odd years.

481. Cooperative Education in Sociology/Criminal Justice I.
Cr. 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.

482-483. Cooperative Education in Sociology/Criminal Justice II-III.
Cr. 1-3. Continuation of Sociology 481. Prerequisites: Sociology 481 and approval of the Chair of the Department. May be repeated beyond 483 for additional credit.

486. Internship in Criminal Justice II.
Cr. 3. Continuation of 386. Available to students in the Criminal Justice Concentration who do not elect to participate in the Chicago Urban Semester Program. Prerequisite: Sociology 386.

487. Internship in Sociology.
Cr. 3. A student is placed in a formal organization for one semester and required to observe and analyze part of it, using concepts introduced in previous courses. After becoming familiar with job requirements, the student may be delegated some responsibilities, at the discretion of the organization. Prerequisites: Sociology 110, 245 or 250, and consent of the Chair of the Department.

495. Independent Study in Sociology.
Cr. 1-3. 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.

497. Honors Work in Sociology.
Cr. 3. See Honors Work, page 41.

498. Honors Candidacy in Sociology.
Cr. 3. See Honors Work, page 41.
Theology

Professors Albers, R. Baepler, Droge, Harre, Keller, Krodel, Lasky, Ludwig (Chair), Rast, Truemper; Associate Professors Brockopp, J. Moore, Niedner, Senne; Assistant Professors DeBerg, R. DeMaris, Kunnie, Pahl.

General Education. The Theology component of the general education requirement at Valparaiso University is three courses of three credit hours each. These courses shall be taken from each of the three levels indicated in the course listings below. All students are required to take a level I course, ordinarily in their freshman year. This must be followed by a course from level II, ordinarily taken in the sophomore year. In either the junior or the senior year, each student must take at least one course from the level III listings.

Major. A minimum of 30 credit hours in Theology, 21 credit hours beyond the general education requirement, constitutes a major. Courses must include Theology 100 or 106, a course in biblical studies (210, 313-319, 411, 412), a course in the history of the Church and its thought (220, 230, 321-326, 331-336, 433), a course in contemporary religion and practice (240, 250, 341, 343, 442, 356-358, 451-459, 230, 321-326, 331-336, 433), a course in history of religions (260, 361-368) and seminar 493 (or in exceptional cases, research 495). Students shall also take four additional courses chosen in consultation with their departmental major adviser.

Minor. A minimum of 18 credit hours in Theology, chosen by the student in consultation with the Chair of the Department, constitutes a minor. At least three courses shall be taken at level III.

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. Programs for preparation for seminary studies are individually tailored to the needs and interests of the student.
3. Students interested in service as Directors of Christian Education or Youth Workers arrange their programs with their departmental adviser.

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 advisers at the beginning of each semester.

Level I. Ordinarily freshman year.

100. Introduction to Christian Theology.
Cr. 3. An introduction to Christian theology from the standpoint of religion in human experience. Certain sections of the course will examine Christian theology by focusing on the Christian tradition: the nature of religious faith, biblical themes, central doctrines, worship and ethics. Other sections will examine Christian theology by focusing on fundamental questions: the knowledge of God, the meaning of suffering, human wholeness and purpose.

106. Families of Abraham: Judaism, Christianity and Islam.
Cr. 3. An introduction to the study of religion by giving attention to the sacred writings, central teachings, worship practices and ethical assumptions of the three monotheistic religions, noting both their similarities and their differences. Fulfills the level I theology requirement. Not open to those who have received credit for Theology 100. (This course is designed especially to serve the needs of some of the international students. To insure learning through dialogue, class enrollment will be approximately one-half international and one-half U.S. students.)

Level II. Ordinarily sophomore year. Prerequisite for courses in this level is one course at Level I.

210. Literature of the Bible.
Cr. 3. A study of the development of the two Testaments in the framework of the history of ancient Israel and early Christianity. Emphasis is placed on key theological themes and on the literary types within these scriptures.

220. Formative Events in Church History.
Cr. 3. A study of those events which shaped the Church’s understanding of its nature and mission.

Cr. 3. A study of the formation and development of Christian creeds and doctrine.

240. Christian Ethics.
Cr. 3. A study of norms for moral judgment and the dynamics for moral action in the light of the Christian faith.
250. The Church in the World.  
Cr. 3. A study of the life and mission of the Church, with particular emphasis on movements for renewal, reform and reunion, as well as on current events in Church life.

260. History of Religions.  
Cr. 3. A study of major religions and of the ways in which they interpret the nature of reality and the relationship between humanity and the divine.

270. Christianity and Culture.  
Cr. 3. A study of the way in which theology interprets basic elements of the Christian tradition in the context of cultural beliefs and questions.

Level III. Prerequisite for courses in this level is one course at level II. To fulfill General Education requirements, students must take a Level III course in their junior or senior year.

THE BIBLE AND ITS WORLD

313. Archaeology and Religions of the Ancient Near East.  
Cr. 3. A study of the religions of Mesopotamia, Egypt and the Levant as known from archaeology. Special reference is made to the Israelites in the context of the ancient Near East.

314. The Books of Moses.  
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.

315. David and the Kings of Israel.  
Cr. 3. An investigation of the Deuteronomic History (Deuteronomy-2 Kings), with special attention to the period of the kingship and the importance of Jerusalem in the Old Testament.

316. 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.

317. Psalms and Prayers of Ancient Israel.  
Cr. 3. A study of the prayers in the Book of Psalms, with attention to the language and dynamics of prayer. Use is made of form-critical results in the study of the psalms.

318. Jesus and the Gospels.  
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.


411. Introduction to the Bible: Old Testament.  
Cr. 3. A study of the history and theology of the Old Testament with attention to the role of the Old Testament in Christian faith. Not open to students who have completed Theology 210. Prerequisite: junior or senior standing.

Cr. 3. A study of the history and theology of the New Testament with attention to its rootage in the Old Testament. Prerequisite: junior or senior standing.

CHURCH HISTORY

321. Early Christianity.  
Cr. 3. A study of major events, themes and developments in the history of the church in the period beginning with the ministry of Jesus and the Apostles and ending about 500 A.D.

322. Reformation Christianity.  
Cr. 3. A study of the impact of the theology of the Protestant reformers on the church with special emphasis on the work of Martin Luther.

323. History of Christianity Since the Reformation.  
Cr. 3. A study of the history of Christianity from 1650 to the present.

324. The American Religious Experience.  
Cr. 3. An investigation of American religious thought with special emphasis on the interaction between religion and cultural development.

325. History of Lutherans in America.  
Cr. 3. A survey of the history of American Lutherans from colonial times to the present, with emphasis on the nineteenth century immigrations and twentieth century trends.

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.

CHRISTIAN THOUGHT

331. Life and Thought of Martin Luther.  
Cr. 3. A study of the life of Martin Luther and the structure of his thought.

332. Theology of the Lutheran Confessions.  
Cr. 3. A study of the historical background and doctrinal content of the confessions of the Lutheran Church.

334. Comparative Christianity.  
Cr. 3. An examination of various Christian denominations in the light of their history and confessions.

335. Constructing a Working Theology.  
Cr. 3. A study of issues and problems encountered in the attempt to construct an ordered and coherent structure of thought about the Christian faith.

Cr. 3. A survey of twentieth century theology, including a study of major currents and of representative works of particular theologians or schools of thought.

433. The Lutheran Doctrinal Tradition.  
Cr. 3. A study of Lutheran doctrinal theology and its transmission from the Reformation era to the present, with special reference to its reception and development in American Lutheranism. Prerequisite: junior or senior standing.
CONTEMPORARY ETHICAL ISSUES

341. Introduction to Bio-Ethics. (May also be offered as Philosophy 341.) Cr. 3.
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.

343. 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.

356. Christian Response to Social Victims. Cr. 3. A study of how different Christian thinkers have understood the nature and function of government and the relation of the Christian faith to political action. Prerequisite: junior or senior standing.

CHURCH AND MINISTRY

357. The Church and Contemporary Crises. Cr. 3. An examination of the Church's past experience and its theological resources in order to anticipate and cope effectively with potential social crises (e.g., unemployment, undocumented aliens, racial tensions, global injustice).

358. Spiritual Needs and Health Care. Cr. 3. An examination of the spiritual dimension of health care. Special attention will be given to the assessment and meeting of spiritual needs in the care of oneself and of others.

359. Studies in Judaic Thought. Cr. 3. A study of the historical and theological foundations of the Jewish faith. Attention is given to the role of the diaconate in the church, the development of diaconal community, and the nurture of a spirituality of service. Prerequisite: junior or senior standing.

361. Studies in Judaism. Cr. 3. A study of how different Christian thinkers have understood the nature and function of government and the relation of the Christian faith to political action. Prerequisite: junior or senior standing.

442 / 542. Christian Faith and Contemporary Politics. Cr. 3. A study of how different Christian thinkers have understood the nature and function of government and the relation of the Christian faith to political action. Prerequisite: junior or senior standing.

443. 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.

445 / 555. Principles and Forms of Worship. 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. Prerequisite: junior or senior standing.

450 / 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. Prerequisite: junior or senior standing.

HISTORY OF RELIGIONS

361. Studies in Judaism. Cr. 3. Studies of selected topics in Judaism: biblical, rabbinic and contemporary. A student may receive credit for this course more than once, provided that the topics are different. These offerings are sponsored in part by the Jewish Chautauqua Society.

362. 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 the significant contemporary developments in the Muslim world.

363. Religions of China and Japan. Cr. 3. A study of the religious worldview of China and Japan, seen both in the traditional folk 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.

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.

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.

366. Encounter with Recent Religious Movements in America. Cr. 3. Mini Session Only. A study of some of the non-Christian religious groups currently active in the United States, such as Bahá’í, Hare Krishna Society, Zen Buddhism, and the Unification Church (i.e., the "Moonies"). Wherever possible, the study of each group is approached through its origin in one of the living world religions. At least one field trip is included.

368. American Indian 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.

CHRISTIANITY AND CULTURE

372. Christianity and Humanism. Cr. 3. A study of the Christian dialogue with and response to contemporary humanism, with special emphasis on understanding the positive contribution of the atheism implicit in some of its forms.
Cr. 3. An exploration of the meaning of Christian faith in dialog with modern literature, particularly with a view toward understanding the human condition and discovering implicit religious dimensions in representative novels and plays.

### 471 /571. Theology and the Human Sciences.
Cr. 3. An investigation of areas of common interest in the fields of Christian theology and the social or personality sciences. Prerequisite: junior or senior standing.

### 475 /575. Understanding Death and Dying.
Cr. 3. An exploration of the biblical meaning of death in relation to contemporary cultural meanings. Each student is encouraged to consider the meaning of his or her own death. Special attention is given to the care of the dying. Prerequisite: junior or senior standing.

### OTHER COURSES

#### 390. Topics in Theology.
Cr. 3. As special circumstances and opportunities allow, certain unlisted courses may be announced under this listing. A student may receive credit for this course more than once, provided that the topics are different.

#### 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, nor may it be counted toward the theology major or minor. 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.

#### 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.

#### 495 /595. 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, 12 credit hours in theology, and consent of the Chair of the Department.

#### 497. Honors Work in Theology.
Cr. 3. See Honors Work, page 41.

#### 498. Honors Candidacy in Theology.
Cr. 3. See Honors Work, page 41.
CHRIST COLLEGE

Mark R. Schwehn, Ph.D., Dean
Margaret Franson, M.A.L.S., Assistant to the Dean

Professors Lee, Rubel; Associate Professors Olmsted, Piehl, Schwehn; Instructors Contino, Pearson.

Organization. Christ College is an honors college emphasizing liberal studies and providing a place in undergraduate study for courses and programs which implement honors standards and offer the freedom and flexibility for educational experimentation.

The College shares the general purposes of Valparaiso University. Its membership is drawn from the University’s four undergraduate colleges in which each student is completing a normal specialized program. Through these colleges a University degree is granted with the added honors designation, “Christ College Scholar” or “Christ College Associate,” for students who at the same time have met the requirements of Christ College.

The program of courses offered by Christ College replaces many of the general education courses required of all students by the University. This program, supplemented by seminar work, invites its students to inquire beyond their specialized interests into larger contexts of thought, action and production, encouraging thereby the exploration of values and the integration of knowledge. Such liberal studies are an excellent preparation for many professions. Personal and intellectual growth of high quality is fostered by a resident staff which works closely with small numbers of students.

Above all, Christ College encourages the restlessness of the seeker who desires to know things as they are and whose thought and imagination have been captured by some vision of things as they might be under the grace of God and the exertions of human will and intelligence.

To achieve these purposes Christ College provides:
1. A variety of planned programs and supervised studies leading to a student’s graduation with the honors designation, “Christ College Scholar” or “Christ College Associate.”
2. One or more comprehensive Freshman Programs which approach general education experimentally at
the level of honors work and fulfill part of the University's general education requirements.

3. A range of courses and programs, largely experimental or interdisciplinary in nature, which do not naturally fall into the traditional division of work among the regular departments.

4. Co-curricular experiences, including lectures and conferences designed to foster a reflective and civilized style of life as well as involvement in the problems of modern society.

5. Opportunities to work out a theology of life and vocation.

6. An attractive building which facilitates immediate relationships between students and faculty as well as communication among the traditional divisions of knowledge.

**The Freshman Program.** The program is a network of activities designed to capitalize on the educational opportunities arising from a series of carefully designed general studies. The program is offered to a relatively small group of freshmen who are willing to invest more of themselves in the academic enterprise than might normally be required of them. Small classes, tutorial work and an experimental flair characterize the multi-disciplinary work of the program.

The program is planned as a two-semester sequence and carries eight credit hours per semester. The successful completion of the program satisfies part of the general education requirements of the student's college. Students from the professional colleges as well as from the College of Arts and Sciences are enrolled in the program. A further description of it is available from the Dean of the College.

Students are admitted into the program upon approval of their applications for admission. The application form, which is available through the Dean's Office, asks that students provide evidence of their ability to profit from the program, together with an expression of their personal intellectual goals. Since a limited number of students can be accepted for the program, the Christ College staff chooses its registrants from among the applicants.

**Admission and Membership.** Any student at Valparaiso University is welcome to enroll in the courses offered by Christ College, subject to the approval of the instructor of the course. Students who wish to become members of the College may apply for admission beginning with their sophomore year but no later than the middle of their junior year. Students admitted to the College are designated "Members of Christ College." As such, students are at the same time enrolled in another University college; they are jointly advised by their departmental adviser and their Christ College adviser.

In admitting students, consideration is given to their interests and goals, their academic achievement and promise, and evidence of initiative, originality, creativity or qualities of leadership.

Once admitted to membership, the student's status is periodically reviewed by the faculty to determine whether the student is satisfying the standards and requirements of Christ College. These requirements include satisfactory academic progress toward the College's stated goals and contribution to the common life of the College and the University. Even when students are not directly involved in the courses offered by the College, they shall contribute to the College's common life, partly through their relationship with an adviser and partly through membership in the Christ College Symposium which meets periodically during each semester at a regularly scheduled hour. The students may further contribute by assisting in teaching; opportunities for assisting in instruction are arranged particularly for senior students.

The faculty takes an interest in the total program of each member. Accordingly, it may authorize certain variations in the normal academic requirements of a student if such variations seem desirable. For example, it may permit a student to carry extra credit hours, to waive prerequisites for advanced courses, to acquire academic credit through examination and to waive certain University requirements if such waivers are justified. In general, the faculty may tailor a program to meet a student's interests and needs within the general framework of the University's objectives.

Membership in Christ College is never terminated by the mechanical application of arbitrary criteria such as grade point average or the student's academic record.
for a particular semester. In general, Christ College students should expect to maintain an average grade of B or better, but in every case the judgment of whether a student should be admitted, retained or readmitted as a member of the College is made only after thorough consideration of the probable best interests of the student.

Members of the College are normally required to meet, by course examination or other evidence of qualification, the regular requirements for graduation except where explicitly modified. The faculty of Christ College may recommend such adjustments in these requirements as are in the spirit of the University’s requirements and in the best interests of the students. A member of Christ College may graduate with a **Christ College Scholar** or as a **Christ College Associate**.

**Christ College Scholar.** The requirements for graduating with this designation are:

1. Membership in Christ College for a minimum of three semesters.
2. Twenty-four credit hours of work in courses in the College at a grade average of at least B. Students who have completed part or all of the Freshman Program need take only twenty-one additional credit hours.
3. CC 205 and 250.
4. One course in religion sponsored by Christ College.
5. CC 345 and 499.
6. Two additional courses in Christ College, ordinarily taken during the junior and senior years. These courses shall be junior-senior seminars, tutorial studies or independent study work taken under the auspices of Christ College. Students enrolled in an off-campus program of the University may petition to waive one of these two courses.

**Christ College Associate.** The requirements for graduating with this designation are:

1. Membership in Christ College for a minimum of three semesters.
2. Seventeen credit hours of work in the College at a grade average of at least B. Students who have completed part or all of the Freshman Program need take only fourteen additional credit hours.
3. CC 205 or 250.
4. One course in religion sponsored by Christ College.
5. CC 345 and 499.
6. One additional course in Christ College, ordinarily taken during the junior or senior year. This course shall be a junior-senior seminar, tutorial studies, or independent study work taken under the auspices of Christ College. Students enrolled in an off-campus program of the University may petition to waive this course.

**Special Program in the Humanities.**

A student with a first major in any department of the College of Arts and Sciences may earn a second major in an interdisciplinary study of the humanities. This combination comprises the Special Program in the Humanities.

The aim of the program is an increased knowledge of the human world and the acquisition of skills leading to the enjoyment and understanding of a wide range of imaginative and intellectual works. The courses in the program focus on a variety of works and ideas such as lyric poetry, various kinds of argument, analyses of the symbolic structures of society and significant concepts found in scientific literature. These courses cultivate the arts of interpretation and judgment which may be applied to texts as well as to events in social and political life. This activity leads to further reflection on central cultural problems of our time, so that the student is encouraged to make an independent effort to assess statements of facts and test values among competing contemporary and traditional claims.

A brochure describing the Special Program in the Humanities is available in the Dean’s Office. A brief outline of the study plan follows:

I. A major approved by any department in the College of Arts and Sciences.

II. Interdisciplinary major in the Humanities.

**Note:** As background for this program, students should develop historical perspective, some appreciation of the fine arts and some insight into the relation of theology and the imagination before or during their formal work in the program. Members of Christ College who have taken the College’s freshman-sophomore offerings should also take an appropriate art or music course and an upper division theology course related to this program as approved by their advisers. Students who have not taken the lower division program in Christ College should take History 100 and 210, or Philosophy 210 and 230, or two courses in English literature in addition to the art or music course and the upper division theology course mentioned above.

**A. Core Sequence.**

1. CC 250 .............................................. 4 Cr.
2. CC 345 .............................................. 3 Cr.
3. CC 360 .............................................. 3 Cr.
4. CC 499 .............................................. 1 Cr.

**B. Supplementary Courses.**

Each student will select three courses from:

- CC 365 .............................................. 3 Cr
- CC 370 .............................................. 3 Cr
- CC 375 .............................................. 3 Cr
- CC 455 .............................................. 3 Cr.

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Christ College

Selection of specific seminars or sequences of seminars is determined through advising and continued review of the student’s program.

C. Independent Study.
CC 496, 3 Cr. An independent study resulting in an essay on an approved topic. A study proposal is to be submitted by the end of the spring semester of the junior year.

The Special Program in the Humanities may also serve as a nucleus or coordinated portion of the Individualized Major of the College of Arts and Sciences (page 34). The Special Program may be taken as an academic minor, which shall consist of a minimum of 16 credit hours, including CC 250. Any of the 365-375 seminars may be taken individually or in combination by any student, subject to permission of the instructor.

Degrees. 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,” and/or with the designation, “Special Program in the Humanities.” The transcript carries the notation along with an explanation of its meaning.

FRESHMAN PROGRAM

CC 110. Texts and Contexts I: An Introduction to Western Thought.
Cr. 8. This course offers an opportunity for intensive study of great works in the Western tradition through the sixteenth century. 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. Readings are drawn from the areas of history, literature, philosophy and religion. Advisory grades (A-F) are given throughout the semester, but the final grade is S/U.

CC 115. Texts and Contexts II: An Introduction to Western Thought.
Cr. 8. A continuation of CC 110. The first seven weeks focus on the seventeenth through nineteenth centuries. The second seven weeks are devoted to seminars on topics drawn from the modern period. Each student conducts a major investigation of a problem to be formulated in the seminars.

SOPHOMORE-JUNIOR-SENIOR CURRICULUM

CC 205. Word and Image.
Cr. 4. A study of selected literary and intellectual texts, with special emphasis on the relationship of these texts to contemporary works of art. These classic texts are read, analyzed and discussed in seminar settings, supplemented by plenary sessions devoted to lectures and discussions on paintings. Prerequisite: Christ College 115 or English 100.

Cr. 3. A study of one or more major topics in the history of Christian thought, with attention to the ways these topics have been addressed by the Scriptures, classics in theological discourse, and other significant writings.

CC 250. Interpretation.
Cr. 4. An introductory study of interpretation through the examination of selected primary materials in the humanities, the social sciences, or the natural sciences. Sections focussing on two or three of the above three areas will be offer each spring semester. Specific questions of authorial intention, of the place of language, symbol, and tradition in society, of audience expectation and response, of appropriate modes of inquiry and methods of validation, of the uses of mathematical language, and the role of participant-observer are considered in the context of recent theory and practice on a variety of topics. Interpretation in the Humanities required of humanities majors.

CC 260. Philosophy of the Arts and Sciences.
Cr. 3. An exploration of the liberal arts and their use in the study of various subject matters.

CC 310. The Legal Process.
Cr. 3. A study of leading legal concepts, methods of legal reasoning and the function of the law in the social and economic order. Prerequisite: consent of the Dean.

CC 315. The Philosophy of Public Discourse.
Cr. 4. A study of the classical liberal arts of language and an examination of their use in selected classical and popular examples of discourse about the public and its affairs. Prerequisite: consent of the Dean.

CC 320. Public Affairs Seminar.
Cr. 3. Application of the arts of inquiry, invention and judgment to a selected issue currently under public discussion. The approach is interdisciplinary from the standpoint of involving several academic and professional fields and of shaping new questions for research and policy formation. Topics of seminars offered in the past include The Modern City, Philosophy and Public Affairs, The American Right Wing.

CC 340. Special Topics.
Cr. 2-3. Each year Christ College offers courses, often in the form of seminars, which are open to sophomores, juniors and seniors in the University, dealing with themes of social, intellectual or artistic importance. These courses are ordinarily interdisciplinary in nature. Topics dealt with in the past and likely to be repeated in the future include:
- Art and Aesthetic Judgment
- Science, Technology and Public Policy
- Changing American Lifestyles
- History of Socialist Economic Thought
- Theology and the Imagination: Comedy
- Law, Society and Medicine
- Religion and Politics
- Law and Society
CC 345. Tutorial Studies.
Cr. 3. The course presents opportunities for inquiry into significant educational, vocational and social issues, using the resources of the classical liberal arts tradition. During the first seven weeks students read common texts that raise significant problems concerning educational, vocational and social choices in a pluralistic world. During the second seven week period students pursue a topic that requires independent investigation and judgment, under guidance of the instructor. Open only to members of Christ College.

CC 350. Christ College Symposium.
Cr. 0. A periodic occasion for presentation and discussion of items and topics of special interest to members of the Christ College community. S/U grade.

Cr. 3. A study of contemporary Christian writers and the issues they deal with in their effort to relate the Christian faith to modern culture.

CC 360. Literature, Religion and Modernity.
Cr. 3. An examination of religious elements in the rhetoric and style of modern writers. Topics include religion and rhetoric, the religious symbol, aesthetics of religious art. Prerequisite: consent of the Dean.

CC 365. Humanities Seminar.
Cr. 3. A study of a particular topic (e.g., Christian Humanism, Politics and the Novel, Technology and Culture) on the basis of works selected from the various fields of the humanities. Prerequisite: consent of the Dean.

CC 370. Humanities Seminar.
Cr. 3. A study of representative persons whose work and life have had a significant influence in Western Tradition (e.g., Dostoyevsky, Freud, Goethe, Kant, Aristotle). Prerequisite: consent of the Dean.

CC 375. Humanities Seminar.
Cr. 3. A study of the thought, sensibility and social context of a particular period (e.g., The Medieval Experience, The Romantic Movement, Images of the Twenties) through an examination of selected works from the period. Prerequisite: 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 other courses offered by the College. S/U grade.

CC 475. Value and Judgment in the Humanities.
Cr. 3. A study of evaluative problems encountered in assessing the significance of selected texts and/or works in the performing or fine arts on which students have reflected in their undergraduate experience.

CC 495. Independent Study Project.
Cr. 2-6. A special independent study project arranged with a member of the faculty. Approval of this project must be obtained from the faculty mentor and the Dean of the College. Forms for this project are available from the Dean's Office.

CC 496. Independent Study.
Cr. 3. A course of study arranged by the student with an instructor. The study must comply with requirements and options for independent study as described under the Special Program in the Humanities.

CC 499. Christ College Colloquium.
Cr. 1. A colloquium offered under the supervision of the faculty of Christ College and built upon the work students have begun in their tutorial studies. Each year the colloquium is focused on a common topic and structured around presentations based on student research. Open only to members of Christ College. Prerequisite: Christ College 345 and consent of the Dean.
COLLEGE OF BUSINESS ADMINISTRATION

John A. Miller, D.B.A., Dean
Alice W. Krause, M.Ed., Assistant to the Dean

Professors F. Langrehr, McCuddy, J. Miller; Associate Professors Ehrenberg, V. Langrehr, Reichardt, Dean Schroeder; Assistant Professors Becker, Guydan, Hires, Holder, Lazar, Morrison, Ozgur, David Schroeder, Strasser, Stück, Trapp; Instructor McSparin.

Organization. The College is a separate administrative instructional unit of the University under the direction of the Dean of the College and offers two degrees: a Bachelor of Science in Accounting (with a major in Accounting) and a Bachelor of Science in Business Administration (with a major in Business Administration). A student selecting the Business Administration major has the option either of concentrating in finance, human resource management or marketing, or of following a general management track.

Objectives. The increasing size and complexity of business organizations and the changing economic, political, legal and social environments require that business students learn to approach problems from the viewpoint of many disciplines. Recognizing the dynamics of the contemporary environment, the faculty in the College of Business Administration advocates a philosophy of education characterized by the broad and the fundamental; it supports a teaching methodology oriented toward the analytical rather than the predominantly descriptive. The curriculum in general education assures each student exposure to a broad range of disciplines, problem-solving techniques and methods of inquiry. The business curriculum likewise introduces students to opportunities which help develop concepts, tools of analysis and techniques of evaluation which serve as a foundation for their growth into competent and ethically responsible business men and women. Such a philosophy is particularly appropriate for undergraduate education in business, which, though it properly concerns itself with preparation
for professional life, must also concern itself with life in general.

**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 business organizations within an integrative, capstone, policy-determination experience. In addition to taking certain prescribed courses in the core, the student must complete a major in Accounting or Business Administration. The requirements for each major are set forth in the curricula described on pages 144-145.

Each of the two curricula requires that the student devotes approximately one-half of his time to required and elective courses in liberal arts. The required courses include English, theology, the natural sciences, mathematics, and social and behavioral sciences. Students may select liberal arts electives from any of the natural sciences, mathematics, humanities (fine arts, history, philosophy, etc.), foreign languages, social sciences, or behavioral sciences. A student normally chooses elective courses in those areas which provide support to his professional program. Specific details concerning the prerequisites for courses in the liberal arts can be found in the announcements of the College of Arts and Sciences in this bulletin.

**Minor.** A student may declare a minor in the College of Arts and Sciences or may complete the interdisciplinary Manufacturing Management minor available to business and engineering students (see page 173). No more than two courses (except economics or mathematics) of specified liberal arts courses required for a College of Business Administration degree may be used in fulfilling the requirements of a minor. The minor is 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. Those students invited to participate in Christ College will also have an adviser 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 page 137).

**Double Concentration.** Students may earn a double concentration by completing all the requirements for two concentrations—a total of seven different courses for each.

**Double Major.** Students may complete a double major by fulfilling all the requirements as stated in the catalog under the particular degree requirements for the major.

**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.

**Cooperative Education.** Cooperative education is a program designed to permit students to explore career possibilities while still enrolled in school. They participate in planned and supervised experiences in business settings outside the formal classroom environment. Students in good standing in the College of Business Administration may participate in the cooperative education program upon completion of 24 credits. They may be employed in either alternating (full-time) or parallel (part-time) positions. Students register for two credits for each co-op placement and may apply up to a combination of six credits in cooperative education and/or internships toward fulfillment of their free elective requirements. Co-op placements require prior approval of the CBA Cooperative Education Coordinator; students interested in the co-op program should meet with the Coordinator early in their academic career. Students add a semester to their graduation date for each semester they are on a full-time co-op assignment.

**Internships.** Internships enable students with senior standing to apply business concepts learned in their concentration or major course work to situations encountered in actual organizational settings. Students register for two credits for an internship placement; they may apply up to a combination of six
credits in cooperative education and/or internships toward fulfillment of their free elective requirements. Internships require prior approval of the CBA Internship Coordinator.

**Small Business Institute Program.** The Small Business Institute Program is a practicum in which students participate as a member of a team of student consultants on actual small business cases. Enrollment is limited by the number of cases. All consultant activities are performed by the students, under general supervision of the faculty coordinator. Students must apply and receive approval from the SBI Coordinator prior to enrollment in the SBI course section. Students receive three credits and letter grades in the SBI Program.

**Admission.** The general requirements for admission to the University and to the College are found on pages 178-180 of this bulletin.

**Transfers.** Students currently enrolled at Valparaiso University and wishing to transfer into the College of Business Administration, as well as those from other universities who wish to enter, must have a minimum cumulative grade point average of 2.000. Transfer students should refer to page 179 regarding theology requirements and to page 11 for the Freshman Studies requirement.

Freshman or sophomore transfers from other accredited institutions who have completed business courses designated as upper division (305-495) in our bulletin do not automatically receive upper division transfer credit. Transfer credit is granted only for business courses which have been taken at the same level as that required at VU. Evaluation of such credit is made by the Dean's office. Any course work completed at other colleges or universities with a grade lower than C— does not carry transfer credit.

**Advancement to Upper Division.** For advancement to upper division (courses 305 or above) in the College, a student must complete a minimum of 56 credit hours with an overall cumulative grade point average of at least 2.000. In addition, the student must complete all the lower division curriculum courses listed below with a minimum grade point average of 2.000.

**Designated Lower Division Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 122</td>
<td>4 cr.</td>
</tr>
<tr>
<td>Mathematics 124</td>
<td>4 cr.</td>
</tr>
<tr>
<td>Computer Science 117</td>
<td>3 cr.</td>
</tr>
<tr>
<td>Accounting 205</td>
<td>3 cr.</td>
</tr>
<tr>
<td>Accounting 206</td>
<td>3 cr.</td>
</tr>
<tr>
<td>Decision Science 205</td>
<td>3 cr.</td>
</tr>
<tr>
<td>General Business 206</td>
<td>3 cr.</td>
</tr>
<tr>
<td>Economics 221</td>
<td>3 cr.</td>
</tr>
<tr>
<td>Economics 222</td>
<td>3 cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29 Cr.</strong></td>
</tr>
</tbody>
</table>

**Upper Division Standards.** To remain in good academic standing in the upper division a student must maintain a minimum cumulative grade point average of 2.000 in all course work, 2.000 in all business courses, and 2.000 in courses in the Accounting major (eight upper division Accounting courses and Business Law) or the Business Administration concentration (the four courses in the concentration plus the appropriate 300-level core course).

**Graduation Requirements.** To be eligible for the degrees Bachelor of Science in Accounting or Business Administration, a student must complete one of the prescribed curricula found on the following pages. The student must also satisfy the upper division grade point requirements stated above and must meet all additional requirements for graduation established by the University (see pages 189-190 in this bulletin).

**S/U Grading.** This option is permitted in all non-business courses except Mathematics 122 and 124, Computer Science 117, Economics 221, 222 and one 300-level Economics course. See page 185 for a complete explanation of the S/U grading option. The College of Business Administration does not encourage students to take any course S/U other than for the purpose of exploring new areas.

**Advisement.** Advisement of students admitted to the College is under the direction of the Assistant to the Dean. The Assistant to the Dean helps freshmen and sophomores select courses and interpret the requirements for orderly progress toward the degree. Faculty members also are available for advisement. Each upper division student in the College is assigned a faculty adviser. It is each student's responsibility to know curriculum requirements, prerequisites for courses, academic policies and procedures, and deadline dates.
STUDENT ORGANIZATIONS

Students may elect or be invited to join one or more of the following professional fraternities or societies.

Kappa Phi Chapter of Delta Sigma Pi. This professional business fraternity of men and women worldwide has been organized to foster the study of business in universities, encourage scholarship and social activity and to promote closer affiliation between the commercial world and students of business.

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 public responsibility. Membership in the Society is open to all students interested in pursuing careers in accounting.

Society for Human Resource Management. SHRM is a professional association organized to provide its members with assistance in their professional development, to stimulate research in the profession, and to promote leadership in establishing and supporting standards of professional excellence.

Financial Management Association—Richard H. Laube Student Chapter. The organization promotes scholarship and professionalism within the field of finance. Student and faculty sponsored programs are designed to enhance the classroom experience and to help students make the transition from college to business. Membership is open to all students interested in finance.

American Marketing Association—William E. Urschel Chapter. This organization promotes scholarship and professionalism within the field of marketing. Student and faculty sponsored programs are designed to enhance the classroom experience to help students make the transition from college to business. Membership is open to all students interested in marketing.

Chi Beta Alpha. This local honor society was established in 1979 to recognize students for academic achievement in the College. Membership is limited to the upper ten percent of the senior class and the upper five percent of the junior class. Members are entitled to wear gold honor cords at commencement.

COURSES COMMON TO ALL COLLEGE OF BUSINESS ADMINISTRATION DEGREE PROGRAMS

The College of Business Administration offers two degree programs—the Bachelor of Science in Accounting and the Bachelor of Science in Business Administration. Courses specifically required in either degree program are listed under the degree program descriptions following the "General Education" and "Business Core" requirements. The following courses are common requirements for both sequences.
### General Education

**Freshman Studies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theology 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>English 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Freshman Seminar 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12 Cr.</strong></td>
</tr>
</tbody>
</table>

**Academic Area Studies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theology Level II and Level III</td>
<td>6 Cr.</td>
</tr>
<tr>
<td>English 200</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Mathematics 122</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Mathematics 124</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Economics 221-222</td>
<td>6 Cr.</td>
</tr>
<tr>
<td>Economics 300-level</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Computer Science 117</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Non-Western or Third World Studies</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Social Analysis</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Natural Science</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Behavioral Science (Note 1)</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Non-business Electives</td>
<td>6 Cr.</td>
</tr>
<tr>
<td>Physical Education 101-105</td>
<td>1 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50 Cr.</strong></td>
</tr>
<tr>
<td><strong>Total General Education</strong></td>
<td><strong>62 Cr.</strong></td>
</tr>
</tbody>
</table>

**Notes:**
1. Behavioral sciences include psychology, sociology and anthropology. Either Psychology 101 or Psychology 102 must be included in the general education portion of the curriculum.
2. Students must include a third course in Economics at the 300 level in the general education area or as an elective in the concentration.
3. No more than four credits combined from performance music, ensemble music, and Physical Education 101-149 may be applied toward a degree. With the exception of one credit of the general education requirement of PE 101-105, PE courses are free elective credits only.
4. No more than six credits from cooperative education and/or internship may be applied toward the degree; they are free elective credits only.

### Business Core

**Sophomore (Lower Division) Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 205</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 206</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>DS 205</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GBUS 206</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12 Cr.</strong></td>
</tr>
</tbody>
</table>

**Junior/Senior (Upper Division) Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 305</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GBUS 306</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>MKT 305</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>DS 305</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>DS 310</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GBUS 470</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18 Cr.</strong></td>
</tr>
<tr>
<td><strong>Total Business Core</strong></td>
<td><strong>30 Cr.</strong></td>
</tr>
</tbody>
</table>

### Bachelors of Science in Accounting

The degree in Accounting prepares students for professional careers in public accounting, industry, financial institutions and not-for-profit organizations.

### Major Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 310</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 311</td>
<td>3 Cr.</td>
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<tr>
<td>ACC 320</td>
<td>3 Cr.</td>
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<tr>
<td>ACC 330</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 350</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 410</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 450</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ACC 470</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>GBUS 410</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27 Cr.</strong></td>
</tr>
</tbody>
</table>

Free electives (Note 4) | 6 Cr.

**Grand Total** | 125 Cr.

### Bachelor of Science in Business Administration

The Bachelor of Science in Business Administration degree program permits students to major in Business Administration.

Students who choose to major in Business Administration may select from four major options. They may specialize in one of three management concentrations—Financial Management, Human Resource Management, or Marketing Management—or they may follow a General Management concentration.

### Financial Management Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 310</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FIN 320</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FIN 330</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>FIN 470</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12 Cr.</strong></td>
</tr>
</tbody>
</table>

Select one non-core course from any two of the following areas:

1. Accounting, ACC
2. Economics (Note 2)
3. General Management GBUS
4. Human Resource Management, HRM
5. Marketing, MKT
6. Decision Science, DS

**Total** | **6 Cr.**

**Business Elective** | 3 Cr.

Free electives (Notes 3 and 4) | 12 Cr.

**Grand Total** | 125 Cr.

### Human Resource Management Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRM 310</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HRM 320</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HRM 330</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>HRM 470</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12 Cr.</strong></td>
</tr>
</tbody>
</table>
Select one non-core course from any two of the following areas:
1. Accounting, ACC
2. Economics (Note 2)
3. Finance, FIN
4. General Management, GBUS
5. Marketing, MKT
6. Decision Science, DS

Total 18 Cr.
Business Elective 3 Cr.
Free electives (Notes 3 and 4) 12 Cr.
Grand Total 125 Cr.

MARKETING MANAGEMENT CONCENTRATION
MKT 310
MKT 320
MKT 330
MKT 470

Total 12 Cr.

Select one non-core course from any two of the following areas:
1. Accounting, ACC
2. Economics (Note 2)
3. Finance, FIN
4. General Management, GBUS
5. Human Resource Management, HRM
6. Decision Science, DS

Total 6 Cr.
Business elective 3 Cr.
Free electives (Notes 3 and 4) 12 Cr.
Grand Total 125 Cr.

GENERAL MANAGEMENT CONCENTRATION
Students must select six non-core courses from the following four course areas, with no more than two courses per area.
1. Finance, FIN
2. Human Resource Management, HRM
3. Marketing, MKT
4. Management: GBUS 420, 430; DS 320

Total 18 Cr.
Business elective 3 Cr.
Free electives (Notes 3 and 4) 12 Cr.
Grand Total 125 Cr.

COURSE DESCRIPTIONS

ACCOUNTING

ACC 205. Financial Accounting.*
Cr. 3. A study of basic accounting theory and practice, the nature of assets and equity, income measurement, and financial statement preparation. Prerequisite: sophomore standing.

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.

Cr. 3. A study of generally accepted accounting principles as applied to asset measurement, liability valuation, and income determination. Prerequisite: ACC 206. FIN 305 should be taken concurrently.

ACC 311. Intermediate Financial Accounting II.
Cr. 3. The continuation of Accounting 310 with emphasis on generally accepted accounting principles as applied to stockholders’ equity and selected financial reporting topics. Prerequisites: ACC 310 and FIN 305.

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. Prerequisite: ACC 206.

Cr. 3. A study of the use, evaluation, and design of accounting information systems. Prerequisites: ACC 206 and CS 117.

Cr. 3. A study of the principles of federal income taxation with emphasis on provisions applicable to individuals and sole proprietorships. Prerequisite: ACC 205.

ACC 390 /490. Topics in Accounting.
Variable credit. A detailed examination of selected topics pertinent to the field of accounting to be offered when sufficient interest and staffing are available. Permission of the instructor or Dean required. Prerequisites will vary, depending on topics being covered.

ACC 410. Advanced Accounting.
Cr. 3. A study of generally accepted accounting principles as applied to partnerships, corporate consolidations, international operations, and governmental and not-for-profit entities. Prerequisite: ACC 311.

ACC 450. Federal Income Tax Accounting II.
Cr. 3. The continuation of ACC 350 with emphasis on federal tax provisions applicable to corporations, partnerships, estates, and gifts. Prerequisite: ACC 350.

ACC 470. Auditing.
Cr. 3. A study of the principles, procedures, standards, and ethical responsibilities involved in conducting financial, compliance, and operational audits. 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 faculty and the Dean. 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.

*Credit for Accounting 205 may be earned through the College Level Examination Program subject examination in Introductory Accounting.
DECISION SCIENCE


DS 305. Production-Operations Management. Cr. 3. A study of the various forms the production process takes and the corresponding requirements placed upon management. Topics discussed include inventory management, workforce management and production planning and control. It includes the use of management science techniques in the production decision-making process. Prerequisite: admission to upper division.

DS 310. Management Information Systems. Cr. 3. Study of the concepts and application of information systems to managerial decision making. It includes topics such as systems theory, data base concepts, data analysis and management, managerial interfaces and control. Prerequisites: Computer Science 117 and DS 305 (the latter may be taken concurrently).

DS 320. Management Science. Cr. 3. A study of fundamentals of management science techniques in decision-making processes from a problem solving perspective. Stresses problem formulation and solution using linear programming, network flows, queuing theory, dynamic programming, Markov processes and the like. Prerequisite: admission to upper division or permission of the Dean.

FINANCIAL MANAGEMENT

FIN 301. Principles of Finance. Cr. 3. A survey of the principles of finance as they apply to management and holders of the securities of the firm. Major topics include the financial environment, the time value of money, valuation of securities, capital budgeting, capital structure, financial statement analysis, and working capital management. Prerequisites: junior standing, ACC 205 and Economics 221 or 222. This course will not apply toward the Bachelor of Science in Accounting or the Bachelor of Science in Business Administration degrees.

FIN 305. Financial Management. Cr. 3. A survey of the field of financial management. Consideration is given to issues of importance to management and holders of the firm's securities. Major topics include the financial environment, working capital management, the time value of money, financial statement analysis, capital structure, valuation of securities, capital budgeting, assessment of risk, and international finance. Prerequisite: admission to upper division.

FIN 310. Financial Management Theory. Cr. 3. This course studies theories underlying current financial techniques and analyzes contributions of major authors to finance theory. It further studies applications of these theories to contemporary usages such as risk and return measurement, capital structure, capital budgeting, and dividend policy. Prerequisites: FIN 305 and its prerequisites.

FIN 320. 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. Prerequisite: FIN 305 and its prerequisites.

FIN 330. Management of Financial Institutions. Cr. 3. A study of the finance function and management techniques within financial institutions with major emphasis on commercial bank management. Areas covered include acquisition of funds, credit extension, liquidity management, and capital structure. Prerequisite: FIN 305 and its prerequisites.

FIN 470. Financial Strategy and Policy. 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. Prerequisites: FIN 305 and its prerequisites, FIN 310, plus senior standing.

GENERAL BUSINESS

GBUS 206. 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.

GBUS 290 /490. Topics in Business. Variable credit. A detailed examination of selected topics pertinent to the field of business to be offered when sufficient interest and staffing are available. Permission of the instructor or Dean required. Prerequisites will vary, depending on topics being covered.

GBUS 301. Principles of Management. Cr. 3. An introductory course in the practice and study of management which covers the various activities and approaches of the manager, the organization as the setting of management, and the skills and demands of the manager as an individual. Prerequisite: junior standing. This course will not apply toward the Bachelor of Science in Accounting or the Bachelor of Science in Business Administration degrees.

GBUS 306. 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.

#Credit for DS 205 may be earned through the College Level Examination Program subject examination in Statistics.

*Credit for FIN 301 may be earned through the College Level Examination Program subject examination in Principles of Finance.

**Credit for GBUS 301 may be earned through the College Level Examination Program subject examination in Principles of Management.
in the total organizational environment.
Prerequisites: Psychology 101 or 102 and
admission to upper division.

**GBUS 320. Small Business Management and Entrepreneurship.**
Cr. 3. The study and the applications of the essential managerial 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: GBUS 306, FIN 305 and MKT 305.

**GBUS 381. Cooperative Education in Business I.**
Cr. 2. The first cooperative education placement.
Prerequisite: approval of the CBA Cooperative Education Coordinator. S/U grade.

**GBUS 382. Cooperative Education in Business II.**
Cr. 2. The second cooperative education placement. Prerequisites: GBUS 381 and approval of the CBA Cooperative Education Coordinator. S/U grade.

**GBUS 383. Cooperative Education in Business III.**
Cr. 2. The third and subsequent cooperative education placements. Prerequisites: GBUS 382 and approval of the CBA Cooperative Education Coordinator. S/U grade. May be repeated.

**GBUS 410. Business Law.**
Cr. 3. A study of various areas of law that affect the commercial community. The scope of this course includes the law of contracts, sales, commercial paper, agency and property. This course emphasizes the provisions of the Uniform Commercial Code regarding sales contracts, transfer of titles, warranties, duties, liabilities, rights and the remedies of the parties.
Prerequisite: GBUS 206.

**GBUS 420. Small Business Institute.**
Cr. 3. Practicum in which the student participates as a member of a team of student consultants on actual small business cases referred by the Small Business Administration. Enrollment is limited by the number of cases referred by the SBA. All consultant activities are performed by the students, under general supervision of the faculty coordinator. Prerequisite: approval of the SBI Coordinator.

**GBUS 430. International Environment of Business.**
Cr. 3. A survey course dealing with opportunities and problems encountered in formulating global strategy and managing multinational operations. Focuses on financial, legal, and trade frameworks of international transactions and the major issues involved in managing international business operations.

**GBUS 460. Ethics in Business.**
Cr. 3. An analysis of the moral bases for ethical decisions and behavior's ethical aspects in business leadership. Contemporary business conduct is examined in an ethical context.
Prerequisite: senior standing.

**GBUS 470. Business Policy and Strategy.**
Cr. 3. Capstone business course. The development of the administrative perspective on management, including establishing and analyzing policy and strategy in various settings, as well as the relationships between administrative decision making and important social issues. Case method and computer simulation are used.
Prerequisites: senior standing and completion of the CBA core.

**GBUS 486. Internship in Administration.**
Cr. 1-3. A work experience in which students apply business concepts to situations encountered in actual organizational settings.
Prerequisites: senior standing and approval of the CBA Internship Coordinator. S/U grade.

**GBUS 495. Independent Study in Business Administration.**
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.

**HUMAN RESOURCE MANAGEMENT**

**HRM 310. Organizational Change and Development.**
Cr. 3. A study of organizational change and development, with emphasis on concepts such as environment, structure, technology, and culture as related to organizational effectiveness. It includes current theoretical bases and implications for management practice.
Prerequisite: GBUS 306.

Cr. 3. An introduction to the areas of activity common to the field of personnel management, including human resource planning, job analysis, recruitment, selection, orientation and career development. Continued in HRM 330.
Prerequisite: GBUS 306 (may be taken concurrently).

Cr. 3. A continuation of the coverage of the areas of activity common to the field of personnel management, including compensation, health and safety, performance appraisal and discipline, training and development, and labor-management relations. Prerequisite: GBUS 306 (may be taken concurrently).

**HRM 460. Managerial Interpersonal Competencies.**
Cr. 3. A practice-oriented course allowing students opportunities to test and develop interpersonal competencies in managerial roles and settings. Prerequisites: GBUS 306 and senior standing.

**HRM 470. Human Resource Management.**
Cr. 3. An integrating course primarily for seniors with a concentration in Human Resource Management. Case studies and other activities are used to integrate theoretical bases (HRM 310) with the various practices (HRM 320 and 330). Prerequisites: GBUS 306 and two of the following courses: HRM 310, HRM 320, HRM 330, and senior standing.
MARKETING MANAGEMENT

MKT 301. Principles of Marketing.
Cr. 3. An introductory course surveying the marketing of goods and services as viewed through the role of the marketing manager. Emphasis is on the major elements of the marketing mix: price, promotion, products and distribution. Prerequisite: junior standing. This course will not apply toward the Bachelor of Science in Accounting or the Bachelor of Science in Business Administration degrees.

MKT 305. Marketing Management.
Cr. 3. Emphasis is placed on the application of marketing concepts, theories and principles which relate to product policy, promotional mix decisions, distribution and logistical planning and pricing. The international business environment, including social, cultural, economic, political-legal, competitive and technological variables, is studied and compared with American markets. The areas of buyer analysis, the utilization of marketing information systems, and market planning and analysis are also stressed. Prerequisite: admission to upper division.

MKT 310. Marketing Research.
Cr. 3. A course designed to introduce the marketing student to the areas of marketing research and marketing information systems. Coverage of marketing information system design and the marketing research process, including research design and sources of information, data collection methods, sampling procedures, data analysis and interpretation, and the formal research report. Prerequisite: MKT 305 and its prerequisites.

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 305 and its prerequisites.

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. Prerequisites: MKT 305 and its prerequisites.

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 301 or MKT 305.

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 legal environment of advertising and the role of the different service institutions, such as advertising agencies, also are covered. Prerequisites: junior standing and MKT 301 or MKT 305.

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. Prerequisite: MKT 305 and its prerequisites; two of the following: MKT 310, 320, 330; plus senior standing.

*Credit for MKT 301 may be earned through the College Level Examination Program subject examination in Principles of Marketing.
COLLEGE OF ENGINEERING

Stuart G. Walesh, P.E., Ph.D., Dean

Educational Objectives and Academic Program. The College of Engineering is a demanding, exclusively undergraduate engineering college operating in the Christian tradition of Valparaiso University; led by a readily accessible faculty having a rich and varied academic and professional practice background; and offering a comprehensive curriculum that stresses the laboratory and requires a professional practice experience.

Bachelors degrees may be earned in civil, computer, electrical, and mechanical engineering. The curriculum is comprehensive in that about one-fourth of the credits are earned in mathematics and basic sciences, one-fourth in engineering sciences, one-fourth in engineering analysis and design, and one-fourth in humanities and social sciences. All engineering students fully participate in the University’s Freshman Studies program taking the freshman seminar and courses in theology, communication, and history.

Approximately forty percent of the credits required for graduation in engineering are taken in one or more of the other colleges at the University. The typical engineering student completes courses in ten different departments.

Faculty supervised laboratory experience gives the student first-hand observation of physical phenomena, opportunity to compare theoretical prediction to actual occurrences, experience in data collection and analysis, report writing ability, equipment and instrument operating skill, and an introduction to teamwork. All engineering students participate in at least one of two available professional practice experiences. The two experiences, each of which is described elsewhere, are the Independent Study Project and Cooperative Education.

The first three semesters of the College’s program contain identical courses, with few exceptions, and are designed to provide students with a
general background in mathematics, the physical sciences and engineering sciences. The last five semesters provide breadth and depth of study in a chosen field of specialization. Graduates are prepared for direct entry in the practice of engineering or for graduate school.

The College of Engineering, encourages its students to be involved in all phases of University life. Social, moral and ethical issues are given a place of high importance. This philosophy is consistent with the University’s objective of offering students knowledge plus values. This objective can be achieved by full participation in the academic, social, cultural and spiritual life of a Christian campus.

**History.** As early as 1873 civil engineering was taught at Valparaiso University. 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 310 acre campus, contains faculty offices, classrooms and laboratories of the College of Engineering.

The optional cooperative education program was initiated in 1983 and the first group of cooperative education students graduated in 1986. The first Computer Engineering degrees were also awarded in 1986.

**Location.** The University’s location provides good opportunities for contact with industrial and consulting firms and government agencies. The campus is fifty miles southeast of Chicago and is located in the Calumet and St. Joseph Valley industrial region. This location allows students and faculty to visit engineering organizations and to participate in numerous professional meetings sponsored by engineering societies in the area.

**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 three engineering departments. Department chairs are responsible for leadership as well as for advisement of students in departmental programs. The General Engineering Director and the Coordinator of Cooperative Engineering Education report to the Dean.

**Independent Study Project.** All students, with the exception of some cooperative education students, are required to complete a major independent study project under the supervision of a faculty adviser. These projects focus on the investigation of engineering problems and emphasize oral and written communication skills. Many of the projects are both suggested and sponsored by industrial and consulting firms and government agencies. Special research interests of the faculty, or of the students, are also considered as sources of project topics.

**Computer Facilities.** Engineering students use computing, word processing and computer-aided drafting and design (CADD) facilities and work stations. Some of these facilities are housed in the Academic and Computer-Communications Center (ACCC) adjacent to the Gellersen Engineering and Mathematics Center. Other computer and computer related facilities are strategically located in staffed clusters on the campus. A Data General time-shared computer provides a major resource for engineering students and is accessible through terminals located at various points on the campus as well as through student-owned microcomputers via telephone links. All engineering faculty
have microcomputers in their Gellersen Center offices. Numerous other microcomputers are available throughout the Gellersen Center where they are used for a variety of engineering purposes such as to data acquisition, data management, data analysis, graphics, system simulation, finite element analysis, computer-aided design, computer-aided manufacturing and fabrication, and word processing.

Students will find it beneficial to own a microcomputer when undertaking an engineering major. An IBM-compatible microcomputer is recommended. All students should have or quickly develop basic keyboard skills. Professionally oriented microcomputers and concomitant software are part of the Electrical Engineering and Computer Engineering programs beginning with the second semester of the sophomore year. Class assignments involve extensive use of computers on a daily basis. Therefore, Electrical Engineering and Computer Engineering majors are urged to acquire a microcomputer for use in their place of residence. Details regarding the type of microcomputer recommended by the College of Engineering should be obtained from the office of the Dean of Engineering.

Engineering Supply Store. A student-operated Engineering Supply Store is housed in the College of Engineering to provide students with convenient access to low cost specialized engineering supplies. Under the guidance of faculty advisers, student managers staff the store and gain useful business experience.

Student Professional Organizations. To heighten student interest in the profession of engineering and in activities of the student body of the College of Engineering, 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 one of the student chapters of the related professional societies. The American Society of Civil Engineers, the Computer Engineering Society, the Institute of Electrical and Electronic Engineers, the American Society of Mechanical Engineers, and the Society of Women Engineers all have active student chapters on campus. 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.

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. The Engineer-in-Training (EIT) examination is held for students in their senior year each spring at Valparaiso University.

Placement. The Office of Career Planning and Placement 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 of 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.

Accreditation. The Bachelor of Science degree programs Civil Engineering, Electrical Engineering and Mechanical Engineering are accredited by the Accreditation Board for Engineering and Technology. The newer Computer Engineering and Cooperative Education programs were submitted for review by ABET inspection during academic year 1989-90.

SPECIAL PROGRAMS OF THE COLLEGE OF ENGINEERING

Cooperative Education. Cooperative education 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 Co-op 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 throughout the United States. The initial work assignment normally starts during the summer after the sophomore year. Academic credit may be earned for each work period. Students typically complete four or five summer and semester work sessions with the same employer. The Co-op Program enhances the graduating engineer’s placement status and some employers count the time served as a Co-op student toward fringe benefits provided to the employees.

**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 nuclear, electromechanical, bio-medical or chemical engineering or medicine can enrich their engineering programs by careful selection of technical and free electives. These programs involve replacing technical and free electives with courses from other disciplines. Each student plans a program of studies in consultation with a faculty adviser and must secure approval of the Dean of the College. Upon graduation the student receives a Bachelor of Science degree in Civil, Computer, Electrical or Mechanical Engineering.

Students who have an interest in nuclear engineering may take advanced courses in nuclear science offered by the Department of Physics. The Department of Physics has excellent facilities and maintains a modern sub-critical nuclear reactor.

**Manufacturing Management Minor.** A minor in Manufacturing Management is offered jointly by the College of Engineering and the College of Business Administration (see page 173 for requirements).

**Student Advisement.** Each first-year engineering student is assigned an academic adviser. This adviser assists the student with program planning through the first three semesters of study. Upon selection of a specific engineering major, a new adviser is provided for that degree area.

**Extended Orientation Program.** Initiated in 1986, the optional extended orientation program was designed primarily for first year engineering students as an extension of the intensive, four day freshmen orientation which precedes the beginning of classes in the fall semester. The purposes of the program, now known as A+ (Academics Plus), are to assist students in making the transition from high school to college, to help students confirm engineering as their preferred course of study, and to select a major in engineering. Typical events include presentations on campus computers, cooperative education, and the various engineering majors and tours of local businesses employing engineers. Social events include a fall picnic and a spring engineering fair.

**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 168 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 Deans.

**Majors and Minors.** A student may earn a major or minor in other colleges of the university by satisfying course and credit requirements specified for a major or minor provided that no more than seven hours of specific courses required for the engineering program are used in fulfilling the requirements of the major or minor. The student will take more courses than are required for an engineering degree. The major or minor will be noted on the student’s official academic record.

**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. The Christ College courses provide an enriched program in the humanities and satisfy general education requirements for the engineering
program. Academic advisers are assigned for both the College of Engineering and Christ College.

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 11-13 of this catalog, engineering students may also participate in international cooperative education.

THE ENGINEERING PROGRAMS

Mathematics Placement. All students entering the engineering program are required to take the mathematics placement examination, unless they have prior college credit in calculus or have passed the Advanced Placement Examination. Admitted students may request to have their parents proctor the mathematics placement examination at home prior to the fall semester. Those who do not take the examination in advance must take the exam during fall registration.

There are two acceptable paths which engineering students may take in fulfilling mathematics requirement. One path provides additional instruction in functions and trigonometry; this path consists of Mathematics 131, 132, 233, and 234. The second path includes Mathematics 151, 152, 253, and 234. Both sequences of courses provide proper preparation for the engineering curriculum and satisfy graduation requirements for the College of Engineering.

Admission Requirements. The requirements for admission of first year students to the College are listed on pages 178-180 of this catalog. Academic work taken at other institutions is evaluated for advanced standing granted by the Registrar. The appropriate departmental 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. The transfer student may apply a maximum of three credit hours in theology from his or her advanced standing to the theology requirement. An engineering transfer student with more than 68 credit hours of advanced standing need only complete one theology course (3 Cr.) at Valparaiso University.

Progression Requirements. Engineering students typically declare an engineering major (civil, computer, electrical or mechanical engineering) during the third semester of their studies with the major being effective with the beginning of the fourth semester. Admission to a major requires meeting all of the following academic standards prior to the start of a semester or summer session in which a student takes any course in their major:

1. A cumulative grade point average (GPA) of 2.00 for all required courses.
2. A cumulative GPA of 2.00 in General Engineering and applicable mathematics and chemistry courses.
3. A cumulative GPA of 2.00 in General Education courses.

Other Academic Policies. University academic policies are described on pages 184-189 of this general catalog. The College of Engineering has established additional academic policies and procedures consistent with University Policies and tailored to the needs of the engineering program. Policy and procedure statements regarding taking courses on an S/U basis, withdrawing from courses, academic probation, and academic suspension are available in the Dean's office.

Graduation Requirements. In addition to the requirements set forth on pages 189-190 of this catalog, the student must have:

1. A cumulative GPA of 2.00 in General Engineering courses and required mathematics and chemistry courses. Cooperative education courses are included as are those non-engineering courses (e.g., physics courses) used as technical electives.
2. A cumulative GPA of 2.00 in the engineering major. Courses to be included are those identified with the departmental prefix (CE, ECE, ME) corresponding to the major.
3. A cumulative GPA of 2.00 in General Education courses applicable to the desired degree.

The student must also complete one of the prescribed engineering curricula. The curriculum for each degree is composed of a group of courses common to the degree program offered by the College and a group of courses that make up the specialized studies in a selected program. Each program requires a total of 137 credit hours except Civil Engineering which requires 138 credit hours. An exception is made for those taking the Mathematics 151, 152, 253 and 234 sequence, who graduate with 136-137 credit hours. The common courses required for all programs are listed below and the additional courses required for each specific program are found in the departmental listings.

In addition to meeting all other requirements, courses must be selected to satisfy minimums established by the Accreditation Board for Engineering and Technology. These minimums are: 32 credit hours of mathematics and basic sciences, 32 credit hours of engineering sciences, 16 credit hours of engineering design, and 16 credit hours of humanities and social sciences.

CORE COURSES COMMON TO ALL UNDERGRADUATE ENGINEERING PROGRAMS

GE 102 Algorithms for Computing 3 Cr.
GE 104 Engineering Graphics 3 Cr.
GE 107 Energy Systems 3 Cr.
GE 109 Mechanics-Statics 3 Cr.
GE 205 Electricity and Magnetism 4 Cr.
GE 209 Mechanics-Dynamics 3 Cr.
GE 307 Engineering Science 4 Cr.
Chemistry 115 General Chemistry 4 Cr.
Chemistry 116 General Chemistry 3 Cr.
Freshman Seminar 100 3 Cr.
English 100 Exposition and Argument 3 Cr.
English 200 Literary Studies 4 Cr.
History 100 3 Cr.
Western Thought and Society 3 Cr.
Theology 100 3 Cr.
Introductory Christian Theology 3 Cr.
Physical Education 101-105 1 Cr.
Mathematics 131, 132, 233 14 Cr. (or 151, 152, 253) (13 Cr.)
Calculus Mathematics 234 4 Cr.
Differential Equations and Linear Algebra
Theology Elective, Level II or III 3 Cr.
Humanities or Social Science Elective** 3 Cr.
Total 70 or 71 Cr.

SUGGESTED LOWER DIVISION SEQUENCE

To build a broad educational foundation, all students take common courses for the first three semesters regardless of which major they select. The most common sequence is shown below. Some students will take Chemistry 115 or 116 their freshman year and delay GE 107 and History 100 until their sophomore year.

Students selecting a Computer Engineering major or a Computer Science minor will take ECE 121 and ECE 221 in place of GE 107 and the Theology elective which are usually delayed until their junior year.

At the beginning of the fourth semester the student generally begins a program leading to one of the four professional degrees. For those who wish to defer their choice until the fifth semester, special schedules are arranged for the fourth semester to provide continuation with minimum loss of progress. Suggested sequences leading to the various degrees are found in the departmental offerings.

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td></td>
</tr>
<tr>
<td>Mathematics 131</td>
<td>Mathematics 132</td>
</tr>
<tr>
<td>(151)</td>
<td>(152)</td>
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<tr>
<td>GE 102</td>
<td>GE 107</td>
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<td>GE 104</td>
<td>GE 109</td>
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<tr>
<td>Fr. Seminar 100</td>
<td>English 100</td>
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<tr>
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<td>History 100</td>
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<tr>
<td>PE 101-105</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 233</td>
<td></td>
</tr>
<tr>
<td>(253)</td>
<td>GE 205</td>
</tr>
<tr>
<td>Chemistry 115</td>
<td>GE 209</td>
</tr>
<tr>
<td>Theology Elective</td>
<td>Total 3</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
</tr>
</tbody>
</table>

GENERAL ENGINEERING***

Cr. 3. A fundamental course in algorithmic processes. Students design algorithms and write Pascal programs to implement those algorithms. Elementary applications in numerical analysis and data processing are studied. Previous experience with computers may be helpful but is not necessary. (Students cannot receive credit for both GE 102 and CS 157.)

GE 104. Engineering Graphics. 2+3, Cr. 3. A course in the theory and techniques of engineering graphics. Emphasis is

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**Advisers have a list of approved courses.

***See page 45 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.
Cr. 3. A basic course in energy and related principles of physics. The first law of thermodynamics is emphasized through the use of energy balances. The second law of thermodynamics is introduced. Properties of gases and vapors are studied using tables, charts, and the perfect gas equation. Heat power systems are analyzed. Prerequisite: Mathematics 131 or 151.

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 areas, study of trusses, frames and machines, friction. Prerequisite: Mathematics 131 or 151.

GE 205. Electricity and Magnetism.
3±3 Cr. 4. A study of the definitions and properties of electric and magnetic force fields. The application of Kirchhoff’s Laws to elementary DC and AC circuits is emphasized. Prerequisite: Mathematics 131 or 151.

Cr. 3. A study of the motion of a particle and systems of particles in rectilinear, curvilinear and polar coordinates. The course includes motion of a rigid body in translation, rotation and general plane motion; forces involved in moving systems; use of work and energy relations; impulse and momentum. Prerequisites: Mathematics 132 or 152 and GE 109.

Cr. 2. The theory of economic decision-making based on comparisons of worths of alternative courses of action with respect to cost. It includes time-value mechanics and depreciation methods. Prerequisite: junior standing in the College.

GE 481. Cooperative Education I.
Cr. 2. The application of theoretical and experimental engineering concepts in 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 a final report in approved form. Prerequisites: approval of the Cooperative Engineering Education Coordinator and the Department.

GE 482. Cooperative Education II.
Cr. 2. A continuation of GE 481. This course requires a satisfactory employer evaluation and a final report in approved form. An oral presentation before faculty and peers is required if credit is to be waived for the Independent Study Project.

GE 483. Cooperative Education III.
Cr. 1. Application of the concepts of engineering in a business, consulting, industrial or government environment. It requires a final report in approved form. May be repeated for up to three credit hours. Prerequisites: approval of the Cooperative Engineering Education Coordinator and the Department.

GE 495. Senior Problem.
Variable Cr. Selected students are permitted to work out a special problem in their particular field 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 approved form. Open only to students with acceptable senior standing upon permission of the faculty and approval of the Dean of the College.

Civil Engineering

Professors Schueler, Seeley (Chair), Spring; Associate Professor Walesh; Assistant Professor Tarhini.

"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

Civil engineers measure and map the earth’s surface and utilize these maps to locate their projects. They design and supervise the construction of bridges, tunnels, buildings, dams and aqueducts. They build supporting foundations for these and other structures. Civil engineers plan, design, construct and maintain highways, railroads, canals and airports. They regulate rivers and control floods; build docks, pipelines, sea walls; develop harbors; design and build plants and systems to bring pure water to homes and factories; design and build systems for sewage and refuse disposal; drain swamps and irrigate arid areas. Civil engineering is truly a people-serving profession.

Civil Engineering Laboratories. The Civil Engineering program at Valparaiso University is arranged to maintain proper balance between laboratory and classroom instruction. Over 5000 square
feet of modern, well-equipped laboratory space is available in five laboratories for materials testing, fluid mechanics, concrete and soil mechanics, environmental engineering and experimental stress analysis. In addition, field exercises in surveying are conducted outdoors except in the case of unusually inclement weather. The laboratory experience is vital to the interpretation and application of classroom theory.

Graduation Requirements. In addition to the courses common to each degree program listed on page 154, the following courses are required to earn the Bachelor of Science in Civil Engineering degree.

CE 201 Surveying .................................................. 3 Cr.
CE 215 Mechanics of Materials .................................. 3 Cr.
CE 301 Statistical Applications in CE ......................... 3 Cr.
CE 312 Materials Engineering ................................. 3 Cr.
CE 315 Structural Analysis I ................................... 4 Cr.
CE 316 Structural Design I ...................................... 4 Cr.
CE 320 Soil Mechanics ........................................... 3 Cr.
CE 322 Soil & Foundation Engineering ......................... 3 Cr.
CE 332 Hydrology .................................................. 3 Cr.
CE 334 Fluid Mechanics .......................................... 3 Cr.
CE 353 Transportation ............................................ 3 Cr.
CE 415 Structural Analysis II ................................... 3 Cr.
CE 417 Structural Design II ..................................... 3 Cr.
CE 436 Water Resources Engineering .......................... 3 Cr.
CE 444 Engineering Management ............................... 3 Cr.
CE 464 Environmental Engineering I .......................... 3 Cr.
CE 465 Environmental Engineering II ......................... 3 Cr.
CE 495 Independent Study Project I ............................ 2 Cr.
CE 496 Independent Study Project II ........................... 2 Cr.
Economics 221 or 222 ............................................. 3 Cr.
Principles of Economics ......................................... 2 Cr.
Communication 140 ............................................... 2 Cr.
Public Speaking .................................................... 2 Cr.
Technical Electives .............................................. 6 Cr.
Total .................................................. 68 Cr.
Total credits required for graduation = 138

Technical Electives. The technical elective requirement may be met with Civil Engineering electives or courses from biology, chemistry, mathematics, computer science, physics or courses in other engineering departments. Courses used to fulfill this requirement must be upper division courses and must be approved by the Chair of the Civil Engineering Department.

Cooperative Education. Students may petition the Department to substitute, on a credit for credit basis, Cooperative Education credits for Independent Study Project and/or Technical Elective credits provided they satisfy the requirements specified by the department (see the Chair for specifics). A faculty advisor will be assigned to assist each co-op student to develop a program to meet the departmental requirements.

Suggested Course Program. This suggested schedule of courses represents an orderly sequence for meeting degree requirements.

Sophomore Year, Fourth Semester.
Mathematics 234 .................................................... 4 Cr.
CE 201# .......................................................... 3 Cr.
CE 215 .......................................................... 3 Cr.
GE 307 .......................................................... 4 Cr.
Chemistry 116 ..................................................... 3 Cr.
Total .................................................. 17 Cr.

Junior Year
Fifth Semester Cr. Sixth Semester Cr.
CE 301 .......................................................... 3 CE 315 .......................................................... 4
CE 312# .......................................................... 3 CE 316# .......................................................... 4
CE 320# .......................................................... 3 CE 322 .......................................................... 3
CE 332 .......................................................... 3 CE 334# .......................................................... 3
CE 353 .......................................................... 3 English 200 .................................................. 4
Communication 140 .............................................. 2 Total .................................................. 18
Principles of Economics ......................................... 2 Cr.
Public Speaking .................................................... 2 Cr.
Technical Electives .............................................. 6 Cr.
Total .................................................. 68 Cr.

Senior Year
Seventh Semester Cr. Eighth Semester Cr.
CE 415 .......................................................... 3 CE 436 .......................................................... 3
CE 417 .......................................................... 3 CE 465 .......................................................... 3
CE 444 .......................................................... 3 CE 496 .......................................................... 2
CE 464# .......................................................... 3 Technical Elective ........................................ 3
CE 495 .......................................................... 3 Humanities or .............................................. 2
Technical Elective .............................................. 3 Social Science .............................................. 3
Total .................................................. 17 Economics 221 or 222 ........................................ 3
Principles of Economics ......................................... 2 Cr.
Public Speaking .................................................... 2 Cr.
Technical Electives .............................................. 6 Cr.
Total .................................................. 68 Cr.

CIVIL ENGINEERING

CE 201. Surveying. Cr. 2 + 3, Cr. 3. A study of the science and art of absolute and relative spatial measurements for engineering purposes. Special emphasis is placed on the theory of errors, use of surveying instruments, and field practice in transit-tape traversing, leveling and route surveying. Prerequisite: Mathematics 131 or 151.


CE 301. Statistical Applications in Civil Engineering. Cr. 3. An introduction to the planned procurement, property description, analysis, and

#Courses with laboratory or 3-hour design period.
*See page 45 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.

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presentation of engineering data. A study of the continuous and discrete distributions most commonly encountered in engineering quality control, experimentation, and design. Emphasis is given to the Central Limit Theorem and its applicability in many areas of Civil Engineering, to the estimation of the sample size required to achieve desired levels of confidence in the conclusions reached by the engineer, to probabilistic methods used in experimental design and quality control, and to a variety of applications of probabilistic theories in engineering practice and research. Prerequisite: Mathematics 132 or 152.

**CE 312. Materials Engineering.**
2+3, Cr. 3. A study of the mechanical properties of engineering materials and the relationship between their behavior and the design of structural and machine components. The macro- and micro-structure of materials are studied and the elementary concepts of failure including fracture, yielding and elastic instability are presented along with the classic theories of failure. Experimental investigations involving static, dynamic, and fatigue tests are conducted in the laboratory. Prerequisite: CE 215 (may be taken concurrently).

**CE 315. Structural Analysis I.**
Cr. 4. Analytical and graphical methods for the determination of axial, flexural, shearing and torsional stresses and their resulting deflections. Common structural forms of both determinate and indeterminate types, such as bridge and roof trusses, cable structures, beams and frames are treated. Influence line theory and energy methods are introduced. Prerequisite: CE 215.

**CE 316. Structural Design I.**
3+3, Cr. 4. (4 cr. Design) The design of steel structural system components using elastic and plastic methods. Design of bolted and welded connections. Use of AISC and AASHTO codes in the design of steel buildings, plate girders and bridges. Field trips and a design project are required. Prerequisite: CE 315 (may be taken concurrently).

**CE 320. Soil Mechanics.**
2+3, Cr. 3. (1 cr. Design) The study of index, structural, mechanical and hydraulic properties of soils. Soil compaction and stabilization. Theoretical soil mechanics, including shear strength, pressure distribution, consolidation, active and passive states of plastic equilibrium and flow-through permeable media. Elementary principles of laboratory identification and testing of soils. Fundamental properties of plain concrete and its components, including batch design. Prerequisites: CE 215, 312 and 332 (may be taken concurrently).

**CE 322. Soil and Foundation Engineering.**
Cr. 3. (2 cr. Design) A continuation of CE 320. Further aspects of theoretical soil mechanics including slope stability, lateral earth pressure and retaining walls, vertical pressure distribution and settlement, bearing capacity analysis and load capacity of individual piles and pile groups. Proportioning of shallow and deep foundations. Subsoil investigation techniques. Prerequisite: CE 320.

**CE 332. Hydrology.**
Cr. 3. Introduction to surface and ground water hydrology: hydrologic cycle, precipitation, evaporation, infiltration, transpiration, groundwater flow, well hydraulics, run-off, rainfall-runoff relationships, uniform flow in open channels, streamflow measurements, hydrologic routing, hydrologic modeling, hydrologic probability, and applications. Prerequisite: GE 107 and Mathematics 233 or 253.

**CE 334. Fluid Mechanics.**
2+3, Cr. 3. 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 similitude. Applications include pumps, flow in conduits, lift and drag, pipe networks, and hydraulic model studies. Prerequisites: GE 107, GE 209, and Mathematics 233 or 253.

**CE 353. Transportation.**
Cr. 3. (1 cr. Design) Study of the geometric design of transportation routes. Transportation planning. Topics include a survey of the application of engineering principles on the location, design and construction of water, rail and air transport, pipelines, belt conveyors and systems for the future; a study of public transportation modes. Prerequisites: GE 209 and CE 201.

**CE 415. Structural Analysis II.**
Cr. 3. Analysis of statically indeterminate structures, using the approximate method, classical methods and contemporary methods. These include moment distribution, slope deflection, matrix methods, elastic center column analogy and digital computer approaches. Prerequisites: GE 102 and 315.

**CE 417. Structural Design II.**
Cr. 3. (3 cr. Design) The analysis and design of reinforced concrete structural system components using the latest ACI strength design methods. Design includes flexural members, compression members, slabs and footings. Field trips and a design project are required. Prerequisites: CE 315 and CE 415 (may be taken concurrently).

**CE 418. Structural Design III.**
2+2, Cr. 3. (2 cr. Design) The analysis and design of timber and masonry structural system components. The use of building codes is stressed. Design projects may be required. Prerequisite: CE 315 (may be taken concurrently).

**CE 436. Water Resources Engineering.**
Cr. 3. (1 cr. design) 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.

Cr. 3. Application of the concepts of engineering economy to construction projects, using the case study approach. Investigation of construction management aspects, i.e., CPM, specifications, contracts and forms of organization of an engineering firm. Selected discussions relating to professionalism and professional ethics. Prerequisite: senior standing in the College of Engineering.

CE 457. Traffic Engineering. 
Cr. 3. (1 cr. Design) Fundamental traits and behavior of the road user. Vehicle characteristics, traffic speeds, volumes, stream flow; intersection operations; signing and marking; accidents and safety. Taught in alternate years. Prerequisite: CE 353 or consent of instructor.

CE 464. Environmental Engineering I. 
2+3, Cr. 3. (1 cr. Design) Overview of the relationships between society and environmental quality. The impact of pollution on nature's resources. Topics considered in depth are: water supply and distribution; wastewater collection and disposal. The laboratory addresses chemical and bacteriological principles and analysis of water and wastewater. Application of laboratory results to treatment process control. Field trips are required. Prerequisite: CE 332 or ME 373.

CE 465. Environmental Engineering II. 
2+2, Cr. 3. (3 cr. Design) The understanding of environmental pollution and the need for mechanisms of control. In-depth study of the physical, chemical, and biological principles involved in water and wastewater treatment. Engineering process design of water and wastewater treatment facilities. Field trips are required. Prerequisite: CE 464 or consent of instructor.

CE 466. Air Pollution / Toxic Waste. 
2+2, Cr. 3. History of the air pollution and toxic waste problems. A study of the types of pollutants and the effects on the environment. Air and water quality criteria, standards, and regulations. Air pollution control measures. Toxic waste detection, investigation, monitoring, and remediation. Field trips are required. Taught in alternate years. Prerequisite: CE 332 (may be taken concurrently).

CE 495. Independent Study Project I. 
1+3, Cr. 2. (1 cr. Design) The application of theoretical and experimental engineering concepts and mathematical principles in the analysis, design or investigation of an engineering system. Individual or group problems in the field of Civil Engineering are to be selected by the student with the approval of the Department of Civil Engineering faculty. Prerequisite: senior standing in Civil Engineering.

CE 496. Independent Study Project II. 
1+3, Cr. 2. (1 cr. Design) A continuation of the project selected in CE 495.
Electrical and Computer Engineering

Professors Gelopulos, Luecke (Chair), Vocke; Associate Professors Bohlmann, Goodman, Hart, Kraft; Assistant Professor Crosmer; Visiting Assistant Professor Kempf.

The Department of Electrical and Computer Engineering offers two degree programs: Computer Engineering and Electrical Engineering.

The Electrical Engineering program is designed to provide a variety of career opportunities in industries as diverse as aerospace, computers, manufacturing, communications and electrical power. It is based on required work in circuit theory, analog and digital electronics, linear system theory, structure of computers, electromagnetic field theory and electromechanical energy conversion. Elective courses allow emphasis in computers, communication, industrial power and control systems.

The Computer Engineering program combines study in basic engineering principles, computer science, and electric and electronic circuits and systems. Graduates from this program are prepared for career opportunities in fields where the hardware aspects of computer design and on-line control applications are of primary importance. With the continuing emergence of the digital computer as a central component in engineered systems, opportunities will continue to develop in industries not historically identified with the manufacture of computers.

Each program contains a significant laboratory component. Emphasis is placed on developing skills in the design, construction and testing of circuits and systems. The laboratory course sequence is correlated with lecture courses which are normally taken concurrently. The following laboratory facilities are supported in the department. The electric circuits laboratory supports intermediate level work in digital and analog systems. Rotating machines, power electronics, power systems, and controls are studied in the power systems laboratory. The communication laboratory is used for studies in communication electronics and microwave communication systems. The computer laboratories contain computers, development systems and peripherals which are separate from other campus computer facilities. Senior projects use the facilities of the Department as required.

COMPUTER ENGINEERING Administration. The Computer Engineering Program is administered by the inter-departmental Computer Engineering Committee appointed by the Vice President for Academic Affairs. Committee membership consists of three faculty from the Mathematics and Computer Science Department in the College of Arts and Sciences and three faculty from the Electrical and Computer Engineering Department in the College of Engineering. The committee addresses all curriculum and advising matters for the Computer Engineering Program.

Graduation Requirements. In addition to the courses common to each degree program listed on page 154, the following courses are required to earn the degree of Bachelor of Science in Computer Engineering.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 121</td>
<td>Algorithms &amp; Pascal Programming II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 211 Laboratory I</td>
<td></td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 220 Digital System Design</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 221 Data Structures</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 222</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 260 Linear Circuits</td>
<td></td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ECE 316 Computer Laboratory II</td>
<td></td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 317 Computer Laboratory III</td>
<td></td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 323</td>
<td>Organization of Programming Languages</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 324</td>
<td>Architecture of Computer Systems</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ECE 340 Electronics</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 360 Linear System Theory I</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 418 Computer Laboratory IV</td>
<td></td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 495 Independent Study Project I</td>
<td></td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE 496 Independent Study Project II</td>
<td></td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Mathematics 240 Statistical Analysis</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Mathematics 360</td>
<td></td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Discrete Mathematical Structures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Electrical Engineering

Graduation Requirements. In addition to the courses common to each degree program listed on page 154, the following courses are required to earn the degree of Bachelor of Science in Electrical Engineering.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 211 Laboratory I</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 220 Digital System Design</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 260 Linear Circuits</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>ECE 312 Laboratory II</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ECE 313 Electrical Laboratory III</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE 321 Computer Organization</td>
<td>3 Cr.</td>
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<tr>
<td>ECE 340 Electronics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 341 Analog System Design</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 350 Probability and Stochastic Processes</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE 360 Linear System Theory I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 361 Linear System Theory II</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 370 Energy Conversion</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 430 Electromagnetic Field Theory</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 451 Communication Theory</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE 495 Independent Study Project I</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE 496 Independent Study Project II</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ECE Design Electives</td>
<td>12 Cr.</td>
</tr>
<tr>
<td>GE 407 Engineering Economics</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Engineering Science Elective</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Free Elective</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Social Analysis Elective*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66 Cr.</strong></td>
</tr>
</tbody>
</table>

Total credits required for graduation = 137

Program Areas. The Electrical Engineering program has elective courses which allow a student to emphasize electrical communications, industrial power and control, or engineering applications of computers. Specific recommendations regarding the selection of electives are available from the Department and should be made in consultation with a departmental academic adviser. By taking additional courses beyond the minimum required for the degree, a minor may be earned. Because of prerequisite requirements, planning for a minor should be done during the freshman year.

Technical Electives. The technical elective requirement may be met with additional Electrical and Computer Engineering electives or with courses from the following departments: Civil Engineering, Mechanical Engineering, Biology, Chemistry, Mathematics and Computer Science or Physics. Courses used to fulfill this requirement must be approved by the academic advisor.

Engineering Science Elective. The engineering science elective requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 481</td>
<td>3</td>
</tr>
<tr>
<td>GE 484</td>
<td>3</td>
</tr>
<tr>
<td>GE 485</td>
<td>3</td>
</tr>
<tr>
<td>GE 487</td>
<td>2</td>
</tr>
<tr>
<td>GE 496</td>
<td>2</td>
</tr>
<tr>
<td>Engineering Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Free Elective</td>
<td>4</td>
</tr>
<tr>
<td>Social Analysis Elective*</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

Defined on page 34

**Total credits required for graduation = 137**
may be met by taking one of the following courses: CE 215, CE 334, ME 362, ME 370, or ME 373.

Cooperative Education. Students may request the Department to substitute up to three credits of GE 481 through GE 484 for technical elective credit hours. Other cooperative education credits may be used as free electives. A faculty adviser will monitor the academic progress of each student's cooperative education experience to meet departmental requirements.

Suggested Course Program. This suggested schedule of courses represents an orderly sequence for meeting degree requirements. For students with special situations, alternate suggested courses may be arranged in consultation with the departmental academic adviser.

Sophomore Year, Fourth Semester
Mathematics 234 ........................................ 4 Cr.
Chemistry 116 ............................................. 3 Cr.
Social Analysis Elective ................................ 3 Cr.
ECE 211 .................................................... 1 Cr.
ECE 220 .................................................... 3 Cr.
ECE 260 ................................................. 4 Cr.
Total ...................................................... 18 Cr.

Junior Year
Fifth Semester  ........................................... Cr.
GE 307 .................................................... 4 Cr.
ECE 312 .................................................... 3 Cr.
ECE 340 .................................................... 3 Cr.
ECE 360 .................................................... 3 Cr.
ECE 370 .................................................... 3 Cr.
Humanities or Social Science ........................... 3 Cr.
Total .................................................................. 17 Cr.

Senior Year
Sixth Semester ............................................... Cr.
ECE 430 .................................................... 3 Cr.
ECE 451 .................................................... 2 Cr.
ECE 495 .................................................... 2 Cr.
Engineering Science Elective ............................ 3 Cr.
ECE Electives ................................................ 6 Cr.
Total ......................................................... 16 Cr.

ELECTRICAL AND COMPUTER ENGINEERING*

ECE 121. Algorithms and Pascal Programming I. 
Cr. 3. (Also offered as Computer Science 158.) (1 cr. Design) Emphasis on the development of structure and discipline in program design and style, especially for intermediate size programs. Prerequisite: GE 102.

3+3, Cr. 4. Principles and applications of electrical and electro-magnetic devices. Not open to Electrical Engineering or Computer Engineering majors. Prerequisite: GE 205.

ECE 211. Laboratory I. 
0+3, Cr. 1. Laboratory study of linear and digital circuits. Prerequisite: GE 205.

ECE 220. Digital System Design. 
Cr. 3. (Also offered as Computer Science 248.) (2 cr. Design) A logic design course covering inter-domain conversion, combinational and sequential logic, controller specification and design using MSI and LSI devices. Prerequisite: GE 205 or consent of the Chair of the Department.

ECE 221. Data Structures. 
Cr. 3. (Also offered as Computer Science 235.) (1 cr. Design) A detailed study of various data structures, including stacks, queues, linked lists and trees. The emphasis will be on algorithms to build and manipulate the data structures, various implementations, time analysis of the algorithms and applications, such as garbage collection. Prerequisites: ECE 121 and Mathematics 132 or 152.

Cr. 3. (Also offered as Computer Science 246.) (1 cr. Design) 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. Prerequisite: ECE 121.

ECE 260. Linear Circuits. 
Cr. 4. A study of the fundamental methods and theorems of electric circuit analysis with emphasis on both analytical and computer-aided methods. Topics include steady state analysis of DC and AC circuits, transient and complete response of first and second order circuits by Laplace Transform methods, frequency domain analysis and coupled circuits. Prerequisite: GE 205.

ECE 312. Electrical Laboratory II. 
0+3, Cr. 1. The study of analog and digital signals and signal processing circuits emphasizing measurement techniques. Prerequisites: ECE 211 and either ECE 260 or 220.

ECE 313. Electrical Laboratory III. 
0+6, Cr. 2. (1 cr. Design) An introduction to the design, construction and laboratory evaluation of analog and digital electronic systems. Prerequisite: junior standing in the ECE department.

ECE 316. Computer Laboratory II. 
0+3, Cr. 1. The study of analog and digital signals and signal processing circuits emphasizing measurement techniques. Prerequisites: ECE 220 and 260.

ECE 317. Computer Laboratory III. 
0+3, Cr. 1. (1 cr. Design) Electrical measurements in computer systems. Study of computer subsystems. A/D and D/A converters, serial and parallel interfaces, memory systems. Prerequisite: ECE 211 and junior standing in the Computer Engineering program.

*See page 45 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.
Cr. 3. (1.5 cr. Design) An introduction to the information transfers and transformations which take place in a digital computer. Topics include stored program concepts, data representations, common algorithms, instruction formats, components and structure of computer systems. Prerequisite: ECE 220 or junior standing.

ECE 323. Organization of Programming Languages.  
Cr. 3. Also offered as Computer Science 355. (1 cr. Design) Formal language constructs as exhibited in a variety of programming languages. Topics include syntax and basic characteristics of grammars, parsing, data types and structure, run-time consideration. Prerequisite: ECE 221. Recommended: Mathematics 360.

Cr. 4. (2 cr. Design) The description, organization and design of computer elements to perform specific tasks effectively. Arithmetic and string processing machines and the influence of software on their structure. Prerequisite: ECE 222 or ECE 321.

ECE 340. Electronics.  
Cr. 3. (0.5 cr. Design) An introduction to semiconductor theory and the application of diodes, transistors and integrated circuits in the design of amplifiers and multiple transistor circuits. Prerequisite: GE 205.

ECE 341. Analog System Design.  
Cr. 3. (3 cr. Design) The design of analog electronic systems using discrete and integrated devices. Topics include discrete and integrated amplifier circuits, active filters, waveform generators, power amplifiers, power supplies and regulators. Prerequisite: ECE 340.

Cr. 2. Introduction to the elements of probability, random variables and the probabilistic description of random signals. Axioms of probability, density and distribution functions and their expected values, and Gaussian and Poisson stochastic processes are discussed. Prerequisite: Mathematics 132 or 152.

ECE 360. Linear System Theory I.  
Cr. 3. An introduction to discrete linear time-invariant systems analysis using frequency response and linear transform techniques. Prerequisites: 260 and Mathematics 234.

ECE 361. Linear System Theory II.  
Cr. 3. (1 cr. Design) A continuation of ECE 360 with emphasis on continuous systems and the digital representation of continuous systems. Topics include state space representation of linear systems and digital simulations. Prerequisite: ECE 360.

ECE 370. Energy Conversion.  
Cr. 3. (0.5 cr. Design) A study of electromagnetic devices with emphasis on the principles and operating characteristics of transformers and rotating electrical machines. Prerequisite: ECE 260.

ECE 390. Study Abroad.  
Cr. 3. Open only to juniors and seniors who have been selected for participation in a study abroad program. Prerequisite: Permission of department chairperson.

ECE 418. Computer Laboratory IV.  
0+3, Cr. 1. (1 cr. Design) Software and hardware development with assemblers and compilers for embedded systems. Prerequisite: ECE 317.

ECE 420. Microprocessor Applications.  
2.7+1, Cr. 3. (2 cr. Design) The application of microprocessors in engineering design, emphasizing the interconnection of available components into systems and case studies of existing applications. Prerequisite: ECE 321 or CS 246 and ECE 220 or CS 248.

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 boundary value problems, Maxwell's equations and electromagnetic radiation. Prerequisite: Mathematics 233 or 253.

ECE 431. Microwaves.  
2.7+1, Cr. 3. (2 cr. Design) An introduction to the principles and applications of microwave devices and circuits. Topics include microwave circuit theory, wave-guiding techniques, components and solid state devices. Prerequisite: ECE 430.

ECE 440. Communication Electronics.  
2.7+1, Cr. 3. (2 cr. Design) A course in the analysis and design of electronic circuits used in the transmission of information by electric signals. Topics include RF amplifiers, oscillators, mixers, modulators, demodulators and coupling circuits. Prerequisite: ECE 341.

2.7 Cr. 3. (2 cr. Design) Theory of interconnected digital systems including information flow control by packet and circuit-switching techniques and standards for communication between network nodes. Prerequisites: ECE 340, ECE 451, and ECE 321 or 324.

ECE 451. Communication Theory.  
Cr. 2. Methods of transmission of information by electrical signals through channels limited by bandwidth and additive noise. The characteristics of standard modulation schemes such as AM, FM, PM, PCM are investigated and related to their channel requirements. Prerequisites: ECE 350 and ECE 361 or current enrollment in CE 301 and permission of the instructor.

ECE 452. Digital Speech Processing.  
2.7+1, 3. (2 cr. Design) Overview of the techniques of digital signal processing with applications in speech processing. Topics include speech coding, enhancement and recognition.

ECE 460. Control System Design.  
2.7+1, 2. (2 cr. Design) Classical design of feedback control systems using root-locus and frequency response methods. Introduction to modern control theory and state space representation, Luenberger observers and pole-placement solutions. Prerequisite: ECE 361.

Courses which fulfill electrical engineering elective requirements.
ECE 470. Power System Engineering.\textsuperscript{6} 2.7 + 1, Cr. 3 (2 cr. Design) Power system components, system modeling and computer methods for power system analysis are studied. Design topics include transmission lines, protection systems and voltage control. Prerequisite: ECE 260.

ECE 471. Power Electronics.\textsuperscript{3} 2.7 + 1, Cr. 3 (2 cr. Design) A course in the application and design of power semiconductor circuits. Topics include rectifiers, AC controllers, DC choppers, inverters and switched-mode power supplies. Prerequisites: ECE 260 and ECE 340.

ECE 490. Topics in Electrical and Computer Engineering. Cr. 1-3. The investigation of electrical engineering or computer engineering topics of special interest. (Depending on the syllabus, this course may qualify as a Design Elective.) Prerequisite: consent of the Chair of the Department.

ECE 495. Independent Study Project I. 1+3, Cr. 2 (1 cr. Design) The application of theoretical and experimental engineering concepts and mathematical principles to the planning, analysis, design and laboratory investigation of an engineering system. Individual or group problems in the field of electrical and computer engineering are selected by the student with approval of the faculty. Oral and written reports are required. Prerequisite: senior standing in Electrical Engineering or Computer Engineering.

ECE 496. Independent Study Project II. 1+3, Cr. 2 (1 cr. Design) A continuation of the project selected in ECE 495.

\section*{Mechanical Engineering}

Professors G. Lehmann, Schoech, Steffen (Chair); Associate Professors Doria, Rose; Assistant Professors Bora, Jensen, Palumbo.

The field of mechanical engineering includes a wide range of technical activities in the areas of energy conversion, automatic control of engineering processes, and the design, development and manufacture of mechanical components or systems. These broad categories break down into many sub-specialties. For example, mechanical engineers play an important role in the development of alternate energy sources including solar, wind and geothermal energy, or in improving the design and manufacturing techniques for products ranging from delicate medical instruments to reliable automobiles. Mechanical engineering contributes to almost every aspect of our society.

The Mechanical Engineering graduate is able to apply scientific knowledge and engineering skills in either graduate school or industry. Industrial careers are as varied as sales and product applications, planning and supervision of manufacturing, designing new products or systems, improving existing products or systems and general company management. Employment opportunities are available in all areas of the economy, including private industry, government service and consulting firms.

\textbf{Mechanical Engineering Laboratories.} The Mechanical Engineering program contains a significant laboratory component which is closely correlated with lecture courses. There are eight primary laboratory facilities within the Department. All laboratory facilities are available for use in senior independent study projects. Personal computers with appropriate hardware and software are available in the laboratories to construct data sheets, process data, and print results and graphs.

The \textit{Mechanical Measurements Laboratory} is utilized to promote instruction in the use of standard measurement equipment, calibration techniques and determination of instrument operating limits.

The \textit{Energetics Laboratory} provides the opportunity to study sources such as spark ignition and compression ignition engines. Investigations into the laws governing the conversion and transfer of energy are conducted in the \textit{Heat Transfer and Gas Dynamics Laboratory} which includes many unique pieces of laboratory equipment. The \textit{Automatic Control Laboratory} is used to conduct experiments with actual and simulated process systems and the associated instrumentation to control these processes.

The \textit{Manufacturing Processes Laboratory} is utilized to provide instruction in methods and theory of metal working, production systems and automation. This facility contains Computer-Aided\textsuperscript{6}Courses which fulfill electrical engineering elective requirements.
Design/Computer-Aided Manufacturing (CAD/CAM) desk top computers linked to a computer numerically controlled (CNC) machine tools and robots as well as tool room and production equipment. The Metallurgy Laboratory contains equipment for instruction in metallurgical specimen preparation and examination and a variety of heat treatment experiments and non-destructive test methods. Primary strain/stress analysis techniques including electrical resistance strain gages, photoelasticity, and brittle coating methods are applied to various load-bearing members in the Experimental Stress Laboratory. Instruction in the use of mechanical and electrical vibration excitation and measuring devices takes place in the Vibration and Sound Laboratory. This facility also contains equipment to perform sound measurement and analysis studies.

**Graduation requirements.** In addition to the courses common to each degree program listed on page 154, the following courses are required to earn the degree of Bachelor of Science in Mechanical Engineering.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 212</td>
<td>Drawing Specifications &amp; Conventions</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ME 222</td>
<td>Computer Applications</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ME 252</td>
<td>Materials Science</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 333</td>
<td>Mechanical Measurements Laboratory</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 353</td>
<td>Manufacturing Processes</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 362</td>
<td>Mechanisms</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 370</td>
<td>Thermodynamics I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 373</td>
<td>Fluid Mechanics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 374</td>
<td>Heat Power Laboratory</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>ME 376</td>
<td>Heat Transfer</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 463</td>
<td>Machine Design I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 471</td>
<td>Thermodynamics II</td>
<td>2 Cr.</td>
</tr>
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<td>ME 495</td>
<td>Independent Study Project I</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ME 496</td>
<td>Independent Study Project II</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>CE 215</td>
<td>Mechanics of Materials</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ECE 206</td>
<td>Principles of Electrical Engineering</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>GE 407</td>
<td>Engineering Economics</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Communication 140</td>
<td>Public Speaking</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Mechanical Engineering Electives</td>
<td>12 Cr.</td>
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</tr>
<tr>
<td>Social Analysis Elective</td>
<td>3 Cr.</td>
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</tr>
<tr>
<td>Technical Elective</td>
<td>3 Cr.</td>
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<tr>
<td>Free Elective</td>
<td>3 Cr.</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>66 Cr.</strong></td>
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</tr>
</tbody>
</table>

Total credits required for graduation = 137

**Technical Electives.** The technical elective requirement may be met with additional courses from Mechanical Engineering, Civil Engineering, Electrical and Computer Engineering, Biology, Chemistry, Mathematics, Computer Science or Physics. Courses used to fulfill the requirement must be above the introductory level and must be approved by the departmental adviser.

**Cooperative Education.** Students who successfully complete the co-op program may petition the Department to substitute GE 481 and GE 482 co-op credit hours for ME 495 and ME 496 course credit hours. Additional co-op credits for GE 483 may be substituted for free elective credit. Students placed after their junior year may petition to substitute GE 482 and two GE 483 credits hours for ME 495 and ME 496 course credit hours. A faculty adviser will monitor the academic progress of each student’s co-op experience to meet departmental requirements. Courses must be selected to provide a minimum of 16 credits in design.

**Sophomore Year, Fourth Semester.**

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<td>Heat Power Laboratory</td>
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<td>Communication 140</td>
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<td>Mechanical Engineering Electives</td>
<td>12 Cr.</td>
<td></td>
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<tr>
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<tr>
<td>Technical Elective</td>
<td>3 Cr.</td>
<td></td>
</tr>
<tr>
<td>Free Elective</td>
<td>3 Cr.</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17 Cr.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 333</td>
<td>Mechanical Measurements Laboratory</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 353</td>
<td>Manufacturing Processes</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 370</td>
<td>Thermodynamics I</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>ME 373</td>
<td>Fluid Mechanics</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>CE 215</td>
<td>English 200</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Communication 140</td>
<td>Social Analysis or</td>
<td>2 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17 Cr.</strong></td>
<td></td>
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</table>

**Senior Year**

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<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME 471</td>
<td>Engineering Economics</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>ME 495</td>
<td>Mechanical Engineering</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>GE 407</td>
<td>Engineering Economics</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>Humanities or Social Science</td>
<td>0-3 Cr.</td>
<td></td>
</tr>
<tr>
<td>ME Electives</td>
<td>3-9 Cr.</td>
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</tr>
<tr>
<td>Technical or free Social Analysis</td>
<td>0-3 Cr.</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>0-3 Cr.</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15 Cr.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**MECHANICAL ENGINEERING**

**ME 212. Drawing Specifications and Conventions.**

Cr. 1. Through the media computer-assisted drawing, the topics of dimensioning, tolerances, section views, geometric tolerancing, threads and fasteners are considered. Prerequisite: GE 104.

*See page 45 for the number of credit hours that may be applied toward a degree in the College of Arts and Sciences.*
ME 222. Computer Applications.
Cr. 2. A continuation of 102 which applies computer programming to mechanical engineering problems. Applications include selected methods of numerical analysis such as root finding, curve fitting, interpolation, integration, and solution of linear systems of equations and ordinary differential equations. Computer spreadsheets are applied to data representation and analysis. Prerequisites: GE 102 and Mathematics 132 or equivalent; corequisite: Mathematics 234.

ME 252. Materials Science.
2+3. Cr. 3. (0.5 cr. Design) 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 the strengthening mechanisms. Processes studied include solidification, phase transformation, and mechanical working of metals. A field trip to an industrial facility is arranged. Prerequisites: Chemistry 115 and Mathematics 132 or 152.

ME 333. Mechanical Measurements Laboratory.
2+3. Cr. 3. (1 cr. Design) A study of fundamental concepts and physical principles involved in the science of measurement. Experiments involving 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 spread sheets. Prerequisites: GE 107, ECE 100, Mathematics 132 or equivalent.

ME 353. Manufacturing Processes.
2+3. Cr. 3. (2 cr. Design) A study of manufacturing methods including metal cutting, operation planning, fabrication techniques and inspection. Machinability of materials, application of machine tools and Computer Numerical Control (CNC) are introduced through lecture and laboratory work. Field trips to industrial facilities are arranged. Prerequisites: ME 212 and 252, or ME 312, or junior standing in Electrical and Computer Engineering.

ME 354. Manufacturing Processes.
2+3. Cr. 3. (Also offered as Mechanical Engineering 353.) A study of manufacturing methods including metal cutting, operation planning, fabrication techniques, and inspection. Machinability of materials, application of machine tools, and Computer Numerical Control (CNC) are introduced through lecture and laboratory work. Field trips to industrial facilities are arranged. Open only to business majors in the Manufacturing Management Minor program. Prerequisite: Mathematics 124, Computer Science 117, and official advancement to upper division in the College of Business Administration.

ME 362. Mechanisms.
Cr. 3. (1 cr. Design) Graphical and analytical approaches to kinematic analysis and synthesis of linkages, gears andcams are presented. Linkage topics include displacement, velocity a acceleration analysis along with type, number and dimensional synthesis techniques. Fundamentals of gears and gear trains are investigated. sizing and application of motion programs to cam design and static forces in mechanisms are considered. Prerequisites: GE 102, GE 209 and concurrent registration in Mathematics 233 or 253.

ME 370. Thermodynamics I.
Cr. 3. (1 cr. Design) Topics originally presented in GE 107 are studied in much greater depth. Extensive use made of the second law in analyzing processes and cycles. Additional topics covered are gas mixtures and the concept of available energy. Prerequisite: GE 107.

ME 373. Fluid Mechanics.
Cr. 3. (1 cr. Design) 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: GE 107 and 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. Corequisites: ME 370, ME 373 and 376 (either may be taken concurrently).

ME 376. Heat Transfer.
Cr. 3. (1 cr. Design) The fundamentals of heat transfer by conduction, radiation and forced and free convection are developed and applied to engineering problems. Analytical and graphical solutions for heat exchangers are studied. Corequisite: ME 370.

Cr. 3. (1.5 cr. Design) (Also offered as Computer Science 365.) A study of the fundamentals of interactive computer graphics systems and software. Emphasis is placed on graphics primitives, geometric transformation and projection and methods of creating visual realism and selected graphics algorithms. Prerequisites for engineering students: CS 158 and junior classification.

ME 444. Automatic Control.
2.5+1.5. Cr. 3. (1.5 cr. Design) 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 Mathematics 234.

Courses which fulfill mechanical engineering elective requirements.
2.5+1.5, Cr. 3. (1.5 cr. Design) A study of the application of robots, computer-numerically-controlled (CNC) machine tools, programmable controllers (PLC), computers and pneumatics equipment to the design of hard and soft automation systems. Design emphasis is placed on the integration of sensors, actuators, drives and analyzers into systems. These systems are applied to automation, manufacturing, and assembly for economic production of mechanical components and systems. Prerequisites: ME 333, ME 353 and ECE 206.

ME 457. Production Operations and Systems.
2.5+1.5, Cr. 3. (Also offered as Mechanical Engineering 458.) The design of production systems including physical systems which produce goods and services, computerized systems which integrate information, and the management systems which provide decisions, information and control data. Emphasis is placed on management strategies for analysis, synthesis and optimization of the production system through a laboratory experience in which students design the production system for a product. Open only to business majors in the Manufacturing Management Minor program. Prerequisite: ME 354.

2.5+1.5, Cr. 3. (2 cr. Design) (Also offered as Mechanical Engineering 457.) The design of production systems including physical systems which produce goods and services, computerized systems which integrate information, and management systems which provide decisions, information and control data. Emphasis is placed on management strategies for analysis, synthesis and optimization of the production system through a laboratory experience in which a product and its associated tooling and production system are designed. Prerequisite: ME 353.

ME 462. Vibrations.
2.5+1.5, Cr. 3. (1 cr. Design) 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. Frequency analysis techniques are presented. Given in alternate years. Prerequisites: Mathematics 234, ME 222, and GE 209.

ME 463. Machine Design I.
2.5+1.5, Cr. 3. (2 cr. Design) The application of specialized topics in mechanics of materials 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, welded joints and general mechanical elements. Prerequisite: CE 215.

ME 464. Machine Design II.
2.5+1.5, Cr. 3. (2 cr. Design) A comprehensive study in the design and analysis of belt and chain drives, gearing, gear trains, anti-friction 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. (1 cr. Design) An introduction to experimental methods for measuring strain and determining stress, including brittle coatings, photoelasticity, resistance strain gages and birefringent coatings. Stress distributions in machine and structural components subjected to various loadings are analyzed both theoretically and experimentally. Given in alternate years. Prerequisite: CE 215.

ME 471. Thermodynamics II.
Cr. 2. (0.5 cr. Design) A continuation of ME 370. The study of the combustion of hydrocarbon fuels and turbomachinery. Prerequisites: ME 370 and Chemistry 115.

2.5+1.5, Cr. 3. (2 cr. Design) A design-oriented course. Involves the synthesis of heat transfer equipment, heating and air conditioning systems, heat pump applications and hydraulic and pneumatic systems. Prerequisites: ME 370, 373 and 376.

ME 490. Topics in Mechanical Engineering.
7 weeks or semester. Cr. 2-3. The investigation of mechanical engineering topics of special interest. Prerequisite: consent of the Chair of the Department. Offered upon sufficient demand.

ME 495. Independent Study Project I.
1+3, Cr. 2. (2 cr. Design) The application of theoretical and experimental engineering concepts and mathematical principles in the analysis, design or investigation of engineering system. Individual problems in the field of mechanical engineering to be selected by the student with the approval of the Mechanical Engineering faculty. Prerequisite: senior classification in Mechanical Engineering, corequisite: ME 353.

ME 496. Independent Study Project II.
1+3, Cr. 2. (2 cr. Design) A continuation of ME 495.

Courses which fulfill mechanical engineering elective requirements.
College of Nursing

Freda S. Scales, Ph.D., Dean

Associate Professors Knaub, Kowalski, Logothetis, Scales, Sheehan; Assistant Professors C. Bartelt, Brown, Haley, Patz, Pepa, Russell, Voltin, Yover.

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 may complete the requirements for the Bachelor of Science in Nursing degree in less than four years. Acceptable transfer credit hours from another college or university and credit by examination may be applied toward required and elective credit hours in the College of Arts and Sciences. Transitional courses, N 260-261, are required for registered nurses.

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. The BSN candidate:

1. Provides comprehensive health care based on nursing theories and research findings in the primary, secondary, and tertiary levels of the health care system.
2. Synthesizes theoretical and empirical knowledge from the sciences and humanities with nursing theory and practice.
3. Assumes the professional role as a care giver, teacher, researcher, leader and lifelong learner.
4. Values each person as a holistic being who perpetually interacts with and is influenced by the internal and external environment.
5. Applies an understanding of the social, cultural, economic, ethical and political influences on the health care system to nursing practice.

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 that lead to mastery of 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 students to the following requirements:

A. A minimum of 57 credit hours in nursing. Courses in which the student is required to earn a grade of C or better are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>N 205</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 206</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>N 215</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>N 220</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 310 Social Analysis</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 315</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 320</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>N 330</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>N 340</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>N 410</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>N 420</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 430</td>
<td>5 Cr.</td>
</tr>
<tr>
<td>N 435</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 440</td>
<td>2 Cr.</td>
</tr>
<tr>
<td>N 450</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>N 480</td>
<td>5 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57 Cr.</strong></td>
</tr>
</tbody>
</table>

B. A minimum of 57 credit hours from the College of Arts and Sciences. Courses in which the student is required to earn a grade of C or better are marked with an asterisk. The specific requirements are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Seminar 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>English 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>History 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Theology 100</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>English 200</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Theology Level II and III</td>
<td>6 Cr.</td>
</tr>
<tr>
<td>Academic Area Studies Option+</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Physical Education 101-105</td>
<td>1 Cr.</td>
</tr>
<tr>
<td>Environmental Studies*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Chemistry 111, 121, or 131*</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Human Biology 151, and 152*</td>
<td>8 Cr.</td>
</tr>
<tr>
<td>Biology 210*</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Home Economics 260*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Psychology 101*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Psychology 130*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Psychology 201*</td>
<td>3 Cr.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57 Cr.</strong></td>
</tr>
</tbody>
</table>

C. Electives. In addition to meeting the requirements in Nursing and Arts and Sciences listed above, the student must present for graduation a sufficient number of electives to bring the total number of credit hours to 126. No more than 6 credits may be baccalaureate nursing credits.

One elective must meet the Academic Area Studies requirement of a three credit hour course in one of the areas listed below:

- Fine Arts or Fine Arts—Literature
- Foreign Language 102 or 103
- Non-Western or Third World Studies
- Philosophical and Historical Studies
- Social Studies

**Note:** No more than four credit hours in applied music, including ensemble, and no more than four credit hours of Physical Education 101-149 may be applied toward a degree of Bachelor of Science in Nursing.

D. Requirements for Admission to Nursing Courses. For admission to the first clinical nursing course, students must attain a minimum cumulative grade point average of 2.0 and no grade lower than C in the courses designated in sections A and B of graduation requirements.

Students are required to present annually evidence of a recent (within the year) physical examination, current immunization (rubeola included), current communicable disease screening (rubella titer, Mantoux test) and current CPR certification or recertification. The College of Nursing does not make arrangements for meeting these requirements.

E. Progression. Students must maintain a minimum cumulative grade point average of 2.00 in all coursework and in the nursing major to remain in the College of Nursing. A cumulative nursing grade point average of 2.3 is necessary for progression to junior level and to the senior level nursing courses. In addition, students must earn a grade of C or better in courses designated in sections A and B of Graduation Requirements.

A grade of less than 2.0 in any two required nursing courses will result in dismissal from the nursing program. The Academic Review Committee reviews petitions of students who request a hearing for appeal of the progression policy.

Senior students will take a State Board Review Course at the College of Nursing before graduation.
**Minor.** A Nursing student may declare a minor (including the Liberal Arts Business Minor or the Human Aging Minor) in the College of Arts and Sciences, 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.

**Student Nurses Association.** All student nurses are invited to membership in the Student Nurses Association.

**Sigma Theta Tau.** 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 national honor society of nursing. The Zeta Epsilon Chapter was installed at Valparaiso University in 1982.

**SUGGESTED COURSE PROGRAM.** This suggested schedule of courses represents an orderly sequence for those students who plan to meet degree requirements according to this catalog. Students who wish to fulfill degree requirements from previous catalog programs should, in consultation with their adviser, refer to the appropriate catalog.

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Second Semester</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 151</td>
<td>Chemistry 111</td>
<td>4</td>
</tr>
<tr>
<td>Biology 152</td>
<td>121, or 131</td>
<td>4</td>
</tr>
<tr>
<td>121, or 131</td>
<td>Freshman Seminar</td>
<td>3</td>
</tr>
<tr>
<td>121, or 131</td>
<td>English 100</td>
<td>3</td>
</tr>
<tr>
<td>History 100</td>
<td>Environmental Studies</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 101</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Second Semester</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 210</td>
<td>English 200</td>
<td>4</td>
</tr>
<tr>
<td>Home Economics 260</td>
<td>NUR 215</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 130</td>
<td>NUR 220</td>
<td>3</td>
</tr>
<tr>
<td>NUR 205</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>NUR 206</td>
<td>Theology II</td>
<td>3</td>
</tr>
<tr>
<td>PE 101-105</td>
<td>Total</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Second Semester</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 201</td>
<td>Theology III</td>
<td>3</td>
</tr>
<tr>
<td>NUR 310</td>
<td>Area Studies Option</td>
<td>3</td>
</tr>
<tr>
<td>NUR 315</td>
<td>NUR 330</td>
<td>4</td>
</tr>
<tr>
<td>NUR 320</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th>Second Semester</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 410</td>
<td>NUR 420</td>
<td>3</td>
</tr>
<tr>
<td>NUR 430</td>
<td>NUR 450</td>
<td>3</td>
</tr>
<tr>
<td>NUR 435</td>
<td>NUR 480</td>
<td>5</td>
</tr>
<tr>
<td>NUR 440</td>
<td>Total</td>
<td>11</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>126</td>
</tr>
</tbody>
</table>

**Note:** Students are responsible for transportation to and from all clinical 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 those listed under Requirements for Admission to Nursing Courses and at least sophomore standing.

**N 205. Professional Role in Nursing.**

- Cr. 3. Introduction of man, health, nursing and environment and their interrelationship as the basis for nursing practice. Examines the expanding role of the nurse including caregiver, teacher, researcher, leader, and lifelong learner.

**N 206. Physical Assessment.**

- 0+6, Cr. 2. Clinical practice in assessment skills of interview, inspection, palpation, percussion and auscultation of the healthy adult. The focus is on client strengths and variations of normal.

**N 215. Clinical Application of the Professional Role.**

- 2+6, Cr. 4. Clinical application of concepts relevant to professional nursing. Focus is on the use of the nursing process and its framework for assessment, planning, implementing, and evaluating clinical phenomena and the nurses' role as caregiver, leader, teacher, researcher, and learner.

**N 220. Primary Care of the Family.**

- 2.5+0.5, Cr. 3. Focuses on promotion and maintenance of health care for the family.

**N 260. Transition to Professional Nursing I.**

- Cr. 4. Concepts relevant to professional nursing are discussed. Nursing process, interpersonal communication skills, research process, teaching-learning theory, and leadership theories are included. Prerequisite: Registered Nurse Status.

**N 261. Transition to Professional Nursing II.**

- 0+12, Cr. 4. Clinical application of concepts relevant to professional nursing. Prerequisite: concurrent enrollment in N 260.

**Note:** Prerequisites for the following courses are N 205, 206, 215, 220, 260, 261, and at least junior standing.

**N 310. U.S. Health Care Systems.**

- Cr. 3. An overview of health care delivery systems in the United States. The course examines the impact of social and political events on health care systems. Health policy, manpower, financing, federal legislation, role of government in health care and the political process are included. Fulfills social analysis requirement for nursing majors.
N 315. Introduction to Nursing Research.
Cr. 3. A study of scientific research as applied to nursing. An overview of the scientific method, the purpose of research, research problems, and approaches to solving research problems are examined.

N 320. Secondary Care of the Parent, Child, and Adolescent.
3+6, Cr. 5. Focuses on the nursing care of families in an acute care setting. The course examines responses of the family to childbirth, illness, and hospitalization.

N 330. Secondary Care of the Adult/Long-lived Adult I.
2+6, Cr. 4. Study and practice of the nursing care of young, middle and long-lived adults. The course examines the responses of adults of all ages and their families to health problems and hospitalization.

3+3, Cr. 4. Study and practice in the nursing care of clients with acute psychiatric disorders.

N 351. The Aging Process.
Cr. 3. An introduction to dimensions of aging with special emphasis on biologic aging and the developmental, functional, and environmental factors that influence adaptability to age-related changes. Open to all students with advanced standing.

N 381. Cooperative Education in Nursing.
Cr. 1-3. Application of the concepts of professional nursing in a health care setting. Requires satisfactory work performance for a preselected employer and submission of a final project. Prerequisite: NUR 215. May be taken on S/U basis.

N 390 /490. Topics in Nursing and Health Care.
Cr. 1-3. An open topic course which may cover specialized areas of nursing, current concepts, nursing concerns of delivery of health services. The course may be taken more than once for a maximum of six credit hours provided there is not duplication of topics. Prerequisites: junior or senior standing, consent of the instructor and the adviser.

N 395 /495. Independent Study in Nursing.
Cr. 1-6. Independent study to be approved by the adviser and the guiding nursing professor. Prerequisite: junior or senior standing in the Nursing major. May be taken on S/U basis.

Note: Prerequisites for the following courses are NUR 315, 320, 330, 340, and at least senior standing.

N 410. Tertiary Care in the Community.
2+6, Cr. 4. A focus on long-term care of clients/families in the community setting.

N 413. Community Health Assessment.
Cr. 1. Application of levels of prevention to the community.

N 430. Secondary Care of the Adult/Long-Lived Adult II.
2+9, Cr. 5. Focuses on restorative care of high risk clients and their responses to life threatening problems.

N 435. Tertiary Care of the Adult/Long-Lived Adult.
Cr. 3. Focuses on the rehabilitation and health care maintenance of the adult and long-lived adult requiring ongoing therapy and nursing care.

N 440. Tertiary Care in Psychiatric Nursing.
1+3, Cr. 2. Study of the nursing care of clients with chronic psychiatric disorders. Field trip.

N 450. Nursing Management in a Health Care System.
2+6, Cr. An overview of management theories and roles as applied by a nurse manager in a health care setting.

N 480. Professional Role Practicum.
0+15, Cr. 5. Focuses on role transition from student to professional nurse facilitating synthesis of knowledge and experience in a clinical setting of choice. (Must be taken in the final seven weeks of a student's coursework.)

Note: Prerequisites for the following courses are NUR 315, 323, 320, 330, 340, and at least senior standing. The following courses will not be offered after Spring Semester, 1990-1991.

N 410. Tertiary Care in the Community.
2+6, Cr. 4. A focus on long-term care of clients/families in the community setting.

N 430. Secondary Care of the Adult/Long-Lived Adult II.
2+6, Cr. 4. Focuses on restorative care of high risk clients and their responses to life threatening problems.

N 435. Tertiary Care of the Adult/Long-Lived Adult.
3+3, Cr. 4. Focuses on the rehabilitation and health care maintenance of the adult and long-lived adult requiring ongoing therapy and nursing care. Field trip.

N 480. Professional Role Practicum.
0+12, Cr. 4. Focuses on role transition from student to professional nurse facilitating synthesis of knowledge and experience in a clinical setting of choice. (Must be taken in the final seven weeks of a student's coursework.)
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.

**Human Aging Minor**

**Administrative Committee:**
Assistant Professor Nelson (Psychology, Chair); Associate Professor Sederberg (Sociology); Assistant Professor Bartelt (Nursing).

A minor in Human Aging may be presented in partial fulfillment of the major field requirements for the Bachelor of Arts degree under a Major Option.

**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 and psychological processes, as well as the role of the older individual in society. The premise of the program is that these changes are best understood and explored in an interdisciplinary context. As the average human lifespan grows longer and the proportion of elderly people in our country increases, study in gerontology will become very important to those seeking to understand and render service to our society. Individuals interested in careers in the biomedical or social sciences who are interested in working with older adults will find this minor to be an essential part of their preparation.

**Requirements.** A minimum of 18 credit hours constitutes a minor. Four courses (12 credit hours) must be taken from the required Core Courses list. At least two elective classes (6 credit hours) must also be taken. Acceptable elective classes include the courses listed on the Elective Courses list. Other University classes such as experiential learning and special topics courses may also be
allowed as elective classes if they are deemed by the Administrative Committee to have a primary focus on gerontological issues. Students wishing to use a course not listed on the Elective Courses list to meet elective requirements for the minor must have the course approved by the Administrative Committee prior to enrolling in the course. Examples of classes which may qualify include Psychology 485 (Psychology Practicum), Social Work 390 (Social Work Colloquium), and Sociology 487 (Internship in Sociology).

Program Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 332</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Psychology of Adulthood and Aging</td>
<td></td>
</tr>
<tr>
<td>Sociology 327</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Aging and American Society</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative Disorders 228</td>
<td>4 Cr.</td>
</tr>
<tr>
<td>Audiology</td>
<td></td>
</tr>
<tr>
<td>Communicative Disorders 320</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Aphasia</td>
<td></td>
</tr>
<tr>
<td>Communicative Disorders 390</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Aural Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>Home Economics 260</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Human Nutrition</td>
<td></td>
</tr>
<tr>
<td>Home Economics 460</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Advanced Nutrition</td>
<td></td>
</tr>
<tr>
<td>Social Work 410</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Analysis of Social Policy</td>
<td></td>
</tr>
<tr>
<td>Theology 356</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Christian Response to Social Victims</td>
<td></td>
</tr>
<tr>
<td>Theology 357</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>The Church and Contemporary Crises</td>
<td></td>
</tr>
<tr>
<td>Theology 375</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Understanding Death and Dying</td>
<td></td>
</tr>
<tr>
<td>Nursing 310</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>U.S. Health Care Systems</td>
<td></td>
</tr>
</tbody>
</table>

Liberal Arts Business Minor

Administration. This program is administered by the Dean of the College of Arts and Sciences.

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.

Requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 221</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Accounting 205</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>English 257 or Accounting 206 or Economics 222</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>General Business GBUS 206</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Marketing MKT 301</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Management GBUS 301</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Finance FIN 301</td>
<td>3 Cr.</td>
</tr>
<tr>
<td>Total</td>
<td>21 Cr.</td>
</tr>
</tbody>
</table>

The Liberal Arts Business Minor is not a fraction of a Business Major. The Business courses numbered 301 are not identical to those required of Business majors and will not count toward the completion of a major in Business Administration.

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 15-18 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 45).

Upon completion of the minor, the designation, "Liberal Arts Business Minor," is placed on the student's transcript.
Manufacturing Management Minor

Administrative Committee:
Professor Schoech (Mechanical Engineering—College of Engineering), Assistant Professor Ozgur (Decision Sciences—College of Business Administration).

Objectives. This interdisciplinary minor program is designed to provide the opportunity for students to focus their study in manufacturing-planning processes and control. It will prepare students for entry level positions in manufacturing and the related areas of production scheduling, quality control, production control, and production design. It complements a major area of study in either engineering or business.

Administration. This minor is jointly administered by the College of Engineering and the College of Business Administration. It is limited to students in either of these two colleges.

Requirements. A total of 15 credit hours is required to complete this minor. Students who intend to complete this minor are strongly encouraged to consult their academic adviser 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.

Business students must complete the requirements for a degree program within the College of Business Administration and these courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 320 Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>DS 305 Production/Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>DS 320 Management Science</td>
<td>3</td>
</tr>
<tr>
<td>ME 354 Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>ME 457 Production Operations and Systems</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

Students in the B.S. in Accounting degree program take ME 354 and ME 457 as non-business electives and DS 320 as a free elective. Students in the B.S. in Business Administration degree program take DS 320 and ACC 320 as concentration electives and ME 354 and ME 457 as free electives. Before taking the minor requirements, students must advance to upper division.

Engineering students must complete the requirements for a degree within the College of Engineering and these courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS 305 Production/Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>DS 320 Management Science</td>
<td>3</td>
</tr>
<tr>
<td>ME 353 Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>ME 456 Robotic/Automation Systems</td>
<td>3</td>
</tr>
<tr>
<td>ME 458 Production Operations and Systems</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

No more than seven hours of all courses required for the engineering program, excluding free electives, may be used in fulfilling the requirements for this minor.

Engineering students are advised to include several specified courses as elective courses in their plans of study. Students should consult their academic advisers on which requirements these courses fulfill for the major.
The program of graduate studies was initiated by Valparaiso University in the Summer Session of 1963. It has continued through day and evening courses as well as summer sessions through subsequent academic years.

More than 1500 students have received a master's degree since the inception of this program. As many of these alumni reside in Northern Indiana and teach in the public schools, the University has, through this program, made a major contribution to the life of the larger community in which it lives.

Five degrees are offered: Master of Arts in Applied Behavioral Science (M.A.A.B.S.), Master of Arts in Liberal Studies (M.A.L.S.), Master of Education (M.Ed.), Master of Music (M.M.), and Master of Science in Nursing (M.S.N.). Details concerning the requirements for these degrees can be found in the Graduate Division Bulletin, which may be obtained by visiting or writing the Graduate Division, Valparaiso University.

The graduate programs are under the general supervision of the President and Faculty of the University. Its policies are determined by the Graduate Council. The programs and regulations, as defined by the Council, are administered by the Dean of the Graduate Division.
For more than a century, the School of Law of Valparaiso University has sent its graduates into private and corporate practice as well as government service. The School was founded in 1879 as the Northern Indiana Law School and became a part of Valparaiso College, now Valparaiso University, in 1905. By keeping pace with advances in legal education and the legal profession, the School of Law has outgrown three buildings since 1905. In the summer of 1986, the School of Law moved into Wesemann Hall, a new and comprehensive facility located on the wooded western edge of campus.

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 faculty. The School seeks a sense of community of individuals with mutual interests working together toward shared objectives.

Together with these values, the School respects each person's individuality and the importance of analytic, conceptual and interpersonal skills in the training of new lawyers. Classes range from small seminars with fewer than ten students, to large classes conducted according to the traditional Socratic method with approximately eighty students. As a law school in a church-related university, it seeks to manifest concern for the total needs of its students and awareness of the problems faced by society and the profession.

The School was approved by the American Bar Association in 1929 and since that time it has been accredited continuously by that Association. In 1930, it was admitted to membership in the Association of American Law Schools. The degree of Juris Doctor, which is granted by the School of Law, is approved by the Board of Regents of the University of the State of New York.

The School offers both the traditional three-year, full-time curriculum and a five-year, part-time program. Detailed information concerning the School's admission policies, costs and curriculum can be found in the School of Law Bulletin, which may be obtained at the Office of Law Admissions at the School of Law: 1-800-262-0656; or 219/465-7829.
SUMMER SESSIONS

The University offers two sessions each summer: namely, the Mini Session (three and one-half weeks) and the Summer Session (seven and one-half weeks). The 1991 dates are as follows: Mini Session, May 22 to June 15; Summer Session, June 19 to August 9. 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, high school graduates beginning their college careers early and other interested persons who would like to take course work on a part-time basis toward their degree objectives or simply for personal enrichment.

In the Mini Session students may earn a maximum of four credit hours. In the Summer Session students may earn a maximum of nine credit hours. The combination of the Mini and Summer Session allows a student to earn a total of 13 credit hours during the summer months, which is nearly the equivalent of the amount of credit that can be earned during the fall or spring semesters.

In each session a variety of courses in the morning and in the evening accommodate the working student who wants to take course work while employed fully or part-time. Also, in the Summer Session a few courses are offered as one week workshops and other abbreviated formats.

From time to time, Summer Educational Tours are conducted. Information regarding tours is normally included in the Mini and Summer Session bulletins.
FEES FOR MINI AND SUMMER SESSIONS

Tuition per Credit Hour
(undergraduate) 115.00
Tuition per Credit Hour
(graduate) 135.00
Private Music Lessons (in addition to tuition) Each private or class lesson in applied music 150.00

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 courses in the College of Business Administration, the College of Engineering, and the College of Nursing.

THE EVENING DIVISION

This program, combining the services of the former extension and adult education programs, was organized in the spring of 1963 to make the offerings of all colleges and departments available to the residents of the greater Valparaiso community, as well as to the full-time students on our campus.

The course offerings are designed to serve the needs of employed adults who desire to work toward a college degree, take courses for self-improvement or qualify for teacher certification. Evening courses are the same in content, objectives and credit hours as corresponding day courses.

The University, through its evening program, does not intend to offer the scope and variety of courses for a student to earn an undergraduate degree by attending only in the evening. However, a considerable amount of credit can be earned through evening classes toward an undergraduate degree and all is applicable to that degree when the student matriculates into the day program.

Admission to the Evening Division.

Admission is open to all students who have exhibited the potential to be successful in their academic work at Valparaiso University. Students who have not matriculated for a degree in the day undergraduate program and who have not been admitted to the undergraduate Evening Division of Valparaiso University must file an enrollment application as an undergraduate student through the Office of Continuing Education. Students who plan to complete requirements for a degree from Valparaiso University and students who plan to complete the requirements for teacher certification must file an application for admission with the Office of Admissions of the University.

Students who wish to take a graduate course must first be admitted to the Graduate Division. Request for applications should be addressed to the Dean of the Graduate Division.

Registration in the Evening Division. Registration in the Evening Division for those adult students taking evening courses only is conducted according to the schedule announced in the brochure published in advance for each semester.

Matriculated undergraduate students may register for up to six credit hours in the Evening Division, provided that their total course load in evening and day courses does not exceed the maximum load permitted (page 182). Any graduate student who registers for a given semester in both day and Evening Division undergraduate courses is considered to be a day student and is charged the regular fees applicable to a day student.

The Schedule of Classes bulletin lists all courses offered by all departments and colleges of the University in numerical order with evening course sections indicated by "EV."
Admission

Formal application for admission on a form provided by the Admissions Office may be filed at any time, but should be filed well in advance of the semester in which admission is desired. Each application must be accompanied by an Application Fee of $30.00 which is non-refundable. Applications for admission to undergraduate programs are to be sent to the Admissions Office. For admission to the School of Law, consult the bulletin of the School of Law. For admission to the Graduate Division, consult the bulletin of the Graduate Division.

General Requirements

Valparaiso University admits those candidates who demonstrate potential for success in rigorous academic work. Qualified applicants are admitted regardless of race, color, sex, national or ethnic origin, age or physical handicaps. The credentials of each applicant are individually evaluated, with consideration given to academic record, entrance examination scores, character, personality and evidence of motivation for college studies. The University reserves the right to deny admission to any applicant.

To provide uniform predictive norms, the University requires all candidates for admission to the freshman class to take either the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the ACT Assessment of the American College Testing Program (ACT). The applicant should be a graduate of an approved secondary school or possess a state high school equivalency certificate.

Valparaiso University’s curricula offer flexibility and attention to individual talents and needs; therefore, no one specific high school program is required of all applicants. However, a student planning to attend the University should take the strongest possible college preparatory
program available. Within these guidelines, individual course selections are best made by the student with the guidance of the high school counselor. A minimum of four years of English, three years of mathematics (algebra and geometry), two years of social studies, two years of laboratory sciences and two years of a foreign language are strongly recommended.

SPECIAL REQUIREMENTS
In addition to the above general requirements, the following colleges have additional specific requirements.

College of Business Administration: To be successful in the College of Business Administration, students should complete a second year of algebra.

College of Engineering: At least three and one-half years of mathematics including one and one-half years of algebra, one year of geometry and one-half year of trigonometry (business, general or shop mathematics may not be counted); one year of either chemistry or physics with regular laboratory work. These requirements are the minimum; applicants are urged to take four years of formal mathematics and both chemistry and physics.

College of Nursing: The laboratory sciences should include chemistry and biology; a second year of biology is strongly recommended.

Christ College: Admission is by invitation of the Faculty Committee on Christ College, and depends on the candidate’s qualities of leadership and scholarship. Christ College scholars have concurrent membership in the College of Arts and Sciences, College of Business Administration, College of Engineering or College of Nursing.

SPECIAL STUDENT STATUS
An undergraduate applicant who is not admitted as a regularly classified student working toward a baccalaureate degree may be admitted as a special student. Credits received while the student is a special student may be subject to revision should the student later become a candidate for a degree. Registered nurse students and international transfer students are generally admitted with special student status until the appropriate classification can be determined. This status is not available to a student dismissed from the University.

INTERNATIONAL STUDENTS
Valparaiso University welcomes applications from qualified international students. At present, over thirty nations are represented in the University’s international student population.

Application and Fee. The completed undergraduate application, together with a check for $30.00 payable to Valparaiso University, should be returned to the Admissions Office at least three months before the term for which the student is applying. The following items must be received before the Admissions Committee acts on the application:

1. Academic records. Certified, official transcripts (original and English translation) of all secondary and university courses which have been completed or attempted;
2. Proof of English proficiency. Test of English as a Foreign Language (TOEFL) score of at least 550, English Language Service (ELS) level of at least 109 or the equivalent is required for admission. For information on the TOEFL, write to TOEFL, Box 899, Princeton, NJ 08540, U.S.A.;
3. 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. Therefore, a notarized statement of this financial support must be submitted;
4. Health Statement. A statement from a physician that the applicant is in good health.

Transfer Students. To receive credit for college-level work successfully completed outside the United States, the applicant is charged a fee of $100.00 for the professional evaluation of that work. This fee must accompany the transcript or certified copy and must be received at
least three months before enrollment at Valparaiso University. A syllabus or detailed description of this work should be included.

**English Proficiency.** In addition to the proof of English proficiency which accompanies the application, Valparaiso University also requires that all international students whose native language is not English take an English proficiency test after arriving on campus. The results of this test are used to place students in the proper English course and to assist advisers with other course selections.

**Full-Time Enrollment.** All international students who are studying on an F-1 visa 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, to take a leave of absence or to transfer to another school should first be discussed with the International Student Adviser.

**Tuition.** See page 192 in this catalog.

**Financial Aid.** Valparaiso University does not have financial aid available for international students.

**Employment.** A very limited number of on-campus jobs are available for international students each year. The Immigration and Naturalization Service does not permit international students to work off-campus.

**Health Insurance.** Valparaiso University requires that all international students purchase or show that they have health insurance in order to help pay for major medical expenses. The health insurance coverage must be kept active as long as the student is enrolled at the University.

For further information regarding admission of international students, please write to International Student Adviser, Valparaiso University, Valparaiso, IN 46383-9978, U.S.A.

**Housing Application**

An application for University housing is mailed to each newly admitted student. This application and a deposit of $200.00 (tuition and housing) should be returned to the Admissions Office as soon as possible. All checks should be made payable to Valparaiso University. A student who occupies a room in a University residence will have $150.00 credited toward the housing and the remaining $50.00 toward tuition and fees.

**Advanced Standing By Examination**

By incorporating four examination programs within its credit-granting structure, Valparaiso University enables students to earn credit and advanced standing for college-level knowledge obtained before enrolling.

Such credit may be earned through satisfactory scores on the Advanced Placement or College Level Examination Program of the College Entrance Examination Board or the International Baccalaureate Program, or through the University’s own Placement Program. Credit earned by examination may achieve advanced standing, meet general education requirements, and accelerate progress into advanced areas of study in an intended major or interdisciplinary program. Credit by examination may reduce substantially the time required to earn an undergraduate degree.

**ADVANCED PLACEMENT PROGRAM (AP) OF THE CEEB**

Applicants for admission who take one or more of the Advanced Placement (AP) Examinations in May will receive credit toward a degree for scores of 5 and 4; in some departments scores of 3 earn credit. AP examinations must be taken before enrollment as a full-time student at Valparaiso University. For more information contact the Admissions Office.

**COLLEGE LEVEL EXAMINATION PROGRAM (CLEP) OF THE CEEB**

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
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 under 4, 5, 6 and 7.
3. Credit for a CLEP General Examination is valid only if no other credit by examination is awarded in courses applicable in 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 Fine 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 is expected to complete at least one laboratory course in science.

Valparaiso University awards credit for CLEP Subject Area examinations as indicated in the separate departmental listings. 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.

**INTERNATIONAL BACCALAUREATE**

In addition to recognizing the International Baccalaureate Diploma as a basis for admission to the University, the University will also award college credit or advanced placement or both based on scores earned on the Higher Level Examinations.

**UNIVERSITY PLACEMENT TESTING**

During the orientation period which precedes each semester, placement tests are offered to incoming students (freshmen and transfers) in the areas listed below. These tests provide an opportunity for students to attain advanced placement, receive credit, or meet certain general education requirements.

Advanced placement and/or credit are awarded in biology, chemistry, foreign languages and mathematics, as explained in the listings for those departments. Full information on AP, CLEP and V.U. Placement can be obtained from the office of the Dean of the College of Arts and Sciences.

**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 registration day of the session 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 the applicants' records are evaluated, they 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 142. For registered nurses in the degree completion program of the College of Nursing see page 167.

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 2.000 (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 106 credits (College of Engineering).

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 usually 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.

The following applies to the use of advanced standing in meeting degree requirements within the College of Arts and Sciences:

A. General Education. A Statement of Equivalence is prepared by the Dean of the College of Arts and Sciences in regard to the general education requirements for the Bachelor of Arts degree.

A transfer student may apply a maximum of six credits in theology from his advanced standing to the theology requirement. Otherwise, a transfer student with more than 45 credits but less than 75 credits of advanced standing needs to complete two courses (six credits) of theology at Valparaiso University. A transfer student with 75 credits or more of advanced standing needs to complete one course (three credits) of theology at Valparaiso University. Students who transfer into the University with 24 or more semester hours of credit are excused from the freshman seminar requirement.

B. Concentration Requirements. Statements of equivalence for academic majors, interdisciplinary programs or professional block schedules are prepared by the 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 during 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></td>
</tr>
<tr>
<td>In all departments except as required in special authorized curricula (e.g., the B.M.E. program and students preparing for licenses in elementary and secondary school teaching)</td>
<td>17</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>17</td>
</tr>
<tr>
<td>College of Engineering (except in approved block schedules)</td>
<td>20</td>
</tr>
<tr>
<td>College of Nursing</td>
<td>17</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, provided that their formal petitions for such work are granted. Such a petition must be signed by the academic adviser and be addressed to the Dean of the appropriate 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 bear the signature of the instructor of the course, the student’s academic adviser 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 adviser and the Chair of the Department in which the course is offered. Forms are available in the Registrar’s Office.

Deadlines for course addition, course withdrawal, filing for S/U grade and withdrawal 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 can be 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, whether caused by inability or lack of application, 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/add 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 class 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

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>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
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<tr>
<td>D-</td>
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<tr>
<td>F</td>
<td>0.0</td>
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<tr>
<td>I</td>
<td>—</td>
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<tr>
<td>W</td>
<td>—</td>
</tr>
<tr>
<td>S</td>
<td>—</td>
</tr>
<tr>
<td>U</td>
<td>—</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 standing of C (2,000 grade point average) 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 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 I (incomplete) at the official end of the semester concerned.

Authorized withdrawal from a course or from the University within the published deadlines gives 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 S/U grade option (condition 1 above) when 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

*For the School of Law and the Graduate Division, refer to the appropriate bulletin.
appropriate form with the signatures of the student's academic adviser, 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 Vice President 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 advisers 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 101-105 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:

A. Such courses must not be selected from:
   1. The student's major or minor field or fields;
   2. The required courses for any professional degree or pre-professional program, except for liberal arts electives or other courses approved by the Dean of the student's College;
   3. A repeated course, if not originally taken on the S/U basis;
B. Such registration must be signed by the student's academic adviser;
C. 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 Mini, Summer Session or seven-week courses.

NOTE: In selection of the S/U option, students are strongly advised to discuss the implications of that option with their adviser concerning entrance into professional schools.

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. This opportunity is part of the University's Course Intensification Plan. The following regulations pertain to this option for a student:

1. The course must be offered in the College of Arts and Sciences.
2. The course must be offered in the Schedule of Classes for three or more credits.
3. The initiative and responsibility for developing a satisfactory proposal lie with the student.
4. The proposal is subject to the approval of the instructor of the course.
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 adviser 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.

A student who elects to repeat a course must secure the appropriate signature on the form provided for this purpose before repeating the course. The form is available in the Registrar’s Office.

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 (2.00 quality points per credit hour) throughout the course of 124 semester hours will have 248 quality points, 124 credit hours 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 gained to the number of credit hours scheduled. Standing is also referred to as the grade point average.

Note the above exception regarding repetition of a course.

CLASSIFICATION OF A STUDENT
In the College of Arts and Sciences, College of Business Administration and College of Nursing, a student must have 24 semester credits and 48 quality points to be classified as a sophomore; 56 semester credits and 112 quality points to be classified as a junior; 88 semester credits and 176 quality points to be classified as a senior.

In the College of Engineering, a student must have 24 semester credits and 48 quality points to be classified as a sophomore; 60 semester credits and 120 quality points to be classified as a junior; 94 semester credits and 188 quality points to be classified as a senior.

A student in the School of Law should consult that School’s bulletin.

SEMESTER GRADE REPORT
Such a report is sent only to the student and only to the 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.

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 600-699.

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 adviser and the academic dean. The necessary form may be obtained from the Registrar’s Office. This student may 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
year period. 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 previous 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 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 transfers.

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 instruction. 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 page 189.

**DECLARATION OF A MINOR IN THE PROFESSIONAL COLLEGES**

Students in the professional colleges may declare a minor in the College of Arts and Sciences and may have this minor noted on their official transcripts. No more than six hours (seven in the College of Engineering) required of the professional program may be used in fulfilling a minor offered by the College of Arts and Sciences.

**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
advisers 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.

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. Notice of such deficiency appears on the grade report. The Dean of each College establishes procedures to give students who are academically deficient timely warning of their being denied continuation of their studies.

Deficiency warnings are sent to parents and guardians of all 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;
conditions which they must satisfy in order to be readmitted.

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 make-up work may be required.

WITHDRAWAL FROM THE UNIVERSITY*

A student who wishes to withdraw from the University for the remainder of a semester or session must apply to the Vice President for Student Affairs 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 the Vice President for Student Affairs. If

*For the School of Law, consult that School’s bulletin.
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.

Graduation

RESPONSIBILITY OF THE STUDENT

Every candidate for a degree is personally responsible for meeting all requirements for graduation. No University official or adviser 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. 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 in which they reenter 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 or University Senate Standing Committee.

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, must fulfill all the specific course requirements for the second degree.

Students in the Graduate Division should refer to that Division's bulletin for specific information.

CREDIT AND QUALITY POINT REQUIREMENTS

Candidates for graduation with the Associate in Science degree or a bachelor's degree must have a standing of 2.00 or more in all their work at Valparaiso University. In addition, candidates for a bachelor's degree must have a standing of 2.00 or more in any major, minor or interdisciplinary program, based on their work at Valparaiso University. Also, candidates for the Associate in Science degree must have a standing of 2.00 in all of their science courses at Valparaiso University. 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 (a minimum of 15 credit hours in the area of foreign languages) the number of credit hours required for any major, minor or interdisciplinary program;
2. At least three credits in theology;
3. One course designated as University Course for degrees in the College of Arts and Sciences;
4. 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.

*For the School of Law, consult that School’s bulletin.
Ordinarily, credit is not given for courses taken concurrently at other approved schools 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 adviser, 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 11-14 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 fifteenth. 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 fifteenth.

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 resident candidates. 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. 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 from the President of the University. Students who complete their work toward a degree at the end of a Fall Semester or of a Summer Session may 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 standing of 3.800 in their work at this institution will be 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 3.600 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 standing of 3.400 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 standing of 3.500 in any semester except the last semester before graduation 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 was registered for at least fourteen credit hours of work for that semester on campus in the Colleges of Arts and Sciences, Business Administration or Nursing, at least fifteen credit hours in the College of Engineering, or at least twelve credit hours in an International Studies Semester, Special Off-Campus Semester or any other approved cooperating program (pages 11-14).
Graduating senior honors are announced at Commencement and are based on the work of the last two semesters. The standing must be 3.500 cumulatively for the two semesters; restriction 1 above applies, and the total credit hours for both semesters must be at least the cumulative total from restriction two above (for example, a total of twenty-eight credit hours on campus in the College of Business Administration, or a total of twenty-six hours for one semester on campus in the College of Arts and Sciences and one Washington Semester).

For honors in scholarship in the School of Law, consult that School's bulletin.

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 Handbook.

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.

With regard to transcripts of academic records, the University's policy covering "dependency" determination is to consider all undergraduate students in the day program as "dependent," unless they specifically inform the Registrar's Office in writing at the beginning of each academic year that they consider themselves to be "independent."

Official transcripts of academic records are released only upon the written request of the student.
TUITION AND FEES
EXPENSES
HOUSING REGULATIONS
REFUNDS

Tuition and Fees

Undergraduate and Professional Tuition, Full-Time Students

<table>
<thead>
<tr>
<th>VU COLLEGE OR SCHOOL</th>
<th>ACADEMIC EACH YEAR (TWO SEMESTERS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Arts and Sciences</td>
<td>$4,395.00 $8,790.00</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>4,395.00 8,790.00</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>4,590.00 9,180.00</td>
</tr>
<tr>
<td>College of Nursing</td>
<td>4,395.00 8,790.00</td>
</tr>
<tr>
<td>School of Law</td>
<td>4,945.00 9,890.00</td>
</tr>
</tbody>
</table>

FEES

The general fee for each semester amounts to $160.00 for all full-time undergraduate students and $140.00 for all full-time law students. The fee is paid by all full-time undergraduate students registered for at least 12 credit hours per semester. The fee is used to defray the cost of the following services: health and hospitalization program and co-curricular activities. The Student Senate Fee of $44.00 is administered, by authorization, as the Student Senate determines.

Laboratory fees are not charged for regular courses. Students enrolling in laboratory courses are financially responsible for breakage or damage to equipment.

Performance Music Fees. The University encourages students to continue performance music instruction by charging modest fees for private lessons. Students

*For the School of Law, see the appropriate bulletin.*
pay a fee of $150.00 per semester per course for instruction in private or class lessons in performance music. There is no additional charge for use of an instrument or practice room.

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 Day Students, Undergraduate and Professional Programs

Students who register for less than 12 credit hours are classified as part-time students. Such students pay a tuition charge of $370.00 per credit hour except in the School of Law. This charge does not include the use of facilities of the health service nor participation in the student insurance plan.

Auditors pay $370.00 per credit hour equivalent.

Tuition and fees for students enrolled only in courses in the Evening Division offered by the University are listed in a separate publication. Any student who registers for a given semester in day and Evening Division classes is considered to be a day student and is charged the regular charges applicable for a day student. A day student may not take more than 6 credit hours in the Evening Division program.

Tuition charges for certain special programs for registered nurses sponsored by the College of Nursing may be determined by contacting the Dean, College of Nursing, or the Office of Admissions.

SPECIAL FEES

Application—$25.00. This fee is payable at the time of application for admission to the University. It is not refundable.

Readmission—$5.00. This fee is payable at the time of application for readmission to the University. It is not refundable.

Tuition Deposit—$50.00. This fee is required of all new students, both resident and commuter. A refund of $25.00 is given if a written notice of cancellation is received before July 15 for the fall semester or before December 1 for the spring semester.

Housing Deposit—$200.00 ($50.00 for returning students). This fee is required of all students requesting University housing. In case of cancellation, see Refunds on page 197.

Nursing Liability Insurance—variable. 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.

Vehicle Registration—$10.00 per year.

Study Abroad, Cambridge, England—$550.00. Each participant pays this fee.

Study Abroad, Reutlingen, Germany—$650.00. Each participant pays this fee.

Foreign Language House—$200.00. Each resident pays this fee.

Transcript—No charge is made for any transcript issued. No transcript of a student’s record is released until the student has met in full all obligations to the University, financial or otherwise.

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 Dean of Men or Dean of Women.

International Student Transfer Credit Evaluation—$100.00. This fee is payable by each international student who transfers college level work for credit.

For the School of Law, see the appropriate bulletin.

$20.00 for the School of Law.
Tuition and Fees, Expenses, Housing Regulations, Refunds

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 Admissions.

PAYEE

Drafts, checks and money orders should be made payable to the Valparaiso University.

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 Arts and Sciences</td>
<td></td>
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<tr>
<td>Tuition</td>
<td>$4395.00</td>
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<tr>
<td>General Fee</td>
<td>160.00</td>
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<tr>
<td>Rent of Room and Board</td>
<td>1350.00</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>200.00</td>
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<tr>
<td></td>
<td>$6105.00</td>
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<tr>
<td>College of Business Administration</td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$4395.00</td>
</tr>
<tr>
<td>General Fee</td>
<td>160.00</td>
</tr>
<tr>
<td>Rent of Room and Board</td>
<td>1350.00</td>
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<tr>
<td>Books and Supplies</td>
<td>200.00</td>
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<tr>
<td></td>
<td>$6105.00</td>
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<tr>
<td>College of Engineering</td>
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<tr>
<td>Tuition</td>
<td>$4590.00</td>
</tr>
<tr>
<td>General Fee</td>
<td>160.00</td>
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<tr>
<td>Rent of Room and Board</td>
<td>1350.00</td>
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<tr>
<td>Books and Supplies</td>
<td>250.00</td>
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<tr>
<td></td>
<td>$6350.00</td>
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<tr>
<td>College of Nursing</td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$4395.00</td>
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<tr>
<td>General Fee</td>
<td>160.00</td>
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<tr>
<td>Rent of Room and Board</td>
<td>1350.00</td>
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<tr>
<td>Books and Supplies</td>
<td>250.00</td>
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<tr>
<td></td>
<td>$6155.00</td>
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<tr>
<td>School of Law</td>
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<tr>
<td>Tuition</td>
<td>$4945.00</td>
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<tr>
<td>General Fee</td>
<td>140.00</td>
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<tr>
<td>Rent of Room and Board</td>
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<tr>
<td>Books and Supplies</td>
<td>300.00</td>
</tr>
<tr>
<td></td>
<td>$5385.00</td>
</tr>
</tbody>
</table>

Estimated expenses for room and board are based upon a minimum meal plan buy-in of $575.00 per semester and double occupancy room rent of $775.00 per semester. A limited number of single rooms may be made available at an additional cost of $225.00 per semester.

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 193) are not included in these estimates.

Amounts due the University are payable in full at the time of registration for each semester. Parents and students are billed approximately three weeks before registration with an invoice 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 registration. The minor adjustments in the billing required by additional course fees, for example, are detailed in a statement forwarded to parents and students approximately one month after registration.

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, 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 transcript is given for a student whose account with the University or the Student Senate has not been settled in full.

Loans such as Perkins NDSL (National Direct Student Loans) or Valparaiso University Student Loans become due as stated in the promissory note signed by the student. Transcripts are not released
to students who fall in arrears on payment of these loans.

EDUCATIONAL EXPENSE PAYMENT PLANS

Valparaiso University participates in a number of deferred payment plans for the convenience of those students and parents who may wish to spread out payment over the school year or beyond. Under these plans, monthly payments may be arranged for the payment of tuition, fees, room and board.

Listed below, along with a brief description, are the plans approved for use by the University. Detailed information is normally sent directly to each admitted applicant by the individual plan sponsors. Should a student not receive this information or should a student have further questions, the address and phone number of each of the plans is also provided.

1. Knight Tuition Payment Plans, Knight Insurance Agency, Inc. 53 Beacon Street, Boston, Massachusetts 02108. Phone: 617-742-3911. Two separate plans are offered. The Insured Tuition Payment Plan is a monthly savings plan for students or parents who intend to meet education expenses on a monthly basis without borrowing. The Extended Repayment Plan is a loan plan designed to keep the size of monthly payments low. Under this latter plan, you may borrow for four years of college and extend repayment over ten years. Both plans require the payment of an initial fee.

2. Academic Management Services, Inc. 1110 Central Avenue, P.O. Box 1000, Pawtucket, Rhode Island 02862. Phone: 800-556-6684. This plan 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 required payment of an application fee.

3. The Tuition Plan, Donovan Street, Concord, New Hampshire 03301. Phone: 800-258-3640. Two separate plans are offered, and a third is available in cooperation with Manufacturers Hanover, the parent company. A Monthly Budget Plan allows parents and students to divide a year's expenses into budgeted monthly payments. An annual participation fee is charged. The Educational Loan Program allows families to spread payments throughout and beyond the school years, thus reducing the size of the monthly payments. The third plan, the Educational Line of Credit, is a newly developed loan in the form of a substantial credit line that can be drawn upon over the years to meet education expenses of students.

Housing Regulations

The University’s regulations require all freshmen, sophomores and juniors* to live in University residence halls. Exceptions are made for veterans, those who will be 21 before the next January 1, those living with parents or spouse, sophomore and juniors who live in the Foreign Language House, and sophomore and junior fraternity men who live in a fraternity house. 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 or in the Foreign Language House during the spring semester.

Senior students may apply to live in University residence halls. Senior, graduate and law students may examine, in person, in the Housing Office a listing of rooms in private homes, apartments and homes for sale or rent. Every landlord whose property is listed has signed a non-discrimination statement. 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. The University is not involved in arrangements between students and landlords, except in the event of racial discrimination.

Application. An application form for University housing is mailed to each new student with the Intent to Enroll form. This application and the $200.00 deposit (tuition and housing) should be returned to the Office of Admissions as soon as

*Class standing is determined by student classification policy, page 186.
possible. All checks should be made payable to Valparaiso University. A student who occupies a room in a residence hall will have $50.00 credited to his tuition and fees account.

All returning students who are required to live in University residence halls according to University housing regulations must complete an Upperclass Housing Agreement form and make an advance room deposit of $50.00 at the Business Office on or before the housing deadline date indicated by the Housing Office.

Students who wish to live in the Foreign Language House must apply through the Department of Foreign Languages and Literatures. Residents for the following year will apply and be selected each spring before the housing deadline date set by the Housing Office.

Assignment Policy. New freshman and transfer student assignments are made by the Housing Office in the order in which their Intent to Enroll forms and deposits are received according to space availability. Returning upperclass student assignments are made by the Housing Office according to student classification. Seniors have first choice, then juniors, then sophomores. In those halls where the number of applicants exceeds the number of spaces available, assignment is made by lottery. All Upperclass Housing Agreements received before the deadline indicated by the Housing Office have equal consideration under this system within the limits of student classification, and if a lottery is necessary, the laws of chance prevail.

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 Housing Office.

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. One-half of the deposit is refunded if notification of cancellation is received between May 2 and July 15 for fall semester and between November 2 and December 15 for spring semester. No refund will be given if enrollment cancellation notice is given after these respective dates.

Refunds-Returning Students. One-half of the housing deposit is refunded if written notice of cancellation is received by the Housing Office on or before July 1 for the fall semester, or on or before December 1 for the spring semester. No refund is given if cancellation is given after July 1 for fall semester and December 1 for spring semester. The Upper Class Housing Agreement may not be cancelled after July 31 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. An agreement is entered into by all students who are assigned University housing which makes it mandatory for them to occupy the residence hall space assigned for both semesters of the school year excluding vacation periods. Students are permitted to move out of the residence hall only if they withdraw from the University or graduate.

Roommate. Preferences should be listed on the housing application. Freshmen are notified in July of their roommate assignments. The specific room number in the residence hall is given when the student arrives on campus.

Arrival at the residence hall for new freshmen and new transfer students should coincide with the first day of orientation activities, to be announced later. All students are expected to report immediately to their assigned residence halls when they arrive on campus for specific room assignment.

Furnishings. All rooms in the University residence halls are provided with the necessary basic furniture. Occupants supply their own bedding, pillows, towels, lamps and throw rugs if desired. Coin-
operated washers and dryers and ironing boards are also provided within each residence hall. Several laundries and dry cleaning establishments are located adjacent to the campus. Draperies are provided. Further information is available from the Housing Office.

University residence halls are staffed by Resident Directors.

All students residing in University owned residence halls are financially responsible for damage to rooms and equipment. Residence Hall Directors report such damage to the Business Office and the student or the parent is billed for the cost of repair or replacement.

DINING FACILITIES

The University operates dining facilities in the Valparaiso Union and selected residence halls for the convenience of the students. Service is available during periods of scheduled classes. When service is not provided in a residence hall, students residing in such halls may participate at a neighboring dining facility.

All students living in resident halls other than Scheele Hall (sorority occupancy) must buy into the a'la carte board plan at the set mandatory rate until they have completed six semesters of college attendance.

Transfer 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 rate for 1990-1991 is $575.00 per semester. Those dollars may be used to purchase food in any of the residence hall dining rooms, Union cafeteria (during designated hours) or campus grocery stores during the semester. All items for sale are individually priced.

The rate for students living in the Foreign Language House is $200.00 per semester.

Non-mandatory meal plan students, during the 1990-1991 academic year, may purchase an initial meal plan credit for a minimum of $195.00. Further purchases may be made in $25.00 increments.

Refunds

In cases of formal voluntary withdrawal only, tuition, room rent and board in University operated dormitories are refundable. Such refunds are available only during the first seven-week period of each semester, beginning with the first official day of classes, and are made in accordance with the schedule below, based on the day the application to withdraw is submitted to the Registrar's Office. If a student is dismissed, there is no refund due. General, special and laboratory fees are never refunded.

<table>
<thead>
<tr>
<th>WEEK OF SEMESTER</th>
<th>PERCENTAGE REFUND FOR TUITION &amp; ROOM</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>90%</td>
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<tr>
<td>2</td>
<td>80%</td>
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<td>3</td>
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<td>6</td>
<td>40%</td>
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<tr>
<td>7</td>
<td>30%</td>
</tr>
</tbody>
</table>

Board: 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.

Refunds are made to students unless the University is instructed in writing to remit to parents or guardians. Refunds must be claimed in writing within six months of the close of the semester in which the assessments were made.

If a student or a parent feels that individual circumstances warrant exceptions to this policy, a written request should be submitted to the Vice President for Business Affairs.
Financial Aid

The financial aid program at Valparaiso University is intended to provide financial assistance to students who, without such aid, would be unable to attend the University. In selecting the students to receive this assistance, the University places primary emphasis on the student's academic achievement, character and future promise. 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. Assistance awarded by the University should be viewed as supplementary to the effort of the family.

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 Admissions. No student may be considered for assistance until his formal application has been approved.
2. Submit a Financial Aid Form to the College Scholarship Service or the American College Testing Service with Valparaiso University listed as an institution to receive a copy and its analysis. This form can be secured from your high school guidance office or by writing to the Office of Financial Aid, Valparaiso University. (Indiana residents must use the Indiana version and file before March 1 to be eligible for Indiana awards.) The filing of this form should be completed as soon after January 1 as possible. The Office of Financial Aid cannot guarantee aid consideration for students whose
Further details in regard to financial aid may be obtained from the Financial Aid Office.

SCHOLARSHIPS AND SPECIAL AWARDS

Valparaiso University makes available a variety of scholarships and awards. Eligibility for all scholarships and grants is determined by the financial aid 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; however, the University reserves the right to alter any scholarship or award should circumstances dictate. Since funds are limited, students should apply for admission as early as possible in the academic year preceding matriculation for priority consideration. In the event that a student is eligible for more than one scholarship or award, the student will receive award or scholarship with the largest value.

Presidential Scholarships. High school seniors with outstanding scholastic achievement. May be awarded without regard to financial need. Scholarships range in size from $2500 to $8500. Renewed if yearly grade point average is 3.0 or above.

University Scholarships. Full-time undergraduate students who exhibit excellent scholastic ability. Awards range from $500 to $2000. Renewed if yearly grade point average is 3.0 or above.

Alumni Heritage Awards. Full-time undergraduate sons and daughters of Valparaiso University alumni. Awards are renewed if the yearly grade point average is 2.0 or above.

Martin Luther Awards. Full-time undergraduate sons and daughters of full-time Lutheran professional church workers. Awards are $3000 and are renewed if the yearly grade point average is 2.0 or above.

Lutheran High School Awards. Full-time undergraduate students who are above average in academic ability. Awards range are $1000 and are renewed if the yearly grade point average is 2.0 or above.

Diversity Awards. Full-time undergraduates of multicultural background who display exceptional promise. Award is up to $2000 and is renewed if the yearly grade point average is 2.0 or above.

Leadership Awards. Full-time undergraduates demonstrating special leadership abilities and achievement. Award is up to $2000 and is renewed yearly if a grade point average of 2.0 or above is maintained.

Indiana Scholarship. Full-time undergraduates who are residents of Indiana and have demonstrated above average academic ability. Award is for $2000 and is renewed annually if a grade point average of 3.0 or above is maintained.

Lutheran Presidents' Scholarships. Full-time Lutheran undergraduate students who are nominated by the Presidents of the major Lutheran Churches. Award is up to $2000 and is renewed if the yearly grade point average is 3.0 or above. (Direct inquiries to the Office of Admissions.)

Athletic Grants. Full-time undergraduates who are nominated by the Director of Athletics, usually upon recommendation of the respective coach. Amounts vary in size and are renewed upon the recommendation of the Director of Athletics.

Music Grants. Full-time undergraduates who participate in musical ensembles. Recipients are nominated by the Department of Music usually based on auditions. Amounts vary and are usually renewed annually if the yearly grade point average is 2.0 or above and performance is satisfactory.

University Grants. Full-time undergraduate students with financial need, who may not qualify for other University scholarships or awards. Grants range in size from $200 to $3000.

Federal Grants. Federal financial aid programs, including Pell grants and Supplemental Educational Opportunity Grants (SEOG), are administered through the Office of Financial Aid and are based solely on financial need as determined by a financial need analysis, such as the Financial Aid Form (FAF).
State Grants. The State of Indiana provides the Indiana Higher Education Award and the Freedom of Choice Award to Indiana residents. The University also participates in the Hoosier Scholars program and the Congressional Teachers Scholarship program. The Lilly Foundation also makes available supplemental grants to Indiana residents. Eligibility for all Indiana programs requires the filing of the Indiana version of the Financial Aid Form (FAF) prior to the strict deadline of March 1.

Loans. Valparaiso University offers institutional loans and assists in administering several federal loans and several private loan programs. Eligibility is determined on the basis of financial need. Several non-need based loan programs are also available.

Campus Employment. Students are employed on campus in a variety of positions. Selection for employment is primarily based on financial need. However, there are a few positions available where need is not a factor.

Complete information regarding financial aid programs available at Valparaiso University is compiled in the Financial Aid Booklet.

Renewal. All need-based financial assistance requires the filing of a Financial Aid Form annually. Renewal depends on continued need, the availability of funds, and satisfactory academic progress. Academic deficiency precludes a student from receiving financial assistance.

Satisfactory Academic Progress. A student must maintain satisfactory academic progress to be eligible to receive financial aid. Satisfactory academic progress can be defined as "proceeding toward the successful completion of degree requirements." The normal standards of academic progress which a Valparaiso University student must meet to remain eligible for financial assistance are as follows:

1. Achievement and maintenance of a cumulative grade point average of at least 2.0 after two semesters of college work.
2. Completion of a full-time course load (minimum of 12 credit hours per semester), except when financial aid was awarded on a part-time basis.

The student who fails to meet these standards of satisfactory academic progress will be placed on Financial Aid Probation for one academic year. The student will still be eligible to receive financial assistance during this probationary period. Merit awards such as Alumni Heritage, Martin Luther, and Diversity Awards are included in this probationary guideline. Failure to meet the standards of satisfactory academic progress at the end of the probationary period results in the total loss of all financial aid.

Scholarships for which a 3.0 cumulative grade point average is required are not renewed when a student fails to achieve or maintain a 3.0 grade point average after the student has completed two or more semesters at the University. If a student loses a scholarship or merit award because of failure to maintain the required grade point average, the scholarship or award may not be restored.

Scholarships

APPLICATION REQUIRED
Students should contact the Office of Admissions and Financial Aid for further information about the following scholarships.

- Aid Association for Lutherans Scholarships. All College and Lutheran Campus Scholarships.
- Luella R. and Herbert P. Buetow Endowed Scholarship. Preference to student(s) who plan to enter upon a career in the broad service of the Church. The award is made on the basis of academic ability, character, future promise and need for financial assistance.
- Dow Chemical Undergraduate Scholarships. Annual awards to outstanding high school students electing to work toward a B.S. in Chemistry. Preference to candidates who intend to pursue a Ph.D. Renewable during four years at Valparaiso University. Awards based on merit.
- 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. Annual awards with preference to sons or daughters of University Guild members.
- Lutheran Brotherhood. Junior and senior college scholarships for Lutheran students and Lutheran Brotherhood Members’ scholarships.
- Lutheran Brotherhood Endowed Scholarship. Established by Lutheran Brotherhood through its
endowed challenge grant program. Restricted to Lutheran students.

- **Valparaiso University Guild Endowed Scholarship.** Scholarships awarded annually to sons or daughters of Guild members.

- **Ed. L. Voelz Endowed Scholarship.** Preference to a student who is a resident of Bartholomew County, Indiana, and a graduate of St. Peter’s Lutheran School.

**NO APPLICATION REQUIRED**

Listed below are the scholarships awarded annually by Valparaiso University. Recipients of the specific scholarships listed below are selected from the total group of applicants who have completed the application for admission. On the basis of the admission application, a candidate will automatically be considered for whichever of these restricted awards the student is eligible. Students who are named Presidential or University scholars often have their scholarships funded by these special scholarships. If additional information is required, the student will be contacted after the standard application for admission has been filed. **Students need not make a separate application or request to be considered for these awards.**

- **Honorary Citation.** One-time awards to students with no need.

- **Mr. and Mrs. Oliver W. (Emma) Allen Scholarship.** Preference to a pre-ministerial student.

- **Alpha Phi Delta Sorority Scholarship.** Preference to upperclass sorority members.

- **Anna B. Althans Scholarship.** Preference to a social work major. Annual Award.

- **Alumni Board Endowed Scholarship (PACT).** Established by members of the 1985 Valparaiso Alumni Board. Designated for sons or daughters of alumnae(i). Financial need not a criterion.

- **Alumni Heritage Award Endowment Fund.** Awarded to dependent children of Valparaiso University alumni enrolled in a full-time undergraduate program, regardless of financial need of the applicant.

- **Ament-Brenner Endowed Scholarships in Nursing.** Preference to students in nursing from Lutheran congregations in the greater St. Louis area, with preference given to students belonging to congregations affiliated with the Lutheran Charities Association and secondly with The Lutheran Church-Missouri Synod. Scholaristic ability and financial need will be major criteria.

- **Amoco Foundation, Inc. Scholarship.** Preference to juniors or seniors majoring in mechanical engineering.

- **John W. Anderson Scholarship.** Preference to College of Nursing students from Northwest Indiana.

- **Reverend Theodore and Vera Andres Memorial Endowed Scholarship.** Annual award.

- **Robert Augustine Memorial Endowed Scholarship.** Preference to students from Wisconsin.

- **Eric Lee Bandick Endowed Scholarship.** This fund was established by Lorenz Bandick in memory of his son, Eric Lee Bandick, to be used as a scholarship/loan fund for needy and worthy engineering students.

- **Bark Memorial Endowed Scholarship.** Established by Elda M. and Alfred E. Bark in memory of their daughter. Preference to pre-ministerial students.

- **Mr. and Mrs. Harry G. Barr Endowed Scholarship.** Preference to a student from Arkansas.

- **Herbert C. Bartelt Endowed Scholarship.** Preference to a senior student who plans to enter the Lutheran Ministry by way of Concordia Seminary in St. Louis, Missouri, or Fort Wayne, Indiana.

- **Emory and Elsie Bauer Endowed Scholarship.** Awarded to a student who participates in varsity football and baseball.

- **The Aimee M. L. Becker Memorial Endowed Scholarship.** Preference to a student from Missouri.

- **Dr. and Mrs. Henry Frederick Beckman Endowed Scholarship.** Preference to a student from Indianapolis, Indiana.

- **Victor H. Bergmann Endowed Scholarship.** Annual Award.

- **Charlotte Berns Scholarship.** Preference to a student in the College of Nursing.

- **Wilfred and Olga Bernthal Scholarship.** Annual award. Established by their son and daughter-in-law, Mr. and Mrs. Harold G. Bernthal.

- **Inez C. and W. H. Bischel Scholarship.** Varying amounts for needy students.

- **W. H. Bischel Scholarships.** Annual award.

- **Charles H. and Elizabeth Blume Endowed Scholarship.** Preference to students from Northwest Indiana.

- **William F. and Martha Boeger Memorial Scholarship.** Varying amounts for needy students.

- **Rudolf F. Boening Memorial Scholarship.** Established by the Valparaiso Board of Realtors in memory of past president Rudolf F. Boening. Preference to senior business majors from Porter County, Hobart or Lake Station who have maintained an academic standing of 3.0, regardless of need.

- **Mrs. Amalie Bokerman Endowed Scholarship.** Preference to a resident of Pennsylvania.

- **John V. Borgerding Endowed Scholarship.** Preference to a resident of greater Pittsburgh or Pennsylvania.

- **Mr. and Mrs. Stanley E. Bovim Endowed Scholarship.** Established in their honor on the occasion of their forty-fourth wedding anniversary. Preference to students from Wisconsin.

- **Otis R. and Elizabeth Bowen Endowed Scholarship.** Annual award.

- **Professor John Bowman Endowed Scholarship.** Preference to students enrolled in the School of Law.

- **Martin W. Brandt, Ph.D., Memorial Endowed Scholarship.** Award for Chemistry major. Applicant must have substantial financial need; demonstrated scholastic ability, good character, and the maturity, perspective and motivation to undertake summer work each undergraduate summer. Preference to orphaned or one-parent children.

- **The Paul and Cleo Brandt Endowed Scholarship.** Preference to students who participate in the University’s Division I basketball.
Financial Aid, Scholarships, Loan Funds

- Carl and Isabelle Brauer Endowed Scholarship. Preference to active member(s) of a Lutheran congregation.
- Ruth Brown Memorial Endowed Scholarship (PACT). Preference to a female student who is a physical education major, field hockey athlete and Lutheran. If there is not a qualified applicant of this description, preference to any student whose major is physical education. Financial need not a criterion.
- Julius C. Bruechner Endowed Scholarship. Annual award to any student in need of assistance.
- Olive Cattau Memorial Endowed Scholarship. Preference to students from Michigan and Western New York. Special consideration to students preparing for full-time service to the Church.
- Dr. Eugene J. Chesrow Memorial Endowed Scholarship. Preference to pre-medical students from Illinois.
- John E. Christen Memorial Endowed Scholarship. Preference to students in the School of Law.
- City Glass Specialty, Incorporated. Preference to students from Fort Wayne, Indiana.
- Emma E. Claus Scholarship. Preference to students participating in the Christ College program.
- Robert F. and Caroline McMillan Collings Endowed Scholarship. Preference to New England students majoring in either art or speech and drama.
- Concordia Lutheran Church, Kirkwood, Missouri, Endowed Scholarship (PACT). Annual award. Preference to a student from this church, then to a student from Christ Community Lutheran School in suburban St. Louis, then to one from the greater St. Louis area.
- Robert F. Connell Memorial Scholarship. Preference to students in the School of Law.
- Delma Coover Endowed Scholarship Fund. Awarded annually with preference to student(s) majoring in music.
- Kenneth Bayard Copeland and Todd Cushman Copeland Family Memorial Endowed Scholarship. Preference to engineering and pre-medical students.
- The Eugene Crawford Memorial Endowed Scholarship (PACT). Preference to student of Native American extraction; next (if no student applies within three years) to a student pursuing courses relating to Native American studies or Native American concerns.
- Sister M. Hugoline Czaplinski Scholarship. Preference to a student pursuing a Bachelor of Science degree in nursing, from Lake or Porter County, then to a student from surrounding counties in Indiana or Illinois. Financial need is not a criterion.
- Roy and Gertrude Dalman Scholarship. Preference to a student from the Shawano, Wisconsin area, on the basis of merit or need.
- The Phyllis Ann Daly Memorial Scholarship. Awarded to a deserving individual who otherwise would not have an opportunity to attend the university.
- Arthur Vining Davis Endowed Scholarship. Awarded annually.
- Chaplain Edward G. Deffner Memorial Scholarship. Awarded annually on the basis of merit or need. Preference to students from Wisconsin.
- Edwin F. Deische Endowed Scholarship. Preference to students from Northern Illinois.
- Delta Upsilon Chapter of Eta Sigma Phi Scholarship. Classics honorary. Awarded annually to promising students who have had at least one year of Greek or Latin. Preference given to Eta Sigma Phi members.
- John L. Devoss Memorial Scholarship. Preference to third-year law students who are from Adams County or who intend to practice in the Adams County area.
- Sophie Doern Endowed Scholarship. Annual award.
- Max E. Dolleck Scholarship. Preference to Missouri Synod Lutheran student(s).
- Donald W. Dopp Memorial Endowed Scholarship. Established with gifts from members of the Dopp family, preference to Michigan residents, preferably from Macomb County.
- Wilbur C. Dopp Memorial Endowed Scholarship. For employees of Dopp Distributors, Incorporated, or for an employee's son, daughter or grandchild.
- Wilbur H. and Marguerite M. Dosland Endowed Scholarship. Awarded annually on the basis of merit or need with preference to students from Eastern Iowa.
- Hugo and Edna Duesenberg Endowed Scholarship. Established by the family in honor of their parents. Preference to graduates from St. Louis Lutheran high schools.
- Richard W. and Phyllis (Buehner) Duesenberg Endowed Scholarship. Established by Richard W. and Phyllis (Buehner) Duesenberg, of St. Louis, Missouri, in memory of his parents, Hugo and Edna Duesenberg, and her father, Rev. Andrew J. Buehner. Annual award. Preference given to graduates from St. Louis Lutheran High Schools and to a student in the School of Law.
- Dr. and Mrs. Ara V. Dumanian Scholarship. Annual award.
- Rupert and Ruth Dunklaud Endowed Scholarship. Preference to a student from Nebraska.
- Charles and Ruth Ebenreiter Family Endowed Scholarship (PACT). Annual award. Preference shall be given to a student from Sheboygan or Oconto counties in Wisconsin and to students having financial need.
- Reverend Ernest H. Eggers Memorial Endowed Scholarship. Annual award with preference to students from Texas.
- Reverend and Mrs. P. J. (Myrtle E.) Eckstaedt Endowed Scholarship. Annual award.
- Faith Lutheran Church, Lake Forest, Illinois, Endowed Scholarship (PACT). Preference to student from this church, then to Lutheran student from the Chicago area. Financial need not a criterion.
- Robert Elmore Findling Memorial Scholarship. Preference to engineering students.
- The Helen Finnhaber Memorial Endowed Scholarship (PACT). Annual award. Preference to a Lutheran student from Ann Arbor, Michigan, then to any Lutheran student from Michigan. Financial need not a criterion.
First National Bank of Valparaiso Scholarship. Preference to students from Porter County, Indiana.

Carl Christian Flesch Memorial Endowed Scholarship. Preference to College of Engineering student.


The Esther H. and Elmer E. Foeller Memorial Endowed Music Scholarship (PACT). Annual award. Preference to a Lutheran student who has chosen music as a major. Financial need not a criterion.

Herbert J. Foeller Endowed Scholarship. Annual award.

Edith Schuchardt Forsberg Family Memorial Endowed Scholarship. Established by Harvey B. Schuchardt. Preference to students from Wisconsin.

Arthur Franke Memorial Endowed Scholarship. Annual award.

The Paul and Emilie Freitag Endowed Scholarship. Preference to Lutheran students from New England area.

Leslie F. and Katherine D. Freking Endowed Scholarship. Preference to students from the Southeastern United States.

Earl R. Freuiling Endowed Scholarship. Preference to students who participate in cross-country or other sports.

William A. Fuzy Family Endowed Scholarship. Annual award.

The Daniel and Thomas Gahl Endowed Scholarship (PACT). Established by family, colleagues and others. Preference to a student whose major is in the field of history.

Gainer Bank. Preference to students from Northwest Indiana.

The Dr. Ernest J. Gallmeyer Memorial Endowed Scholarship. Preference to Lutheran students from the Fort Wayne, Indiana area.

Dr. and Mrs. E. C. Galsterer Endowed Scholarship. Preference to students from Saginaw Valley, Michigan.

William C. Gast Memorial Endowed Scholarship. Preference to children of employees of Gast Manufacturing Corporation who have identified themselves as such—with the scholarships going to students majoring in engineering from southwestern Michigan in any year that the employee’s children do not qualify or are not available.

Grace Lutheran Church, Winter Haven, Florida, Endowed Scholarship (PACT). Preference to a student from this church; then to a student from Florida or neighboring state. Financial need not a criterion.

Grace Lutheran Church, River Forest, Illinois, Endowed Scholarship (PACT). Established by Grace Lutheran Church, River Forest, Illinois, awarded annually, preference to a student from this church, then to a student from Illinois or one of its neighboring states. Financial need is not a criterion.

Grace Lutheran Church, Tulsa, Oklahoma, Endowed Scholarship (PACT). Preference to a student from this church, then to student from Tulsa or Oklahoma, or neighboring state. Financial need not a criterion.

The Erwin and Helen Gratzer Endowed Scholarship (PACT). Two awards annually; first award: preference to a member of Messiah Lutheran Church, Fairview Park, Ohio, then to a student of an Evangelical Lutheran Church in America (E.L.C.A.) congregation in the Cleveland, Ohio, metropolitan area; second award: preference to a student of an E.L.C.A. congregation in the Cleveland area, then to a member of the northeastern Ohio synod of the E.L.C.A.

Earl L. Grieger Memorial Endowed Scholarship. Annual award to undergraduate students with preference to students from Porter County, then to students in the College of Business. Financial need not a criterion.

Henry C. and Ura E. Guhl Endowed Scholarship. Annual award.

The Arthur E. Hallerberg Memorial Endowed Scholarship (PACT). Established by the family. Preference to student(s) preparing to teach mathematics. This is a merit award and nominations are made by the chairperson of the Mathematics Department.

The Elsa and Lloyd Halverson Endowed Scholarship. Annual award.

Clarence and Elsie Hansen Endowed Scholarship. Annual award.

The Rev. Dr. Oliver R. and Bertha Harms Endowed Scholarship. Annual award.

The Edward W. Hartman Memorial Endowed Scholarship. Preference to a Lutheran student who is a graduate of Concordia Lutheran High School in Fort Wayne, Indiana.

The Reverend Harlan Hartner Endowed Scholarship. Preference to students from the Greater Kansas City area.

Harvey Scholarship. Preference to a Pre-osteopathic major.

Lilly Hayden Memorial Endowed Scholarship. Preference to students from Immanuel Lutheran Church, Grand Rapids, Michigan, or other students from that area.

Walter T. F. and Laura M. Heinicke Endowed Scholarship. Preference to pre-medical student(s), sons or daughters of ministers or teachers of the Lutheran Church-Missouri Synod.

John and Dorothea Helms Endowed Scholarship. Annual award. Preference to students studying Greek or Latin.

Dr. Karl H. Henrichs Endowed Scholarship. Established in his honor by Mr. and Mrs. Henry J. Moellerling. Preference to Lutheran students.

Luetta M. Henrichs Endowed Scholarship Fund. Established in her honor by family and friends. Annual award.

The John and Rosa Herscher Endowed Scholarship. Established in their honor by their daughter, Dorothy. Awarded on the basis of need and academic achievement with preference given to a Lutheran student from Kankakee County, Illinois, then from the Northern Illinois District.

Herman C. Hesse Endowed Scholarship. Preference to engineering students. The awardees to be noted as Hesse Scholars.

Mr. and Mrs. Peter Hessler Endowed Scholarship. Annual award.

The William and Vera Heyne Endowed Bach Scholarships (PACT). Established by family and friends, awarded annually, preference to a student majoring in church music, then to any student whose major field is music. Financial need is not a criterion.

Charles H. Hickman Memorial Endowed Scholarship. Annual award.
The Richard Hoeppner, Walter and Mary A. Hoeppner, Wagner and Evans Scholarship. Administered by the School of Law’s Financial Aid Committee. Preference to one student from each of the second and third year classes.

Richard J. Hoerger Endowed Scholarship. Preference to students enrolled in political science courses.

The Harold and Margaret Hoffman Endowed Scholarship. Preference to a student from the Fox River Valley in Kane and McHenry Counties in Illinois.

Dr. O.C.J. Hoffmann-Dr. A. G. Huegli Endowed Scholarship. Preference to St. Louis Lutheran High School Graduates, and then to St. Louis area students.

Clara A. Holeman Scholarship. Preference to students in the fields of chemistry and medicine.

Oscar Homann Endowed Scholarship. Preference to students from Illinois.

Hope Lutheran Church, Park Forest, Illinois, Endowed Scholarship (PACT). Preference to a student from this church, then to a student from Illinois or one of its neighboring states. Financial need not a criterion.

Dr. and Mrs. A. G. Huegli Endowed Scholarship for Leadership. Established in their honor by their children.

A. G. Huegli Southeastern Michigan Endowed Scholarships. Preference to students from Southeastern Michigan. Recipients are designated “Huegli Scholars.”

Joyce Huegli Memorial Endowed Scholarship. Preference to student(s) in the College of Nursing.

Immanuel Lutheran Church, Michigan City, Indiana, Endowed Scholarship (PACT). Annual award. Preference to members of Immanuel Lutheran Church, then to a Lutheran student from the Northern Indiana area.

The Incentive Endowed Scholarship (PACT). Annual award. Intended to be an incentive to young men and women who for financial reasons might normally be disinclined to pursue a college education; therefore, to be awarded to economically disadvantaged inner-city or rural applicants.

Indiana Federal Savings and Loan Association of Valparaiso. Preference to Porter County, Indiana resident enrolled in the College of Business Administration.

Judge and Mrs. F. A. Jaeckel Memorial Endowed Scholarship. Annual award.

Richard F. and Martha W. Jeske Endowed Scholarship. Annual Award.

Edward Jiede, Jr. Endowed Scholarship. Annual award.

Mr. and Mrs. Emil Jochum. Scholarships in varying amounts up to full tuition annually for students from Ohio, preferably Cleveland and vicinity.

Shirley Ayers Jud Memorial Endowed Guild Scholarship. Scholarships awarded annually to sons or daughters of Guild members.

Dr. Philip G. Kapfer Memorial Endowed Scholarship. Annual award based on academic merit and character, to a Valparaiso University senior, with preference to a student majoring in chemistry and preparing for a teaching career. Financial need not a criterion.

Bud Keller Memorial Endowed Scholarship (PACT). Established by the Valparaiso University Guild of Orange County, California. Preference to sons and daughters of guild members, or relatives of Bud Keller, then to any Lutheran students from the Orange County geographical area. Financial need not a criterion.

James S. Kemper Foundation Scholarship. To be awarded to one freshman each year. Candidates must have substantial academic potential and ability, and the maturity, perspective and motivation to undertake summer work experience in a rigorous business environment each of their undergraduate summers.

Edwin H. Klinkerman Endowed Scholarship. Annual award. Preference given to deserving, needy student(s) preparing for the pastoral ministry in the Lutheran Church-Missouri Synod.

Walter C. and Elizabeth K. Klug Memorial Endowed Scholarship. Annual award.


Mr. and Mrs. Edwin H. Koeneman Endowed Scholarship. Preference to students from Concordia Lutheran High School, Fort Wayne, Indiana.

Erra E. Koenemann (Mrs. Henry F.) Endowed Scholarship. Preference to students in the College of Nursing.

The Eleanor R. Koenig Memorial Endowed Scholarship (PACT). Annual award. Preference to students from Immanuel Lutheran Church, Valparaiso, Indiana; then to a student of African American, Hispanic, or foreign identity. Financial need not a criterion.


Jayne Hoffmann Kraegel Memorial Endowed Scholarship. Preference to students with an interest in journalism.

Matilda M. Kramer Memorial Endowed Scholarship. Annual award. Preference to a student in the social work field who will also be working in service to the church, if possible. Further preference to a student from Allen County, Indiana.

John W. and Clara A. Krathwohl Endowed Scholarship. Preference to students from the state of Indiana, especially from the Peru, Indiana area.

Mr. and Mrs. Gilbert W. Krause Athletic Endowed Scholarship. Established by members of their family on the occasion of their fortieth wedding anniversary. Preference to students with outstanding athletic and academic records.

Reverend Paul G. Krentz Memorial Endowed Scholarship (PACT). Established by family and Our Savior Lutheran Church, Aurora, Illinois. Preference to a student from this church; then to student from the Fox River Valley or greater Chicago area. Financial need not a criterion.

The Ruth Krentz Endowed Scholarship (PACT). Established by Our Savior Lutheran Church, Aurora, Illinois, awarded annually, preference to a student from
Financial Aid, Scholarships, Loan Funds

- This church, then to a student from the greater Chicago area. Financial need is not a criterion.
- William H. Kroeger Endowed Scholarship. Preference to a resident of Akron, Ohio.
- Walter H. Kroehnke Scholarship. Established with gifts from the Reverend and Mrs. Justus P. Kretzmann and other members of their family. Preference to students in the College of Business Administration.
- Krueckenberg Family Scholarship. Awarded annually, on the basis of merit or need, with preference to a student from Wisconsin, preferably from the Clintonville area.
- Krumseg Scholarship-Loan Fund. This trust is established in memory of Charles J. Krumseg, Ida F. Krumseg and Elma Krumseg Kraft.
- Arlene E. Laesch Endowed Scholarship. Awarded on the basis of academic ability, character, and need. Preference to a Lutheran student.
- Charles and Meta Laesch Endowed Scholarship. Awarded annually to a pre-medical student with preference to a Junior student planning to enter osteopathy, if available.
- Erwin A. and Eleanor H. Lange Endowed Scholarship. Preference for students in accounting or business administration.
- Harry and Emma Lange Memorial Endowed Scholarship. Established by the children and relatives of Harry and Emma Lange, Seymour, Indiana.
- Edward and Margaret Larson Endowed Scholarship. Preference to Northwestern Indiana student.
- Tommy Lasorda Endowed Scholarship. Funded by friends and associates of the long-time Los Angeles Dodgers manager. Preference to member(s) of the men's baseball team.
- Richard H. Laube Memorial Endowed Scholarship (PACT). Preference to a junior Lutheran student in finance, then to any student in the College of Business Administration. Financial need not a criterion.
- La-Z-Boy Endowed Scholarship. Annual award with preference to Michigan students.
- Blase Lazzara Memorial Endowed Scholarship Fund. Preference to a member of the football team.
- Phoebe Leeds Memorial Scholarship. Preference to applicants who are orphaned, adopted and/or foster children.
- The Dr. & Mrs. H. A. P. Leininger Endowed Scholarship. Annual award to female student of Christian character, preference to Lutheran faith, good scholastic standing, enrolled in the College of Nursing. Financial need not a criterion.
- The George and Fiorella Letz, Sr. Endowed Scholarship. Annual award.
- Ernest and Clara M. Lichtfuss Endowed Scholarship. Annual award.
- Nancy Lieneck Memorial Endowed Scholarship. Preference to a fourth year female student in the area of social work or special education.
- Mr. and Mrs. Erick Lippert Scholarship. Annual awards.
- David L. Litten Endowed Scholarship. Preference to students from North Dakota or Wisconsin and majoring in electrical or mechanical engineering.
- Scott C. Lohr Endowed Scholarship. Preference to a member of the men's cross country team.
- Mr. and Mrs. Orval M. Lohse Endowed Scholarship. Preference to students from Kansas.
- Lynette and Norman Luekens Endowed Scholarship. Preference to students from the Greater Cleveland area.
- Lutheran Deaconess Endowed Scholarships (PACT). Established by friends and members of the Lutheran Deaconess Association. Preference to a deaconess student nominated by Lutheran Deaconess Association staff, then to a Lutheran student majoring in Theology. Financial need not a criterion.
- Lutheran High School Award. Awarded to Lutheran high school seniors who have above average academic ability.
- Lutheran President's Scholarship. Up to $2000.00 scholarships awarded annually in the names of the respective Church body presidents of each of the major Lutheran Church bodies in America.
- Walter A. MacNary Memorial Endowed Scholarship. Annual award.
- Orval L. and Maud L. Main Memorial Endowed Scholarship. Preference to elementary education major, students of cornet or trumpet, creative writing or speech and drama.
- Dr. and Mrs. Max K. Mallon Endowed Scholarship. Preference to students from the Rochester, Michigan area. (This scholarship will not be initiated until it is fully funded.)
- Dan and Louise Manka Endowed Chemistry Scholarship. Preference to a student majoring in chemistry. Financial need a criterion.
- Albert A. and Martha Marks Endowed Education Scholarship (PACT). Annual award. Preference to a student preparing to teach in any Lutheran elementary or high school; preference to a student from New England. Financial need not a criterion.
- Marowske Endowed Scholarship. Preference to employees of the Flame Furnace Co. and members of their families. If no qualified applicants are available in a given year, preference to students from the Greater Detroit area.
- Dr. and Mrs. E. W. Marquardt Endowed Scholarship. Annual award.
- G. H. Maskus Endowed Scholarships. Annual award.
- Russell H. Matthias Endowed Scholarship. Established by the Lutheran Brotherhood, Minneapolis, Minnesota. Preference to deserving students enrolled in the School of Law.
- May Stone and Sand, Inc. Scholarship. Preference to a resident of Fort Wayne, Indiana.
- The Irene Mayer Endowed Scholarship. Annual award. Established by her family in loving memory, to be granted to students interested in the Lutheran ministry.
<table>
<thead>
<tr>
<th>Scholarship</th>
<th>Preference Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine McCallum Endowed Scholarship</td>
<td>Preference to a worthy student in need of assistance. Must be an American citizen.</td>
</tr>
<tr>
<td>James H. McGill Memorial Scholarship</td>
<td>Children of employees of McGill Manufacturing Company.</td>
</tr>
<tr>
<td>Kelly Anne McGill Memorial Endowed Scholarship</td>
<td>Donated by her parents Michael B. and Susan L. McGill, and Kristin McGill.</td>
</tr>
<tr>
<td>Olga J. McKee Scholarship</td>
<td>Preference to a student from Ohio.</td>
</tr>
<tr>
<td>J. Ron &amp; Joanne McLeod Endowed Scholarship</td>
<td>Preference to student(s) from south suburbs of Chicago.</td>
</tr>
<tr>
<td>Vera M. McLeod Memorial Endowed Scholarship Fund</td>
<td>Preference to students from the Chicagoland area.</td>
</tr>
<tr>
<td>Mr. and Mrs. A. A. Meitz Endowed Scholarship</td>
<td>First preference to a member of Messiah Lutheran Church, Dallas, Texas; second preference to a member of Lutheran Church in the Dallas/Fort Worth area; third preference to a Lutheran student who resides in Texas.</td>
</tr>
<tr>
<td>Ernest A. Menzel Endowed Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Messiah Lutheran Church, Oklahoma, Endowed Scholarship (PACT)</td>
<td>Established by Messiah Lutheran Church, Oklahoma City, Oklahoma. Awarded annually. Preference to a student from this church, then to a student from Oklahoma or from the Southwest. Financial need not a criterion.</td>
</tr>
<tr>
<td>Mr. and Mrs. Dirk Meyer Endowed Scholarship</td>
<td>Preference to a student from Pekin, Illinois.</td>
</tr>
<tr>
<td>Lucille M. Meyer Scholarship</td>
<td>Preference to a student majoring in music on the basis of merit or need.</td>
</tr>
<tr>
<td>Gerhard F. Meyne Endowed Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Bertha Miller Memorial Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Harvey O. Miller Memorial Scholarship</td>
<td>Preference to student(s) in the College of Business Administration from the Chicagoland area.</td>
</tr>
<tr>
<td>Helen Miller Endowed Scholarship</td>
<td>Preference to a student from St. Paul Lutheran Church, Napoleon, Ohio.</td>
</tr>
<tr>
<td>Henry Miller Scholarship</td>
<td>Preference to civil engineering students.</td>
</tr>
<tr>
<td>Minnesota Merit Award</td>
<td>Established by Minnesota alumni and friends. Awarded to students from Minnesota with outstanding ability and potential based on scholarship, leadership, character and extracurricular activities. Financial need is not a criterion. Awards are for four years in the amount of $1000.00 per year.</td>
</tr>
<tr>
<td>Dean H. Mitchell Endowed Scholarship</td>
<td>Preference to a student from Indiana.</td>
</tr>
<tr>
<td>Marie Moehring Endowed Nursing Scholarship</td>
<td>Preference to Lutheran nursing student(s), and based on demonstrated leadership, academic achievement, and financial need.</td>
</tr>
<tr>
<td>Henry F. Moellering Endowed Scholarship</td>
<td>Preference to a resident of Fort Wayne or Allen County, Indiana.</td>
</tr>
<tr>
<td>Dr. and Mrs. Robert C. Moellering, Sr. Endowed Scholarship</td>
<td>Preference to music majors or engineering students.</td>
</tr>
<tr>
<td>Dr. Charles and Florence Montz Endowed Scholarship</td>
<td>Preference to student(s) in the College of Nursing.</td>
</tr>
<tr>
<td>R. Stuart and Margaret Moore Memorial Endowed Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Clara Mueller Endowed Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Ewald H. Mueller Scholarship</td>
<td>Awarded to men and women student athletes on the basis of athletic and academic achievement.</td>
</tr>
<tr>
<td>H.F.C. Mueller Endowed Scholarship</td>
<td>Awards to eligible students who have completed the freshman year, for a maximum of four years, including one seminary year.</td>
</tr>
<tr>
<td>Gail (nee Hendrickson) and Robert Muir Endowed Scholarship</td>
<td>Annual award. Preference to sons or daughters of full-time workers in the Lutheran Church.</td>
</tr>
<tr>
<td>Martin David Mundt Memorial Endowed Scholarship (PACT)</td>
<td>Annual award. Preference to an upper division student with a mathematics major or minor whose average grade point is or exceed 3.0 in a four point system. Financial need not a criterion.</td>
</tr>
<tr>
<td>An Endowed Music Scholarship (PACT)</td>
<td>Annual award. Established by Stephen R. Kinder and other friends of the University. Preference to a graduate music student, then to a music student. Financial need not a criterion.</td>
</tr>
<tr>
<td>The George L. and Mary S. Myers Endowed Scholarship</td>
<td>Annual award.</td>
</tr>
<tr>
<td>Max G. and Judith E. Nagel Scholarship</td>
<td>Annual award. Established in their honor on the occasion of their thirtieth wedding anniversary. Preference to Lutheran students enrolled in the College of Arts and Sciences.</td>
</tr>
<tr>
<td>Mr. and Mrs. Martin J. Nehring Endowed Scholarship</td>
<td>Preference to a student from Colorado.</td>
</tr>
<tr>
<td>The Faye Newton Memorial Endowed Scholarship (PACT)</td>
<td>Established by relatives and friends, awarded annually. Preference to a student from the Faith Lutheran Church, Elma, N.Y., then to a Lutheran student from the greater Buffalo area. Financial need is not a criterion.</td>
</tr>
<tr>
<td>The Nickless Family Scholarship</td>
<td>Annual award to students from Michigan with preference to students from Saginaw County. Financial need a criterion.</td>
</tr>
<tr>
<td>Marilyn Niegust Memorial Endowed Scholarship</td>
<td>Preference to a Porter County or Northwest Indiana junior or senior social work, sociology or psychology major with interest in criminal justice in the juvenile area.</td>
</tr>
<tr>
<td>Nicholas H. and Marguerite Lilly Noyes Endowed Scholarship Fund</td>
<td>Authorized by the Board of Directors of Valparaiso University to honor Mr. and Mrs. Noyes, whose generosity makes this scholarship possible. The Noyes Scholars are to be selected on the basis of need, character, personality and leadership. The number of Noyes Scholars and the amount of scholarship is determined each year by the University Scholarship Committee.</td>
</tr>
<tr>
<td>Carl and Arnold C. Nuechterlein Endowed Scholarship</td>
<td>Preference to College of Business Administration students who also agree to take at least one course, if available, on the subject of risk management or insurance.</td>
</tr>
</tbody>
</table>
Joel S. Oberman Endowed Basketball Scholarship. Preference to a member of the basketball team.

Oberst Family Endowed Scholarship. Annual award.

The Reverend Armin and Evelyn Oldsen Endowed Scholarship. Annual award.

George S. Olive and Company Outstanding Achievement in Accounting Award at Valparaiso University. Annual award to a junior accounting major who will graduate by August of the following academic year. Recipient must have a 3.00 grade point average with a 3.30 in accounting; public accounting goal (and likely to practice in Indiana); demonstrated leadership abilities in extracurricular activities; significant involvement, to include assumed leadership positions in any of the following: Beta Alpha Psi, Accounting Club (society), other honorary organizations, other business fraternity, social fraternity or sorority, student government, varsity athletics, community service, other (must be specified).


Helen Mae Olson Memorial Endowed Scholarship. Annual award.

Walter E. Olson Memorial Scholarship. Preference to students from the Northern Illinois District.

The Orting Family Endowed Scholarship (PACT). Preference to students of Prince of Peace Lutheran Church, Mariton, New Jersey, and Bethel Lutheran Church, St. Louis, Missouri.

Dr. Richard Oster Scholarship. Preference to students from New Orleans, Louisiana.

Pacific Hills Lutheran Church, Omaha, Nebraska, Endowed Scholarship (PACT). Preference to a student from this church, then to a student from Nebraska or one of its neighboring states. Financial need not a criterion.

Mollie V. Page Endowed Scholarship. Preference to a member of Bethany Lutheran congregation, Waynesboro, Virginia.


Professor Charles G. Peller and His Son, John Van Alstyne Peller, Memorial Endowed Scholarship. To upperclass students in the College of Engineering, preferably civil engineering.

Peters Family West Michigan Endowed Scholarship. Preference to students from West Michigan.

Gilbert A. Peters Endowed Scholarship. Established in memory of Gilbert A. Peters by his wife. Preference to accounting students; then nursing students.

Margaret A. Pfeiffer Endowed Scholarship. Preference to an active member of a Lutheran congregation in the state of Michigan majoring in sociology.

Ella Pfeiffer Endowed Scholarship. Awarded annually 'to needy, deserving and ambitious students.'

Margaret A. Pfeiffer Endowed Scholarship. Preference to an active member of a Lutheran congregation in the state of Michigan majoring in sociology.

Brenda Phillips Memorial Scholarship. Annual award with preference to a female student majoring in computer science.

Phi Mu Alpha Endowed Scholarship (PACT). Established by members and friends of the Kappa Sigma Chapter of Phi Mu Alpha Sinfonia. Preference to a first year student, or transfer student majoring in music, showing commitment to the study of music, who will contribute significantly to the Valparaiso University Music Department, musically and personally. Nomination by officers of chapter and Music Department chair. Financial need not a criterion.

Hattie Lowe Pierce Endowed Scholarship. Preference to senior women with a special interest in political science.

Pilgrim Evangelical Lutheran Church of Detroit Memorial Endowed Scholarship. Preference to students from the Detroit area.

Arthur H. Poepp Memorial Endowed Scholarship. Annual award.

Arthur E. Pohlman Endowed Scholarship. Annual award.

Pohlman Family Endowed Scholarship. Preference to students from Western New York.

The Rodney B. Poppe Endowed Scholarship. Preference to an athlete from McHenry County, Illinois with any student from McHenry County being a second preference.

Porter County Cancer Society Endowed Scholarship (PACT). Established by friends of Porter County Cancer Society. Preference to a student from Porter County, Indiana, who has been a cancer patient; then to spouse or child of a Porter County resident who has had cancer. Financial need not a criterion.

Porter County Doctors' Scholarship. Preference to students from Porter County who are interested in pre-medical, nursing and medical technology.

Porter Memorial Hospital Guild. Preference to nursing students from Porter County, Indiana.

Professor Henry W. and Laura M. Prahli Scholarship. Annual award with preference to students majoring in English. Based on academic excellence and need.

Mrs. Hazel Predoehl Memorial Endowed Scholarship. Preference to students from California and Oregon.

Vernon F. and Katherine H. Radde Endowed Scholarship. Annual award.

The Herman R. Rahn Endowed Scholarship. Preference to students from the Northwest Chicago area entering a meaningful curriculum; good academic standing of 3.00 or better; strong Christian character.

Emma and William Rakowsky Memorial Endowed Scholarship. Annual award.

Elizabeth Raney Endowed Scholarship. Annual award.

Redeemer Lutheran Church, South Bend, Indiana, Endowed Scholarship (PACT). Annual award. Preference to a student from this church, then to a student from the greater Chicago area. Financial need not a criterion.

The Reverend and Mrs. Arthur L. Reinke and the Reverend and Mrs. Augustus Reinke Memorial Endowed Scholarship. Established by Dr. Edgar C. Reinke in honor of his parents and grandparents. Two awards on the basis of academic excellence, not need, one to a student who has completed one year of college Latin and one to a student who has completed one year of college Greek. Renewable if the recipient elects to major in Latin, Greek or Classics.
Financial Aid, Scholarships, Loan Funds

- Reutlingen Semester Scholarship. Awarded annually to a Valparaiso University student participating in the Reutlingen International Study Program.

- Richardson Twin Scholarship. To provide a family with financial scholarship assistance equal to those families without twins. One full undergraduate scholarship will be awarded consisting of tuition, board and in a residential hall, required books and fees. The other twin must also attend Valparaiso University without receiving any non-governmental grants from Valparaiso University. Financial need is a criterion.

- Mr. and Mrs. Carl Rittberger Scholarship. Preference to residents of Columbus, Lancaster or Zanesville, Ohio Area or from the state of Ohio.

- Cora H. Rosin Memorial Endowed Scholarship. Preference to members of Trinity Lutheran Church, Jackson, Michigan; then to a Lutheran student from Michigan.

- Waldemar M. Roth Memorial Endowed Scholarship. Preference to student(s) preparing for full-time Lutheran Church work.

- Leona Rotzoll and Elsie Skusa Memorial Endowed Scholarship. Preference to student(s) from Ohio.

- The Walter C. & Gudron M. Rubke Endowed Scholarship. Preference to male students who have the goal of becoming Lutheran Church-Missouri Synod pastors.

- Adele Ruettgers Endowed Scholarship. Preference to students in the College of Nursing.

- The Noah B. Ruff Memorial Endowed Scholarship. Preference to student(s) from Ohio.

- August and Helene Ruhe Endowed Scholarship. Annual award to undergraduate students and/or law students who were previously Valparaiso University undergraduate students.

- The Bernice Lillie Ruprecht Endowed Scholarship (PACT). Established by relatives and friends, awarded annually. Preference to a Lutheran student with demonstrated financial need.

- Freeman and Frances Russell Endowed Scholarship. Annual award. Preference to a student preparing for the Lutheran ministry; second preference to a music student.

- The Clemence and Glencie Sabourin Endowed Scholarship (PACT). Preference to students of severe economic disadvantage, particularly students from foreign countries or inner-city communities, or sons and daughters of church workers serving communities from which such students come.

- The Schwan Family Scholarship Fund. Annual award. Preference to one student majoring in chemistry and one majoring in elementary education.

- Dana Schwanholt Memorial Endowed Scholarship (PACT). Annual award to a senior student with preference to a student whose field of study is secondary education.

- Albert F. and Miriam B. Scribner Endowed Scholarship. Preference to students enrolled in the College of Nursing.

- Elmer Seebeck Memorial Endowed Scholarship. Preference to student(s) from the Nebraska area.

- Ray and Marie Seegers Family Scholarship. Preference to students from Northern Indiana, then Northern Illinois, and then from Texas, who is a deserving and qualified graduate enrolled in the College of Business.

- Seuel Endowed Scholarship. Preference to needy and deserving graduates of Chicago Lutheran High School-North.

- Carl W. and Caroline D. Seyboldt. Preference to a member of Bethlehem Lutheran Church, Ridgewood, New Jersey.

- Louis and Helen Zahn Shales Endowed Scholarship. Preference to a member of the First Lutheran Church, Boston, Massachusetts.

- Mr. and Mrs. Hugh O. Sherbert Endowed Scholarship. Preference to Lutheran students from Minnesota, preferably to graduates from Lutheran high schools.

- Vera L. Sieb Endowed Scholarship. Annual award.

- John F. Sievers Memorial. Preference to a major in business or mathematics. $200.00 annually.

- Sigma Phi Epsilon Undergraduate Endowed Scholarship. Annual award.

- Sigma Tau Gamma Undergraduate Endowed Scholarship. Annual award.

- Stanley B. Sink Scholarship. Preference to students from Valparaiso, Indiana.

- Helen Slayback Memorial Endowed Scholarship. Annual award.

- Byron Smith Memorial. Preference to students from Porter County, Indiana.
J. Howard Smith Endowed Scholarship. Given by Harvey W. Smith in honor of his father, J. Howard Smith (Valparaiso University LL.B. 1907; LL.M. (Hon.), 1949; LL.D. (Hon.) 1950).

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

Carl O. Sohre Memorial Scholarship. Preference to students from Minnesota.

St. John Lutheran Church, Lombard, Illinois, Endowed Scholarship (PACT). Annual award. Preference to a student from this church, then to a Lutheran student from the greater Chicago area. Financial need not a criterion.

St. John's Lutheran Church, Long Green, Maryland, Endowed Scholarship (PACT). Preference to student from this church; then to student from either Maryland, Delaware, Virginia, North Carolina, South Carolina, or the District of Columbia. Financial need not a criterion.

Bertha A. Staede Memorial. Preference to a music major, resident of Minnesota.

Edward I. P. Staede and Amanda Hall Staede Endowed Scholarship. Annual awards.

The Arthur and Cecilia Stamm Endowed Scholarship. Annual award. Preference to a student from Houston, Texas, then to a student from Texas, then to a deserving and qualified student.

The Reverend Martin Th. Steege Endowed Scholarship. Preference to pre-ministerial students.


Frederick A. Stendell and Harry E. Stendell Endowed Scholarship. Annual award.

Paul Stoner Endowed Scholarship. Established by his sister, Miss Ruth Stoner. Preference to students from Porter County, Indiana.

Mr. and Mrs. Herbert F. Stride Endowed Scholarship. Preference to pre-law students from Illinois.

The Fred L. and Selma A. Strieter Memorial Endowed Music Scholarship (PACT). Preference to a Lutheran music student, or a student of church music. Financial need not a criterion.

Ida S. Strieter Memorial Endowed Scholarship. Annual award to a deserving senior nursing student.

Margaretta Sackville Tangerman Endowed Scholarship. Preference to a junior or senior social work major.

The TCW Scholarships. To be awarded to deserving students who meet the criteria of financial need, Christian character, and good scholastic standing.

Mr. and Mrs. Paul E. Tegge Memorial Endowed Scholarship. Preference to students from the Milwaukee, Wisconsin area.

Lawrence E. Teich Endowed Scholarship. Preference to chemistry or engineering students.

Louis Thoeming Endowed Scholarship. Annual award.

John David Thomas Endowed Scholarship. Preference to a member of the Valparaiso University wrestling team.

Bertha S. Tietjen Endowed Scholarship. Preference to students from San Francisco, California.


Laura E. Traue Endowed Scholarship. Annual award.

Turk Family Endowed Scholarship. Preference to students from Porter County, Indiana.

Dr. and Mrs. H. L. Ulbrich Endowed Scholarship. Annual award.

Urschel Laboratories Scholarship. Annual award.

William E. Urschel Endowed Scholarship. Annual awards to students who will be noted as Urschel Scholars.

Valparaiso University Board of Directors Endowed Scholarship (PACT). Established by Valparaiso University Board of Directors. Financial need not a criterion.

Valparaiso Women's Club Endowed Scholarship. Annual award.

Theodore H. and Paula Vogel Endowed Scholarship. Preference to students from the greater St. Louis area.

Henry and Anna Waldschmidt Memorial Scholarship. Annual award.

F. G. Walker Endowed Scholarship. Preference to students from Cleveland or Cuyahoga County, Ohio.

David J. Walton Memorial Endowed Scholarship. Preference to students in engineering.

Angus Ward Foreign Service. To a student with expressed intention to serve as career officer in the Foreign Service of the United States; based on academic standing and need. $1000.00 annually.

The Fred and Ruth Wehrenberg Endowed Scholarship. Annual award.

Dr. and Mrs. J. Frederic Wenchel Memorial Endowed Scholarship. Annual award.


Claara and Spencer Werner Endowed Scholarship. Preference to pre-legal students or students enrolled in the School of Law.

Mr. and Mrs. L.W. Werner Endowed Scholarship. Annual award. Preference to Lutheran students.

The Clara and Spencer Werner Endowed Scholarship Fund. Preference to students with scholastic ability. Financial need is not a criterion.

Janet Wesemann Scholarship-Loan Fund. Scholarships, grants or loans with preference to law students.

Whirlpool Scholarship. Established by the Whirlpool Foundation. Awarded to students entering the College of Business or the College of Engineering, with outstanding ability and potential based on scholarship, leadership, character and extracurricular activities. Preference given to students from Benton Harbor-St. Joseph, Michigan, and LaPorte, Indiana, areas.

Edith M. Will Endowed Scholarship. Annual award.

The Otherline Wilson Endowed Scholarship. Annual award. Preference to be given in order of priority to a minority female student from St. Michael's Lutheran Church, St. Louis, Missouri; a Lutheran minority female student from the St. Louis area; any other minority female student who has demonstrated service to church and society.

Wisconsin Endowed Merit Award. Established by Wisconsin alumni and friends. Awarded to students from Wisconsin with outstanding ability and potential based on leadership, character and extracurricular activities. Awards are for four years in the amount of $1500.00 per year.
Financial Aid, Scholarships, Loan Funds

- **Charles W. Wolf Memorial Endowed Scholarship.** Preference to a senior student majoring in chemistry.
- **Matilda E. Wolf Memorial Endowed Scholarship.** Annual award(s).
- **The Gilbert and Vivian P. Wolter Endowed Scholarship.** Scholarship(s) awarded annually to a student(s) majoring in mathematics or physics with a minor in the other, or pursuing a degree in engineering.
- **Ormand C. Yuershs, Jr. Memorial Scholarship.** Preference to a philosophy major or minor.
- **Zion Lutheran Church, Kalamazoo, Michigan, Endowed Scholarship.** Preference to students from this church, then to students from Michigan. Financial need not a criterion.
- **Zuehlke Endowed Scholarship.** Preference to student(s) in the humanities.

### Loan Funds

- **Perkins NDSL Program.** Valparaiso University participates in the National Direct Student Loan Program, and has established a fund consisting of contributions from the government and the University. Details may be obtained from the Office of Financial Aid.
- **Nursing Student Loan Fund.** The Valparaiso University College of Nursing participates in the Nursing Student Loan Program and has established a fund consisting of contributions from the government and the University. Details may be obtained from the Office of Financial Aid.
- **American Bar Association Fund for Legal Education.** Provides a yearly allotment of funds to be used by students of the School of Law of Valparaiso University. Information pertaining to qualifications for this fund may be obtained from the Dean of the School of Law.
- **Donna Francesca-Cesario Chesrow Loan Fund.** Established for the purpose of making small, short-term loans.
- **The Garland Loan Fund.** Loans for students majoring in the sciences, mathematics, or home economics. These will be non-interest bearing loans.
- **Garman Loan Fund.** A loan fund has been established by Benjamin L. Garman to help students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help. Details may be obtained from the Office of Financial Aid.
- **Alvinia Louise Marker Loan Fund.** This fund was established for the purpose of making loans to students making satisfactory progress toward a degree.
- **Phi Alpha Delta Law Fraternity Endowment Fund.** Loans from this fund are available to worthy student members of the fraternity who are in need of such loans to complete their law school education. The maximum amount of such loans is $500.00. Terms of the loans, which are prescribed by the national governing board of the fraternity, may be obtained from the Dean of the School of Law.
- **Henry George Poncher Foundation.** Designed to provide a revolving loan fund to be used for making loans to deserving college students who are taking a pre-medical course preparatory to entering medical school and also to students enrolled in medical school studying to become doctors of medicine. Application is to be made on a form available in the office of the Dean of the College of Medicine of the University of Illinois and in the office of the Vice President for Business Affairs, Valparaiso University. Further information may be secured from either office.
- **The Herman R. Rahn Memorial Student Loan Fund.** Established to provide loan funds to students with a grade point average of 3.00 or better. Preference to Lutheran students, particularly members of St. Peters Lutheran Church, Arlington Heights, Illinois. Details may be obtained from the Office of Financial Aid.
- **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 students who are residents of Porter County, Indiana. Details may be obtained from the Office of Financial Aid.
- **Myra K. Tate Student Assistance Trust.** Established to provide loan benefits to certain students at Valparaiso University. This trust is administered by the Northern Indiana Bank and Trust Company as Trustee. The Trustee considers applications from engineering, law and pre-medical students who are in the last two years of their schooling at the University. Applications are received on recommendation of the Dean of the appropriate college or the pre-medical adviser and are processed through the Financial Aid Office of the University before being forwarded to the Trustee for consideration. Details may be obtained from the appropriate deans or the appropriate advisor.
- **Valparaiso University Law School Alumni Student Assistance Charitable Trust.** The trust is administered by Northern Indiana Bank and Trust Company as Trustee. Application should be made to the Dean of the College of Nursing.
- **Nellie 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.
- **Indiana Federation of Clubs Loan Fund (Lucy D. Putnam Loan Fund and Porter County Federation of Women’s Clubs Loan Fund).**
- **Mr. and Mrs. August Schoenherr Memorial Loan Fund.** Established by Mr. and Mrs. Leonard Schoenherr of Ludington, Michigan, as a memorial to his parents.
- **Henry Strong Educational Foundation.** Provides loans to qualified upperclassmen under twenty-five years of age.
- **Semester on the United Nations Loan Fund.** This was established by the Valparaiso branch of the American Association of University Women for women students eligible to participate in the United Nations Semester at Drew University. Terms are similar to those of the Washington Semester Program Loan.
- **Mr. and Mrs. Glen Tabor Lawyers Loan Fund.** This fund was established for making loans to students in the School of Law.
- **Mr. and Mrs. Glen Tabor Nursing Loan Fund.** This was established for making loans to students in the College of Nursing.
Valparaiso University Association Loan Fund. A University Loan Fund has been established to help students who cannot qualify for a scholarship but who must have financial assistance or those with scholarships who need more help. Details may be obtained from the Office of Financial Aid. In addition to funds provided by special appropriation of the Board of Directors, friends of the University who strongly believe in the principle of lending their resources to students in need have contributed to the University Loan Fund. These contributors are: M. E. Dinsmore Memorial, Frank B. Estell, Oscar Homann, Glenn Krabec, Aaron H. Kruse, The Lutheran Ladies Seminary, Anna and Bertha Meyer, Robert Miller Laboratory, Albert and Anna Raether Memorial, Mr. and Mrs. Henry J. Schneider, Mr. Werner Schroeder, Carl and Susan Thompsen, Trinity Tool Company.

Washington Semester Program Loan Fund. Only students fully accepted for the Washington Semester Program at the American University are eligible. Loans up to one hundred dollars are given; the student is expected to repay the loan plus a donation to the principal of the fund of twenty-five per cent within five years after leaving the University.

Janette G. Wesemann Student Loan Fund. Established for the purpose of making loans primarily to qualified pre-law and law students, preferably from the State of Illinois, who are in need of financial assistance to continue their education. Loans from this fund are available to students who are making satisfactory progress toward a degree.

Betty Rose Wulf Memorial Loan Fund. Established by her parents, Mr. and Mrs. Walter H. Wulf, to be used by students preparing for church work, such as deaconess training.

LOAN REPAYMENT TERMS

Each of the loan programs contain 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.

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. The grants pay tuition and fees.
UNIVERSITY PERSONNEL

Full-Time Faculty
1989-1990

James William Albers, Th.D., Professor of Theology; Vice President for Admissions and Financial Aid; Concordia Senior College (B.A., 1959); Concordia Seminary, St. Louis (M.Div., 1963; S.T.M., 1964; Th.D., 1972)

Gloria T. Alter, Ed.D., Assistant Professor of Education; Valparaiso University (B.S., 1975); University of Denver (M.A., 1977); Fuller Theological Seminary (M.Div., 1982); Northern Illinois University (Ed.D., 1989)

Debra Collins Ames, Ph.D., Assistant Professor of Foreign Languages and Literatures; Holy Cross College (A.B., 1980); University of Virginia (M.A., 1982; Ph.D., 1987)

Norman Robert Amundsen, M.S., Associate Professor of Physical Education; University of Wisconsin (B.S., 1955; M.S., 1967)

Katharine Herbert Beddon Antommaria, Ph.D., Assistant Professor of Home Economics; Associate Dean of 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 Arkkelin, Ph.D., Associate Professor of Psychology; Bowling Green State University (B.S., 1974; M.A., 1976; Ph.D., 1978)

Gerhard Josef Auer, Ph.D., Assistant Professor in Foreign Languages and Literatures; Paedagogische Akademie des Bundes in Baden (Diploma); University of Illinois (M.A., 1982; Ph.D., 1988)

Larry Robert Baas, Ph.D., Professor of Political Science; University of Wisconsin, Whitewater (B.Ed., 1968); Kent State University (M.A., 1969; Ph.D., 1976)

James V. Bachman, Ph.D., Associate Professor of Philosophy; the John Eckrich Professor in Religion and the Healing Arts; Valparaiso University (B.S., 1968); Cambridge University (B.A., 1970; M.A., 1974); Concordia Seminary, St. Louis (M.Div., 1972); Florida State University (Ph.D., 1986)

Richard Paul Baepler, Ph.D., Professor of Theology and Law; Vice President for Academic Affairs; Concordia Seminary, St. Louis (B.A., 1952, M.Div., 1954); Theologische Hochschule, Hamburg; University of Erlangen; The University of Chicago (Ph.D., 1964)

Simone Francoise Baepler, Lic. es L., Assistant Professor of Foreign Languages and Literatures; University of Bordeaux; Lindenwood College, La Sorbonne, Paris (Lic. es L., 1954), The University of Chicago

Richard Lawrence Balkema, Ph.D., Professor of Political Science; Western Michigan University (B.A., 1962; M.A., 1963); Southern Illinois University (Ph.D., 1971)
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eldon William Balko, M.M.</td>
<td>Associate Professor of Music; Wisconsin State University (B.S., 1953); Michigan State University (M.M., 1957); University of Wisconsin</td>
</tr>
<tr>
<td>Carlene Heidbrink Bartelt, R.N., M.S.</td>
<td>Assistant Professor of Nursing; Valparaiso University (B.A., 1946; B.S.N., 1972); University of Arizona (M.S., 1980)</td>
</tr>
<tr>
<td>Michael W. Becker, C.P.A., M.B.A.</td>
<td>Assistant Professor of Accounting; Wayne State University (B.A., 1962); University of Connecticut (M.B.A., 1975); University of Bridgeport (M.A., 1982)</td>
</tr>
<tr>
<td>Meredith William Berg, Ph.D.</td>
<td>Associate Professor of History; St. Olaf College (B.A., 1959); Tulane University (M.A., 1962; Ph.D., 1966)</td>
</tr>
<tr>
<td>Robert Roland Bergt, M.Div.</td>
<td>Professor of Music; Concordia Seminary, St. Louis (B.A., 1952; M.Div., 1955, S.T.M., 1957); St. Louis Institute of Music; Washington University</td>
</tr>
<tr>
<td>James A. Bernard, Jr., Ph.D.</td>
<td>Associate Professor of Economics; Manhattan College (B.B.A., 1965); University of Notre Dame (Ph.D., 1972)</td>
</tr>
<tr>
<td>Bruce Gilbert Berner, LL.M.</td>
<td>Professor of Law; Associate Dean of the School of Law; Valparaiso University (B.A., 1965; LL.B., 1967); Yale University (LL.M., 1978)</td>
</tr>
<tr>
<td>John Paul Bernthal, D.M.A.</td>
<td>Assistant Professor of Music; Valparaiso University (B.M., 1970); Eastman School of Music; University of Rochester (M.M., 1972); University of Illinois (D.M.A., 1982)</td>
</tr>
<tr>
<td>Robert Frank Blomquist, J.D.</td>
<td>Professor of Law; University of Pennsylvania (B.S., 1973); Cornell University (J.D., 1977)</td>
</tr>
<tr>
<td>Ivan Edward Bodensteiner, J.D.</td>
<td>Professor of Law; Dean of the School of Law; Loras College (B.A., 1965); University of Notre Dame (J.D., 1968)</td>
</tr>
<tr>
<td>Rodney John Bohlmann, Ph.D.</td>
<td>Associate Professor of Educational and Computer Engineering; Valparaiso University (B.S.E.E., 1970); Rice University (M.S., 1971; Ph.D., 1974)</td>
</tr>
<tr>
<td>Willis Dolmond Boyd, Ph.D.</td>
<td>Professor of History; University of California, Los Angeles (B.A., 1945; M.A., 1947; Ph.D., 1954)</td>
</tr>
<tr>
<td>Richard H. W. Brauer, M.S. in Art Education</td>
<td>Associate Professor of Art; Institute of Design of Illinois Institute of Technology (B.S. in Visual Design, 1951; M.S. in Art Education, 1960)</td>
</tr>
<tr>
<td>Paul Herman Bristzke, J.D., Ph.D.</td>
<td>Professor of Law; Lake Forest College (B.A., 1962); University of Wisconsin (J.D., 1969); University of London (Ph.D., 1979)</td>
</tr>
</tbody>
</table>

1On leave of absence

2On one-half Study Leave

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donna Lee Briggs, M.S.</td>
<td>Instructor in Physical Education; Morehead State University (B.A., 1981); University of Wyoming (M.S., 1983)</td>
</tr>
<tr>
<td>Philipp L. Brockington, Jr., J.D.</td>
<td>Associate Professor of Law; Amherst College (B.A., 1962); Harvard University Law School (J.D., 1965)</td>
</tr>
<tr>
<td>Daniel Carl Brockopp, S.T.M.</td>
<td>Associate Professor of Theology; Concordia Theological Seminary, Springfield (B.Th., 1961); Lutheran School of Theology at Chicago (S.T.M., 1966)</td>
</tr>
<tr>
<td>Janet Marie Brown, R.N., M.S.N.</td>
<td>Assistant Professor of Nursing; Indiana University (B.S.N., 1969); St. Xavier College (M.S.N., 1983)</td>
</tr>
<tr>
<td>Edward J. Byrne, Ph.D.</td>
<td>Associate Professor of English; Brooklyn College (B.A., 1974; M.F.A., 1976); University of Utah (Ph.D., 1983)</td>
</tr>
<tr>
<td>James Caristi, Ph.D.</td>
<td>Associate Professor of Mathematics and Computer Science; Florida State University (B.A., 1971); University of Iowa (Ph.D., 1974)</td>
</tr>
<tr>
<td>Lee Arnold Carlson, A.M., M.S.</td>
<td>Associate Professor of Mathematics and Computer Science; DePauw University (A.B., 1961); University of Michigan (A.M., 1962); The University of Chicago (M.S., 1971)</td>
</tr>
<tr>
<td>JoAnna Christiansen, R.N., M.S.N.</td>
<td>Assistant Professor of Nursing; Valparaiso University (B.S.N., 1985); Purdue University Calumet (M.S.N., 1989)</td>
</tr>
<tr>
<td>Paul Miles Clikeman, C.P.A., C.I.A., M.B.A.</td>
<td>Assistant Professor of Accounting; Valparaiso University (B.S.B.A., 1982); The University of Chicago (M.B.A., 1984)</td>
</tr>
<tr>
<td>James Everett Combs, Ph.D.</td>
<td>Professor of Political Science; East Tennessee State University (B.S., 1967); University of Houston (M.A., 1969); University of Missouri (Ph.D., 1973)</td>
</tr>
<tr>
<td>Addison Gilbert Cook, Ph.D.</td>
<td>Professor of Chemistry; Wheaton College (B.S., 1955); University of Illinois (Ph.D., 1959)</td>
</tr>
<tr>
<td>Stewart E. Cooper, Ph.D.</td>
<td>Director of the Student Counseling and Development Center with rank of Associate Professor; Part-Time Associate Professor of Psychology; Indiana University (B.A., 1975; M.S., 1977; Ph.D., 1981)</td>
</tr>
<tr>
<td>Nina Maria Corazzo, Ph.D.</td>
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</tr>
<tr>
<td>Joel R. Crosmer, Ph.D.</td>
<td>Assistant Professor of Electrical and Computer Engineering; Concordia Senior College (B.A., 1973); South Dakota School of Mines (B.S., 1976; M.S., 1977); Georgia Institute of Technology (Ph.D., 1985)</td>
</tr>
</tbody>
</table>
Barbara Louise Crumpacker, M.S.W.,
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(B.S.W., 1983); Indiana University (M.S.W., 1985)

Rex Cunningham, M.F.A., Associate Professor of
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3Diane M. Davis, M.A., Assistant Professor of
Home Economics; Purdue University (B.A., 1976;
M.A., 1981)

Grayson S. Davis, Ph.D., Associate Professor of
Biology; George Washington University
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(B.S.Ed., 1972, M.A., 1974); Columbia University
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M.Div., 1956); The University of Chicago
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Ph.D., 1987)

Charles A. Ehren, Jr., J.D., Professor of Law;
Columbia College, New York (A.B., 1954);
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University of Pennsylvania Law School

4James Frank Ehrenberg, C.P.A., M.S.,
Associate Professor of Accounting; Valparaiso
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(M.S., 1966)

Gail McGrew Elfrig, Ph.D., Associate Professor of
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Mawr College (M.A., 1963; Ph.D., 1982)

William Frederick Elfrig, Jr., D.M.A.,
Professor of Music; Valparaiso University
(B.A., 1955); University of Michigan (M.M., 1957;
D.M.A., 1962)

5 Ahmed Sami El-Naggar, P.E., Ph.D.,
Professor of Civil Engineering; University of Cairo
(B.Sc., 1948); University of California, Berkeley
(M.Sc., 1952); Purdue University (Ph.D., 1957)

Bethynne S. Emery, M.M., Assistant Professor of
Music; Michigan State University (B.M., 1947;
M.M., 1948); University of Michigan (M.M., 1951); Royal Conservatoire de Musique de Bruxelles
(Premier Prix, 1957); Royal Conservatoire de
Musique de Ghent; Indiana University

6Conrad James Engelder, Ph.D., Professor of
History; Wayne State University (B.A., 1952);
University of Michigan (M.A. [History], 1953; M.A.
[Geography], 1957; Ph.D., 1964)

Steven Carl Engerer, Ph.D., Assistant
Professor of Chemistry; Michigan State University
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(Ph.D., 1982)

Jody A. Esper, Ph.D., Assistant Professor of
Psychology; Sangamon State University
(B.S., 1978; B.A., 1978); Kansas State University
(M.S., 1984; Ph.D., 1986)

Gene R. Evans, Ph.D., Associate Professor of
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H.E., 1963); State University of Iowa (M.S., 1966);
Purdue University (Ph.D., 1986)

Henning Falkenstein, Ph.D., Professor of
Foreign Languages and Literatures; Philips
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and English, 1961; Ph.D., 1963)

John William Feaster, Ph.D., Professor of
English; Valparaiso University (B.A., 1963); Northern Illinois University (M.A., 1968); Purdue
University (Ph.D., 1970)

Linda Carol Ferguson, D.M.A., Associate
Professor of Music; University of Missouri, Kansas

3For Spring Semester only
4On leave of absence
5On leave of absence, Fall Semester: Retired as of December 31, 1989
6On Sabbatical Leave, Spring Semester
Randall J. Fisk, Ph.D., Assistant Professor of Physics; Michigan Technological University (B.S., 1973); State University of New York at Stony Brook (Ph.D., 1978); Concordia Seminary, St. Louis

Louis Ashley Foster, Ph.D., Professor of Mathematics and Computer Science; Monmouth College (B.S., 1951); McCormick Theological Seminary (B.D., 1954); Purdue University (M.S., 1959; Ph.D., 1964)

Judith Ann Franson, Ph.D., Assistant Professor of Education; George Peabody Teachers College (B.A., 1966); Georgia College (M.Ed., 1974); University of Georgia (Ph.D., 1985)

Margaret Franson, M.A.L.S., Instructor in English; University of Massachusetts (B.A., 1969); University of Wisconsin; Valparaiso University (M.A.L.S., 1989)

Frederick Lawrence Frey, M.F.A., Associate Professor of Art; University of Wisconsin (B.S., 1962; M.F.A., 1965)

Charles Philip Gallmeier, Ph.D., Assistant Professor of Sociology; Indiana University; Fort Wayne (B.A., 1976); University of California, San Diego (M.A., 1980; Ph.D., 1985)

Carl Frederick Galow, Ed.D., Associate Professor of Communication; Valparaiso University (B.A., 1967); University of Wisconsin (M.S., 1969); Oklahoma State University (Ed.D., 1973)

Kevin Paul Geiman, Ph.D., Assistant Professor of Philosophy; Xavier University (A.B., 1983); Washington University (A.M., 1987; Ph.D., 1988); Goethe University

Demosthenes P. Gelopoulos, Ph.D., Leitha and Willard Richardson Professor of Engineering; Valparaiso University (B.S.E.E., 1960); University of Notre Dame (M.S.E.E., 1962); University of Arizona (Ph.D., 1967)

Philip N. Gilbertson, Ph.D., Professor of English; Dean of the College of Arts and Sciences; Augustana College, South Dakota (B.A., 1965); University of Kentucky (Ph.D., 1969); Indiana University

Richard Alan Gillman, D.A., Assistant Professor of Mathematics and Computer Science; Ball State University (B.S. 1979; M.A., 1981); Idaho State University (D.A., 1986)

Daniel Kennett Goodman, Ph.D., Associate Professor of Electrical and Computer Engineering; University of Missouri; Rolla (B.S.E.E., 1965); Stanford University (M.S.E.E., 1967); University of New South Wales (Ph.D., 1971)

Thomas Evan Goyne, Ph.D., Assistant Professor of Chemistry; Union College (B.S., 1978); University of California, Los Angeles (Ph.D., 1983)

Gary Arthur Greinke, J.D., Vice President of Development with rank of Associate Professor; Valparaiso University (B.A., 1963); University of Nebraska (J.D., 1966)

Charles Robert Gromley, LL.M., Professor of Law; Kent State University (B.S., 1948); University of Kentucky (LL.B., 1951); Georgetown University (LL.M., 1955)

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Donna J. Guydan, C.P.A., M.B.A., Assistant Professor of Accounting, University of Pittsburgh (B.S., 1972; M.B.A., 1977)

Beverly Ruth Haley, R.N., M.S., Assistant Professor of Nursing; Ohio State University (B.S.N., 1971; M.S., 1978)

Thomas Gregg Hall, Ph.D., Associate Professor of English; San Francisco State College (B.A., 1966; M.A., 1968); Washington State University (Ph.D., 1971)

Alan F. Harre, Ph.D., Professor of Theology; President of the University; Concordia Senior College (B.A., 1962); Concordia Seminary, St. Louis (M.Div., 1966); Presbyterian School of Christian Education (M.A., 1967); Wayne State University (Ph.D., 1976)

John Walter Harris, Ph.D., Associate Professor of Psychology; Valparaiso University (B.A., 1963); Illinois Institute of Technology (M.S., 1965; Ph.D., 1969)

Daniel W. Hart, Ph.D., Associate Professor of Electrical and Computer Engineering; Valparaiso University (B.S.E.E., 1970); Purdue University (M.S.E.E., 1975; Ph.D., 1985)

Edward Henry Heinze, Ph.D., Associate Professor of Economics; Marquette University (B.A., 1965); Michigan State University (M.A., 1966); Fordham University (Ph.D., 1976)

Johannes Helms, Ph.D., Professor of Foreign Languages and Literatures; Valparaiso University (B.A., 1953); University of Michigan (M.A., 1954; Ph.D., 1963)

James P. Henderson, Ph.D., Professor of Economics; Beloit College (B.A., 1960); Northern Illinois University (M.A., 1967; Ph.D., 1977)

7Director, University Overseas Center, Cambrige, England
8On Sabbatical Leave, Spring Semester
9On half-time leave of absence
Daryll Dwayne Herseman, Ph.D., Vice President for Student Affairs with rank of Associate Professor; University of Illinois (B.S., 1962); Northwestern University (M.A., 1965, Ph.D., 1969)

Elmer Beall Hess, M.S., M.S.I., Librarian with rank of Associate Professor; Western Michigan University (B.S., 1952; M.S.I., 1972); The University of Chicago (M.S., 1953); University of Michigan

Garland Fisher Hicks, Jr., Ph.D., Associate Professor of Biology; St. Lawrence University (B.S., 1967); Michigan State University (Ph.D., 1975)

Jack Arthur Hiller, LL.M., Professor of Law; Valparaiso University (B.A., 1953; J.D., 1955); Yale University (LL.M., 1962)

Jack Merle Hires, J.D., Assistant Professor in the College of Business Administration; Indiana University, South Bend (B.G.S., 1980); Valparaiso University (J.D., 1983)

Patricia Marie Hogan, M.L.S., Librarian with rank of instructor; Saint Mary’s College (B.A., 1980); Indiana University (M.L.S., 1985)

Bruce J. Hrivnak, Ph.D., Associate Professor of Physics; University of Pennsylvania (B.A., 1971; Ph.D., 1980)

Norman LeRoy Hughes, M.S., Associate Professor of Mathematics and Computer Science; Ohio Northern University (B.S., 1953); University of Wisconsin (M.S., 1958)

David Malcom Hull, Ph.D., Associate Professor of Mathematics and Computer Science; Wheaton College (B.S., 1960); Illinois Institute of Technology (M.S., 1972); University of Illinois, Chicago (Ph.D., 1982)

Gregory D. Hume, M.S., Assistant Professor of Mathematics and Computer Science; University of Montana (B.A., 1978; M.S., 1986)

Ronald Arthur Janke, Ph.D., Professor of Geography; Marquette University (B.A., 1965); University of Wisconsin, Milwaukee (M.A., 1967); University of Minnesota (Ph.D., 1976)

Martin David Jean, D.M.A., Instructor in Music; Concordia College, Ann Arbor (B.A., 1982); University of Michigan (M.M., 1984; D.M.A., 1989)

Norman K. Jensen, M.S.M.E., Assistant Professor of Mechanical Engineering; Michigan Technological University (B.S.M.E., 1955); Purdue University (M.S.M.E., 1971); Illinois Institute of Technology

David Henry Johnson, Ph.D. Professor of Mathematics and Computer Science; Augustana College, Illinois (A.B., 1962); University of Illinois (M.S., 1964, Ph.D., 1971)

Renu Juneja, Ph.D., Associate Professor of English; Delhi University (B.A., 1964; M.A., 1966); Pennsylvania State University (Ph.D., 1974)

Kyle E. Juracek, M.A., Instructor in Geography; University of Nebraska, Omaha (B.S., 1984; M.A., 1986); University of Kansas

11 Carol Colby Kaesebler, J.D., Assistant Professor of Law; University of Illinois (B.S. 1971); Indiana State University; Valparaiso University (J.D., 1983)

Ferencz Paul Kallay, Ph.D., Professor of Geography; Acting Director of the Graduate Division; Wayne State University (A.B., 1950; M.A., 1952); University of Michigan (Ph.D., 1955); University of Rome

Frederick Graham Kavanagh, Ph.D., Assistant Professor of Foreign Languages and Literatures; Middlebury College (B.A., 1966); Princeton University; University of Virginia (M.A., [Russian], 1970); University of Hawaii (M.A., [Japanese], 1977; Ph.D., 1985)

Walter Erich Keller, Ph.D., Professor of Theology; Concordia Seminary, St. Louis (B.A., 1952; M.Div., 1955, S.T.M., 1956); University of Cambridge (Ph.D., 1968)

Thomas Davidson Kennedy, Ph.D., Assistant Professor of Philosophy; Calvin College (B.A., 1975); Calvin Theological Seminary; University of Virginia (Ph.D., 1986)

Alan James Kirkpatrick, D.B.A., Assistant Professor in the College of Business Administration; University of South Florida (B.A., 1973); Georgia State University (M.B.A., 1976); University of Tennessee (D.B.A., 1985)

Kenneth Henry Klein, Ph.D., Professor of Philosophy; Washington University (A.B., 1952); The University of Chicago, Divinity School (B.D., 1955); Lutheran Theological Seminary, Chicago; Mansfield College, Oxford University; Harvard University (Ph.D., 1963)

Claire Louise Boyd Knaub, R.N., M.N., Associate Professor of Nursing; Elizabethtown College (B.S.N., 1958); University of Pittsburgh (M.N., 1971)

12 William Ronald Koch, M.S., Associate Professor of Physical Education; Valparaiso University (B.A., 1951); Indiana University (M.S., 1956)

10 On Sabbatical Leave, Spring Semester
11 On leave-of-absence
12 On Sabbatical Leave, Fall Semester
Leonard H. Kochendorfer, Ph.D., Professor of Education; Concordia Teachers College, River Forest (B.S., 1956); Washington University (M.A., 1960); St. John’s University; University of Texas (Ph.D., 1966)

Douglas J. Kocher, Ph.D., Associate Professor of Communication; Valparaiso University (B.A., 1973); University of Tennessee (M.S., 1976; Ph.D., 1979)

Richard P. Koenig, M.S., Professor of Physical Education; Assistant to the President with rank of Professor; Valparaiso University (B.A., 1942; B.S. in P.E., 1954); Indiana University (M.S., 1955)

Donald Dale Koetke, Ph.D., Professor of Physics; Concordia Teachers College, River Forest (B.S. in Ed., 1959); Northwestern University (M.A., 1963; Ph.D., 1968)

Dean Wayne Kohlhoff, Ph.D., Associate Professor of History; Valparaiso University (B.A., 1957); Washington University (M.A., 1958); The University of Chicago (Ph.D., 1973)

Warren Melvin Kosman, Ph.D., Professor of Chemistry; Valparaiso University (B.S., 1967); The University of Chicago (M.S., 1969; Ph.D., 1974)

Susan Marie Kostrzeba, M.S., Assistant Professor of Communication; Purdue University (B.S., 1980; M.S., 1982)

Sandra L. Kowalski, R.N., Ph.D., Associate Professor of Nursing; Purdue University, Calumet (B.S.N., 1973); St. Xavier College (M.S.N., 1977); University of Notre Dame (Ph.D., 1989)

Leonard Alan Kraft, Ph.D., Associate Professor of Electrical and Computer Engineering; Purdue University (B.S.E.E., 1970; M.S.E.E., 1972; Ph.D., 1984)

Diane Hoermann Krebs, M.S., Associate Professor of Mathematics and Computer Science; Valparaiso University (B.S., 1956); University of Michigan (M.S., 1957)

Gottfried G. Krodel, Th.D., L.H.D. (Hon.), Professor of History; Martin Luther Chair in Reformation History; Oberrealschule mit Gymnasium, Neumarkt/Oberpfalz (Arbital, 1949); Friedrich Alexander University, Erlangen (Th.D., 1955); Carthage College (L.H.D.[Hon.], 1982)

Michael Martin Kumpf, Ph.D., Associate Professor of Foreign Languages and Literatures; Luther College (B.A., 1968); The Ohio State University (M.A., 1972; Ph.D., 1974)

Robert Edward Lang, Ph.D., Assistant Professor of Education; DePaul University (B.A., 1973; M.Ed., 1976); University of Illinois (Ph.D., 1987)

Leonard H. Kochendorfer, Ph.D., Professor of Education; Concordia Teachers College, River Forest (B.S., 1956); Washington University (M.A., 1960); St. John’s University; University of Texas (Ph.D., 1966)

Douglas J. Kocher, Ph.D., Associate Professor of Communication; Valparaiso University (B.A., 1973); University of Tennessee (M.S., 1976; Ph.D., 1979)

Richard P. Koenig, M.S., Professor of Physical Education; Assistant to the President with rank of Professor; Valparaiso University (B.A., 1942; B.S. in P.E., 1954); Indiana University (M.S., 1955)

Donald Dale Koetke, Ph.D., Professor of Physics; Concordia Teachers College, River Forest (B.S. in Ed., 1959); Northwestern University (M.A., 1963; Ph.D., 1968)

Dean Wayne Kohlhoff, Ph.D., Associate Professor of History; Valparaiso University (B.A., 1957); Washington University (M.A., 1958); The University of Chicago (Ph.D., 1973)

Warren Melvin Kosman, Ph.D., Professor of Chemistry; Valparaiso University (B.S., 1967); The University of Chicago (M.S., 1969; Ph.D., 1974)

Susan Marie Kostrzeba, M.S., Assistant Professor of Communication; Purdue University (B.S., 1980; M.S., 1982)

Sandra L. Kowalski, R.N., Ph.D., Associate Professor of Nursing; Purdue University, Calumet (B.S.N., 1973); St. Xavier College (M.S.N., 1977); University of Notre Dame (Ph.D., 1989)

Leonard Alan Kraft, Ph.D., Associate Professor of Electrical and Computer Engineering; Purdue University (B.S.E.E., 1970; M.S.E.E., 1972; Ph.D., 1984)

Diane Hoermann Krebs, M.S., Associate Professor of Mathematics and Computer Science; Valparaiso University (B.S., 1956); University of Michigan (M.S., 1957)

Gottfried G. Krodel, Th.D., L.H.D. (Hon.), Professor of History; Martin Luther Chair in Reformation History; Oberrealschule mit Gymnasium, Neumarkt/Oberpfalz (Arbital, 1949); Friedrich Alexander University, Erlangen (Th.D., 1955); Carthage College (L.H.D.[Hon.], 1982)

Michael Martin Kumpf, Ph.D., Associate Professor of Foreign Languages and Literatures; Luther College (B.A., 1968); The Ohio State University (M.A., 1972; Ph.D., 1974)

Robert Edward Lang, Ph.D., Assistant Professor of Education; DePaul University (B.A., 1973; M.Ed., 1976); University of Illinois (Ph.D., 1987)

Dale Gulford Lasky, Ph.D., Professor of Theology; Concordia Seminary, St. Louis (B.A., 1951; M.Div., 1954); University of Heidelberg; Yale Divinity School (S.T.M., 1960); The University of Chicago (M.A., 1965; Ph.D., 1972)

Debra A. Laverie, M.B.A., Assistant Professor in the College of Business Administration; Saint Mary’s College (B.A., 1985); University of Notre Dame (M.B.A., 1987)

Laura Kristen Lazar, C.P.A., Ph.D., Assistant Professor of Accounting; Valparaiso University (B.A., 1972); Indiana University (M.B.A., 1980; Ph.D., 1986)

Richard William Lee, Rel.D., Professor in Christ College; Valparaiso University (B.A., 1960); The University of Chicago (B.D., 1964); The School of Theology at Claremont (Rel.D., 1968)

Gilbert Mark Lehmann, Ph.D., Professor of Mechanical Engineering; Valparaiso University (B.S.M.E., 1955); Illinois Institute of Technology (M.S.M.E., 1957); Purdue University (Ph.D., 1966)

Joel Phillip Lehmann, Ph.D., Associate Professor of Mathematics and Computer Science; Valparaiso University (B.S., 1968); North Carolina State University (M.A.M., 1971; Ph.D., 1978); DePaul University (M.S., 1984)

William Leroy Leoschke, Ph.D., Professor of Chemistry; Valparaiso University (B.A., 1950); University of Wisconsin (M.S., 1952; Ph.D., 1954)

Rosalie Berger Levinson, J.D., Professor of Law; Indiana University (B.A., 1969; M.A., 1970); Valparaiso University (J.D., 1973)

Marcia Ann Lewis, D.M.A., Associate Professor of Music; University of Wisconsin (B.M., 1963; M.M., 1965); Northwestern University (D.M.A., 1978)

Mary Lou Logothetis, R.N., D.N.S., Associate Professor of Nursing; DePaul University (B.S.N., 1966; M.S.N., 1976); Indiana University (D.N.S., 1988)

Theodore Mark Ludwig, Th.D., Ph.D., Professor of Theology; Concordia Seminary, St. Louis (B.A., 1956; M.Div., 1961; S.T.M., 1962; Th.D., 1963); The University of Chicago (Ph.D., 1975)

Edgar Jacob Luecke, Ph.D., Professor of Electrical and Computer Engineering; Valparaiso University (B.S.E.E., 1955); University of Notre Dame (M.S.E.E., 1957); Purdue University (Ph.D., 1968)

Karl Ernst Lutze, B.A., Associate Professor of Theology; Concordia Seminary, St. Louis (B.A., 1942; Diploma, 1945)

On leave of absence
Gayton Carl Marks, M.S., Associate Professor of Biology; Valparaiso University (B.A., 1955); University of Michigan (M.S., 1961)

LeRoy Oscar Anton Martinson, Ph.D., Associate Professor of Sociology; Gustavus Adolphus College (A.B., 1949); Augustana Theological Seminary (M.Div., 1953); Columbia University (M.A., 1965); The University of Chicago (Ph.D., 1971)

Richard Callender Maxwell, Ph.D., Associate Professor of English; University of California, Riverside (B.A., 1969); The University of Chicago (M.A., 1970; Ph.D., 1976)

Joseph Francis McCall, M.M., Associate Professor of Music; Loyola College (A.B., 1951); Peabody Conservatory of Music (M.B., 1954; M.M., 1956); Eastman School of Music

Michael K. McCuddy, Ph.D., Professor in the College of Business Administration; Indiana University, South Bend (B.S., 1971; M.S.B.A., 1973); Purdue University (Ph.D., 1977)

Alfred W. Meyer, LL.M., Louis and Anna Seegers Professor of Law; Valparaiso University (B.A., 1948; J.D., 1950); Harvard University Law School (LL.M., 1951)

Arlin Glenn Meyer, Ph.D., Professor of English; Dean of Christ College; Calvin College (A.B., 1959); University of Michigan (M.A., 1964); Ohio University (Ph.D., 1967)

Ellen Ruth Bierwagen Meyer, M.A., Librarian with rank of Assistant Professor; Valparaiso University (B.A., 1962); Indiana University (M.A., 1965)

Frederick Richard Meyer, Ph.D., Professor of Biology; Valparaiso University (B.S., 1960); Indiana University (M.A., 1962; Ph.D., 1966)

Nancy Jo Meyer, LL.M., Assistant Professor of Communication; Indiana University (A.B., 1963); Valparaiso University (J.D., 1976); New York Law School (LL.M., 1985)

Sandra Sue Michelsen, Ph.D., Assistant Professor of Education; University of Toledo (B.Ed., 1964); Michigan State University (M.A., 1970; Ph.D., 1985)

John A. Miller, D.B.A., Professor of Marketing; Dean of the College of Business Administration; Concordia Senior College (B.A., 1960); Indiana University (M.B.A., 1969; D.B.A., 1972)

Judith Elaine Kimbrough Miller, M.L.S., Librarian with rank of Assistant Professor; Valparaiso University (B.A., 1970); North Texas State University (M.L.S., 1976)

Kevin Charles Mooney, Ph.D., Assistant Professor of Psychology; University of Illinois (B.A., 1977); State University of New York at Buffalo (M.A., 1980; Ph.D. 1982)

James Fraser Moore, Ph.D., Associate Professor of Theology; Park College (B.A., 1968); Luther Theological Seminary (M.Div., 1972); The University of Chicago (Ph.D., 1982)

Theodore D. Morrison, C.P.A., M.P.A., Assistant Professor of Accounting; Emory University (B.A., 1970); Georgia State University (M.P.A., 1979); Mississippi State University

Seymour Moskowitz, J.D., Professor of Law; Columbia University (B.A., 1963); Harvard University Law School (J.D., 1966)

Kathleen Ruth Mullen, Ph.D., Associate Professor of English; Notre Dame College (B.A., 1964); University of Texas (M.A., 1972; Ph.D., 1977)

Marvin Glen Mundt, Ph.D., Professor of Mathematics and Computer Science; Luther College (B.A., 1955); Iowa State University (M.S., 1958; Ph.D., 1961)

David Allan Myers, J.D., Professor of Law; Drake University (B.A., 1973); University of Illinois (J.D., 1976)

Edgar Herbert Nagel, Ph.D., Professor of Chemistry; Valparaiso University (B.S., 1960); Northwestern University (Ph.D., 1965)

Judy Lynn Nantau, M.A., Assistant Professor of Communication; Valparaiso University (B.A., 1973); Western Michigan University (M.A., 1974)

Jean B. Nathlich, M.S., Instructor in Home Economics; Illinois State University (B.S., 1975); Southern Illinois University (M.S., 1989)

Virgil Omar Naumann, Ph.D., Professor of Physics; Montana State University (B.A., 1950); University of Wisconsin (M.S., 1952; Ph.D., 1956)

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14 On leave of absence
15 Director, University Overseas Center, Reutlingen, Germany
16 On partial leave of absence
17 On half-time leave of absence
James Melvin Nelson, Ph.D., Assistant Professor of Psychology; Eastern Washington University (B.A., 1976); Fuller Theological Seminary (M.Div., 1981); Washington State University (Ph.D., 1987)

Frederick Arthur Niedner, Jr., Th.D., Associate Professor of Theology; Concordia Senior College (B.A., 1967); Concordia Seminary, St. Louis (M.Div., 1971; S.T.M., 1973); Christ Seminary-Seminex (Th.D., 1979)

James Allen Nuechterlein, M.A., Professor of American Studies and Political Science; Valparaiso University (B.A., 1960); Yale University (M.A., 1962)

Gregory L. Ogden, LL.M., Visiting Professor of Law; University of California, Los Angeles (B.A., 1970); University of California, Davis (J.D., 1973); Temple University (LL.M., 1978); Columbia University (LL.M., 1981)

William Roys Olmsted, Ph.D., Associate Professor in Christ College; University of Michigan (B.A., 1965); University of Paris; The University of Chicago (M.A., 1970; Ph.D., 1975)


Irving S. Olsen, M.S., Librarian and Director of Instructional Media Center with rank of Assistant Professor; Northwestern University (B.S., 1954; M.S., 1955); Indiana University

Ceyhun Ozgur, C.P.I.M., Ph.D., Assistant Professor in the College of Business Administration; University of Akron (B.S., 1982; M.S., 1984); Kent State University (Ph.D., 1990)

Jon Fredric Pahl, Ph.D., Instructor in Theology; Valparaiso University (B.A., 1980); Trinity Lutheran Seminary (M.T.S., 1983); The University of Chicago (Ph.D., 1990)

Robert Daniel Palumbo, Ph.D., Assistant Professor of Mechanical Engineering; Valparaiso University (B.S.M.E., 1980); University of Minnesota (M.S.M.E., 1984; Ph.D., 1987)

Rita Signorelli Pappas, M.A., Instructor in English; Douglass College (B.A. 1967); Rutgers University (M.A. 1971)

Judith O. Patz, M.S.N., Instructor of Nursing; Valparaiso University (B.S.N., 1967); Purdue University Calumet (M.S.N., 1990)

John Steven Paul, Ph.D., Associate Professor of Communication; Valparaiso University (B.A., 1973); University of Wisconsin, Madison (M.A., 1976; Ph.D., 1981)

Clare E. Pearson, B.A., Instructor in the Humanities in Christ College; The University of Chicago (B.A., 1982)

Carole Ann Pepa, R.N., M.S.N., Assistant Professor of Nursing; Indiana University (B.S.N., 1967; M.S.N., 1982)

Margaret Perry, M.S.L.S., Director of Libraries with rank of Associate Professor; Western Michigan University (A.B., 1954); City College, New York; Catholic University of America (M.S.L.S., 1959)

Mary Geraldine Persyn, M.L.S., J.D., Associate Professor of Law; Law Librarian; Creighton University (A.B., 1967); University of Oregon (M.L.S., 1969); University of Notre Dame Law School (J.D., 1982)

Howard Nevin Peters, Ph.D., Professor of Foreign Languages and Literatures; Gettysburg College (B.A., 1960); University of Colorado (Ph.D., 1966)

Judith Griessel Peters, Ph.D., Professor of Foreign Languages and Literatures; Valparaiso University (B.A., 1961); University of Colorado (Ph.D., 1966)

Richard William Pick, M.F.A., Associate Professor of Communication; Valparaiso University (B.A., 1957); Northwestern University (M.A., 1962); University of Iowa (M.F.A., 1968)

Mel Willis Pielh, Ph.D., Associate Professor of Humanities and History in Christ College; Valparaiso University (B.A., 1968); Stanford University (M.A., 1970; Ph.D., 1980)

John Joseph Potts, C.P.A., J.D., Professor of Law; University of New Mexico (B.A., 1969); Boston College (J.D., 1974); Northeastern University (M.S., 1975)

Walter Emil Rast, Ph.D., Professor of Theology; Concordia Seminary, St. Louis (M.Div., 1955; S.T.M., 1956); Harvard University; The University of Chicago (M.A., 1964; Ph.D., 1966)

Karl Edward Reichardt, C.M.A., Ph.D., Associate Professor of Accounting; University of Wisconsin (B.B.A., 1986); University of Denver (M.S.B.A., 1967); University of Missouri (Ph.D., 1971)

Ann L. Reiser, Ph.D., Associate Professor of Education; Concordia Teachers College, River Forest (B.S., 1962); Michigan State University (M.A., 1969; Ph.D., 1978)

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18On leave of absence
19On Sabbatical Leave
20On Sabbatical Leave
21On Sabbatical Leave
University Personnel

Donna R. R. Resetar, M.A., Librarian with rank of Assistant Professor; Michigan State University (B.A., 1974); The University of Chicago (M.A., 1977)

Malcolm Walter Reynolds, M.S., Associate Professor of Mathematics and Computer Science; University of Michigan (B.S., 1951; M.S., 1952)

Perry W. Riffel, Ed.D., Assistant Professor of Education; Concordia College, Seward (B.S., 1969); Southern Illinois University (M.S.Ed., 1974); Oklahoma State University (Ed.D., 1990)

Dianna Jo Rioli, B.S.N., Instructor in Nursing; Valparaiso University (B.S.N., 1987)

Robert Lawrence Rose, P.E., M.S., Associate Professor of Mechanical Engineering; Illinois Institute of Technology (B.S., 1943; M.S., 1948)

22David L. Rowland, Ph.D., Associate Professor of Psychology; Southern Illinois University (B.A., 1972); The University of Chicago (M.A., 1975; Ph.D., 1977)

Marian Jean Rubchak, Ph.D., Assistant Professor of History; Douglass College (B.A., 1971); Rutgers University (M.A. 1973); University of Illinois (Ph.D., 1988)

Warren Gunther Rubel, Ph.D., Walter G. Friedrich Professor of American Literature; Concordia Seminary, St. Louis (B.A., 1950; M.Div., 1952); Washington University (M.A., 1961); University of Arkansas (Ph.D., 1964)

John Robert Ruff, M.A., Instructor in English; St. John’s University (B.A., 1973); College of St. Thomas (M.A.T., 1975); University of Washington (M.A., 1985)

Dolores Mary Ruosch, M.S., Dean of Women with rank of Associate Professor; Valparaiso University (B.A., 1951); University of Southern California (M.S., 1957)

Cynthia Ann Russell, R.N., M.S., Assistant Professor of Nursing; University of Wisconsin (B.S., 1979; M.S., 1982)

Andrew Joseph Salm, M.A., Instructor in Physical Education; Millikin University (B.A., 1986); Northeast Missouri State University (M.A., 1988)

Mollie A. Sandock, Ph.D., Assistant Professor of English; Brown University (A.B., 1972); The University of Chicago (M.A., Library School, 1976; M.A. [English Literature], 1979; Ph.D., 1985)

Verne Robert Sanford, Ph.D., Professor of Mathematics and Computer Science; University of North Dakota (Ph.B., 1957; M.S., 1959); University of Michigan (M.P.H., 1962; Ph.D., 1970)

Freda SuEllen Scales, R.N., Ph.D., Associate Professor of Nursing; Dean of the College of Nursing; Oklahoma Baptist University (B.S., 1965); Indiana University (M.S.N., 1970); Purdue University (Ph.D., 1977)

William Joseph Schoech, P.E., Ph.D., Professor of Mechanical Engineering; Valparaiso University (B.S.E.E., 1966); Pennsylvania State University (M.S.I.E., 1969); Purdue University (Ph.D., 1971)

Robert Keith Schoppa, Ph.D., Professor of History; Valparaiso University (B.A., 1966); University of Hawaii (M.A., 1968); Taiwan National Normal University; University of Michigan (Ph.D., 1975)

David Lee Schroeder, Ph.D., Assistant Professor in the College of Business Administration; Oklahoma State University (B.A., 1971; M.S., 1984; Ph.D., 1990)

James Edward Schueler, P.E., M.S., Professor of Civil Engineering; Valparaiso University (B.S.C.E., 1959); Northwestern University (M.S., 1960)

23Mark R. Schwehn, Ph.D., Associate Professor of Humanities in Christ College; Valparaiso University (B.A., 1967); Stanford University (M.A., 1969; Ph.D., 1978)

David William Scupham, Ph.D., Assistant Professor of Biology; The University of Chicago (B.A., 1975); Indiana University (Ph.D., 1985)

Nancy Carol Sederberg, Ph.D., Associate Professor of Sociology; Director of University Research; Thiel College (B.A., 1964); University of Pittsburgh (M.Ed., 1965); University of Notre Dame (Ph.D., 1981)

Gerald Raymond Seeley, P.E., Ph.D., Professor of Civil Engineering; University of Wisconsin (B.S.M.E., 1963; M.S., 1966); University of Minnesota (M.S., 1971; Ph.D., 1973)

Edgar Paul Senne, M.A., Associate Professor of Theology, Concordia Seminary, St. Louis (B.A., 1954; M.Div., 1958); Washington University (M.Ed., 1958); The University of Chicago (M.A., 1969)

James Serpento, M.F.A., Assistant Professor of Communication; Iowa State University (B.A., 1983); Indiana University (M.F.A., 1968)

Mary Josephine Sheehan, R.N., D.N.S., Associate Professor of Nursing; Adelphi University (B.S., 1959); New York University (M.A., 1962); Northwestern University; Indiana University (D.N.S., 1987)

22On Sabbatical Leave
23On Sabbatical Leave
William Singleton, Ph.D., Assistant Professor of Economics; University of Connecticut (B.A., 1974); Duke University (M.A., 1976; Ph.D., 1982)

24Robert Sirko, M.F.A., Assistant Professor of Art; Indiana University (B.A., 1982); California Institute of the Arts (M.F.A., 1988)

Dorothy Paulsen Smith, R.N., J.D., Ph.D., Vice President for Business Affairs with rank of Professor; Whitworth College (B.S., 1955); Western Reserve University (M.S., 1960); Yale University (Ph.D., 1967); Valparaiso University (J.D., 1987)

Ronald John Sommer, Ph.D., Professor of English; Wabash College (B.A., 1960); Yale School of Drama; Brown University (M.A., 1963); Indiana University (Ph.D., 1975)

John Raymond Sorensen, Ph.D., Professor of Mathematics and Computer Science; Valparaiso University (B.S., 1957); Purdue University (M.S., 1959; Ph.D., 1966)

Gerald Paul Speckhard, Ed.D., Professor of Education; Valparaiso University (B.A., 1952); University of Wisconsin (M.S., 1959); University of Colorado (Ed.D., 1966)

Arvid Frederic Sponberg, Ph.D., Professor of English; Augustana College, Illinois (B.A., 1966); The University of Chicago (M.A., 1967); University of Michigan (Ph.D., 1973)

Bradford Hall Spring, Ph.D., Professor of Civil Engineering; Cornell University (B.C.E., 1959; M.S., 1961); University of Wisconsin (Ph.D., 1973)

Diane Stanley, M.S., Instructor in Education; Valparaiso University (B.S.Ed., 1982); Butler University (M.S.Ed., 1986)

25James Dill Statt, Ph.D., Professor of History; University of Maryland (B.A., 1957; M.A., 1961; Ph.D., 1965)

John Rudolph Steffen, P.E., Ph.D., Professor of Mechanical Engineering; Valparaiso University (B.S.M.E., 1966); University of Notre Dame (M.S.M.E., 1968); Rutgers University (Ph.D., 1974)

William Leroy Steinbrecher, Ed.D., Professor of Physical Education; Valparaiso University (B.A., 1957; B.S. in P.E., 1959); Indiana University (M.S. in P.E., 1963); Florida State University (Ed.D., 1969)

Jerome J. Stieger, Ph.D., Associate Professor of Physical Education; Florida State University (B.S., 1964; M.S., 1969; Ph.D., 1978)

26Eugenia Adele Stiemke, M.A., Associate Professor of Education; Valparaiso University (B.A., 1945); The Johns Hopkins University (M.A., 1956)

Richard Taylor Stith, III, J.D., Ph.D., Professor of Law; Harvard University (B.A., 1965); Universidad de la Republica, Uruguay; University of California, Berkeley (M.A., 1967); Yale University (M.Phil., 1971; J.D., 1973; Ph.D., 1973)

Wanda M. Strandmark, R.N., M.S.N., Assistant Professor of Nursing; Loyola University (B.S.N., 1966); Indiana University (M.S.N., 1981)

Michael Stevens Straubel, J.D., Assistant Professor of Law; Western Michigan University (B.S., 1979); Marquette University (J.D., 1982); McGill University (Diploma, 1985)

Vernon Edward Strength, Ph.D., Assistant Professor of Communication; University of Southern California (B.S. 1971); California State University, Long Beach (M.A., 1978); University of Kentucky (Ph.D. 1986)

George Strimbu, M.S., Associate Professor of Art; Institute of Design of Illinois Institute of Technology (B.S., 1956; M.S., 1966)

James Michael Stück, Ph.D., Assistant Professor in the College of Business Administration; Azusa Pacific University (B.A., 1978; M.B.A., 1978); Claremont Graduate School (Ph.D., 1981)

Cheryl Andrea Stultz, J.D., Visiting Assistant Professor of Law; University of Notre Dame (B.A., 1981); The Catholic University of America (J.D., 1984)

Patrick John Sullivan, Ph.D., Assistant Professor of Mathematics and Computer Science; University of Notre Dame (B.S., 1980); University of Michigan (M.S., 1985; Ph.D., 1986)

James Chien-Hua Tan, Ph.D., Professor of Biology; Chung Sing University, China (B.S., 1957); Montana State University (M.S., 1961); North Carolina State University (Ph.D., 1968)

Frederick H. Telschow, D.M.A., Professor of Music; Valparaiso University (B.A., 1951); University of Nebraska (M.M., 1960); Eastman School of Music, University of Rochester (D.M.A., 1969)

Bonnie Bernette Thanos, M.S., Assistant Professor of Nursing; Indiana University (B.S.N., 1980); Purdue University (M.S., 1988)

24For Spring Semester only (Part-Time in Fall Semester)

25On research leave, Fall Semester

26On leave of absence, Fall Semester; Retired as of December 31, 1989

27On half-time leave of absence
Harold Thomas Thompson, Ph.D.,
Associate Professor of Civil Engineering; University of Nebraska at Omaha (B.S.C.E., 1968); Pennsylvania State University (M.S.C.E., 1975; Ph.D., 1978)

Mirtha Toledo, M.A., Assistant Professor of Foreign Languages and Literatures; Villanova University, Havana (LL.D., 1959); Indiana State University (B.S., 1964; M.A., 1965); Universidad Central de Madrid; Indiana University

Paul Stephen Trapp, M.B.A., Assistant Professor in the College of Business Administration; University of Colorado (B.S.B.A., 1979); Indiana University (M.B.A., 1981); University of Illinois

Mary T. Treanor, Ph.D., Assistant Professor of Mathematics and Computer Science; College of Mt. St. Vincent (B.A., 1964); University of Notre Dame (M.S., 1959; Ph.D., 1964)

Thomas John Trimborn, Ph.D., Associate Professor of Music; University of Wisconsin-Milwaukee (B.F.A. 1967; M.M., 1968); Northwestern University (Ph.D., 1984)

Albert Raymond Trost, Jr., Ph.D., Professor of Political Science; Valparaiso University (B.A., 1962); Washington University (M.A., 1963; Ph.D., 1971)

David George Truemper, S.T.D., Professor of Theology; Concordia Senior College (B.A., 1961); Concordia Seminary, St. Louis (M.Div., 1965; S.T.M., 1969); Lutheran School of Theology at Chicago (S.T.D., 1974); University of Chicago

Edward Martin Uehling, Ph.D., Associate Professor of English, Hastings College (B.A., 1967); Pennsylvania State University (M.A., 1973; Ph.D., 1980)

Stephanie Edna Umbach, M.A., Librarian with rank of Assistant Professor; Valparaiso University (B.A., 1959); Indiana University (M.A., 1961)

Forrest Leslie Vance, Ph.D., Professor of Psychology; University of Minnesota (B.A., 1952; Ph.D., 1958)

Ruth Casey Vance, J.D., Assistant Professor of Law; Olivet College (B.A., 1979); Valparaiso University (J.D., 1982)

David Eugene Vandercoy, LL.M., Associate Professor of Law; Pennsylvania State University (B.A., 1971); Dickinson School of Law (J.D., 1974); New York University (LL.M., 1980)

Peter J. Venturelli, Ph.D., Associate Professor of Sociology; Illinois State University (B.A., 1972); The University of Chicago (M.A., 1978; Ph.D., 1981)

Shalini S. Venturelli, M.A., Instructor in Communication; Delhi University (B.A., 1971); Illinois State University (B.S., 1973); University of Illinois, The University of Chicago (M.A., 1989)

Meryl Clarence Vocke, P.E., Ph.D., Professor of Electrical and Computer Engineering; Valparaiso University (B.S.E.E., 1955); University of Notre Dame (M.S.E.E., 1957); University of Iowa (Ph.D., 1971)

Jerry M. Wagenblast, M.S., Associate Professor of Mathematics and Computer Science; Illinois Institute of Technology (B.S., 1962; M.S., 1968); Purdue University

Stuart G. Walesh, P.E., Ph.D., Associate Professor of Civil Engineering; Dean of the College of Engineering; Valparaiso University (B.S.C.E., 1963); The Johns Hopkins University (M.S.E., 1965); University of Wisconsin-Madison (Ph.D., 1969)

LouJeanne Bray Walton, M.A., Associate Professor of Social Work; Valparaiso University (B.A., 1960); The University of Chicago (M.A., 1969)

Nola Jean Wegman, Ph.D., Professor of English; Northwestern University (B.S., 1953; M.A., 1954; Ph.D., 1967)

Ted D. Westermann, Ph.D., Professor of Sociology; Concordia Seminary, St. Louis (B.A., 1950; Theology Diploma, 1953); Emory University (M.A., 1962; Ph.D., 1975)

Normand John Widiger, A.B., Associate Professor of Theology; Concordia Seminary, St. Louis (A.B., 1945); University of Alabama; The University of Chicago

Michael R. Yonan, M.S., Assistant Professor in the College of Business Administration; University of Texas (B.A., 1979); Texas A & M University (M.S., 1984)

Gertrude Yonover, J.D., Associate Professor of Law; The University of Chicago (B.A., 1964); Illinois Institute of Technology (J.D., 1983)

Cheryl Lynn Younger, M.S., Instructor in Biology; Valparaiso University (B.S., 1984); Purdue University (M.S., 1988)

Vineva Viola Yover, R.N., M.S.N., Assistant Professor of Nursing; Purdue University (B.S.N., 1973); University of Illinois (M.S.N., 1976); University of Texas

Stanislaus A. Zygmunt, Ph.D., Visiting Assistant Professor of Physics; Massachusetts Institute of Technology (S.B. [Physics], 1984; S.B. [Mat. Sc./Eng.], 1984; Ph.D., 1988)

On leave of absence. Spring Semester
On Sabbatical Leave
Adjunct and Part-Time Faculty, 1989-1990

Michael Peter Adamczyk, M.M., Part-Time Instructor in Music

Julian Bernard Allen, J.D., Adjunct Professor of Law

Larry D. Allen, M.M., Part-Time Instructor in Music

Elise Marta Alverson, M.S.N., Part-Time Assistant Professor of Nursing

Susan Bachman, M.A., Part-Time Instructor in English

Joy C. Banyas, B.S., Part-Time Instructor in Communication

James Lee Barkow, M.M.Ed., Part-Time Instructor in Music

Patti Beier, M.A.T., Part-Time Lecturer in Mathematics and Computer Science

Steven Alan Bjella, M.A., Part-Time Instructor in Music

Marcella R. Borcherding, M.A.L.S., Part-Time Assistant Professor of Education

Ellen Brauer, M.A., Part-Time Instructor in History

Merlin LeRoy Bray, M.A., Part-Time Lecturer in Education

Susan Adams Brietzke, M.A., Adjunct Instructor in the School of Law

Jeffrey C. Brown, M.M., Adjunct Assistant Professor of Music

Mark Charles Bublitz, M.S.M.E., Part-Time Lecturer in Mechanical Engineering

Patricia J. Buckwell, Ph.D., Part-Time Associate Professor of Music

Marie T. Cahn, D.N.S., Part-Time Associate Professor of Nursing

David A. Capp, J.D., Adjunct Professor of Law

Mary Undeen Nelson Carlson, M.A., Part-Time Instructor in Mathematics and Computer Science

Leslie Nordstrom Cefali, M.Ed., Part-Time Lecturer in Education

Curtis W. Cichowski, J.D., Adjunct Professor of Law; Assistant Dean of the School of Law

Eileen Nebe Coates, M.A.L.S., Adjunct Instructor in Foreign Languages and Literatures

Susan Lynn Collins, M.A., Adjunct Instructor in the School of Law

Michele Corazzo, M.F.A., Part-Time Assistant Professor of Art

Denise Elaine Criswell, M.S., Part-Time Instructor in Physical Education

Robert Thomas Dassow, B.A., Part-Time Lecturer in the College of Business Administration

James C. Daugherty, B.S., Adjunct Instructor in Physical Education

Mary Ann Daum, B.A., Part-Time Instructor in Physical Education

M. Suzann Davids, M.F.A., Part-Time Instructor in Music

Patricia Lott Downing, M.A., Part-Time Assistant Professor of Communication

Kathleen M. Dryer, M.S., Part-Time Instructor in Communication

Joan Lynn Ehrstein, M.A., Part-Time Instructor in Communication

Darrel Eichhorn, M.A., Part-Time Instructor in History

Luther O. Estridge, Jr., M.M.Ed., Part-Time Instructor in Music

Bruce Allen Evans, M.M., Part-Time Instructor in Music

Kevin Thomas Firme, M.F.A., Part-Time Assistant Professor of Art

James J. Flora, Jr., Ph.D., Part-Time Associate Professor of Civil Engineering

Felicia Foland, M.M., Part-Time Instructor in Music

William Lennox Foster, M.M., Part-Time Instructor in Music

Gregory D. Fudala, M.M., Part-Time Instructor in Music

Barbara Gaebel-Morgan, M.S.W., Part-Time Assistant Professor of Social Work

Marcia Lou Gienapp, J.D., Adjunct Professor of Law

Rick Christopher Gikas, J.D., Adjunct Professor of Law

Katherine Jean Glade, M.S.W., Part-Time Assistant Professor of Social Work

Victor N. Glover, M.S., Part-Time Instructor in Communication

Diane K. Greve, M.S.S.W., Part-Time Instructor in Theology

Stanley Halpern, Ph.D., Part-Time Assistant Professor of Foreign Languages and Literatures
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Role</th>
<th>Department/Program</th>
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<tbody>
<tr>
<td>Richard Gordon Hatcher, J.D.</td>
<td>Adjunct Professor of Law</td>
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<tr>
<td>Wayne Hewitt, B.S.M.E.</td>
<td>Part-Time Lecturer in the College of Engineering</td>
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<tr>
<td>Mary Schlie Hill, B.S.E.E.</td>
<td>Part-Time Instructor in Electrical and Computer Engineering</td>
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<tr>
<td>John Frederick Hoehner, J.D.</td>
<td>Adjunct Professor of Law</td>
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<td>David L. Hollenbeck, J.D.</td>
<td>Adjunct Professor of Law</td>
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<tr>
<td>John E. Hughes, J.D.</td>
<td>Adjunct Professor of Law</td>
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<td>John Frederick Hoehner, J.D.</td>
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<td>David L. Hollenbeck, J.D.</td>
<td>Adjunct Professor of Law</td>
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<tr>
<td>Diana Ellisabeth Itzsche, B.A.</td>
<td>Part-Time Instructor in Theology</td>
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<tr>
<td>LouAnn H. Karabel, M.A.</td>
<td>Part-Time Instructor in English</td>
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<tr>
<td>Dolores Elaine Keller, M.A.L.S.</td>
<td>Part-Time Instructor in Music</td>
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<tr>
<td>Paula J. Keller, M.S.</td>
<td>Part-Time Lecturer in Home Economics</td>
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<tr>
<td>Scott Louis King, J.D.</td>
<td>Part-Time Assistant Professor of Law</td>
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<tr>
<td>Diane Marie Kitchell, B.I.D.</td>
<td>Part-Time Lecturer in Home Economics</td>
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<tr>
<td>Jon L. Kuss, M.S.W.</td>
<td>Part-Time Assistant Professor of Social Work</td>
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<td>Joanne C. Lehmann, M.A.</td>
<td>Part-Time Instructor in Communication</td>
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<tr>
<td>Donald Paul Levinson, J.D.</td>
<td>Adjunct Professor of Law</td>
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<tr>
<td>Judith Ann Listman, Ph.D.</td>
<td>Part-Time Lecturer in Home Economics</td>
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<tr>
<td>Jane Susan Lowenstine, M.A.L.S.</td>
<td>Part-Time Instructor in Art</td>
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<tr>
<td>Valerie J. Ludwic, Ph.D.</td>
<td>Adjunct Assistant Professor of Psychology</td>
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<td>Gregory R. Lyman, J.D.</td>
<td>Adjunct Professor of Law</td>
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<tr>
<td>Ross J. Mack, M.Div.</td>
<td>Part-Time Instructor in the College of Engineering</td>
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<tr>
<td>Sharif Samir Mansur, M.A.L.S.</td>
<td>Part-Time Instructor in Psychology</td>
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<tr>
<td>Diane Joy Massa, M.S.</td>
<td>Part-Time Lecturer in Education</td>
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<td>Patricia Lynn McAfee, M.S.</td>
<td>Part-Time Instructor in Communication</td>
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<tr>
<td>Hugh E. McGuigan, Ph.D.</td>
<td>Part-Time Assistant Professor of Foreign Languages and Literatures; Director of International Studies</td>
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<tr>
<td>Roderick Gardner Moore, II, M.S.</td>
<td>Part-Time Instructor in Physical Education</td>
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<tr>
<td>Patricia Lynn Moyer, M.A.L.S.</td>
<td>Part-Time Instructor in Geography</td>
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<tr>
<td>Linda Elaine Musser, M.S.N.</td>
<td>Part-Time Assistant Professor of Social Work</td>
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<tr>
<td>Suzanne Nadel, M.S.W.</td>
<td>Part-Time Assistant Professor of Social Work</td>
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<tr>
<td>Rodney R. Nordstrom, Ph.D.</td>
<td>Part-Time Lecturer in the College of Business Administration</td>
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<tr>
<td>Selma Anderson Ochoa, M.A.</td>
<td>Director of the Valparaiso University Study Center at Puebla, Mexico, with rank of Part-Time Assistant Professor</td>
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<tr>
<td>Virginia T. Oram, M.M.</td>
<td>Part-Time Instructor in Music</td>
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<td>Dean N. Panos, B.S.</td>
<td>Part-Time Lecturer in the College of Business Administration</td>
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<td>Roger Dean Paul, M.S.</td>
<td>Adjunct Instructor in Communication</td>
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<td>Marianita Hicks Porterfield, M.Ed.</td>
<td>Part-Time Instructor in Art</td>
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<td>Sandra L. Prigge</td>
<td>Part-Time Instructor in Communication</td>
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<td>Mary Lee Siedentop Riley, M.A.L.S.</td>
<td>Part-Time Instructor in Music</td>
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<td>Andrew Paul Rodovich, J.D.</td>
<td>Adjunct Professor of Law</td>
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<td>Richard A. Rusch, B.A.</td>
<td>Part-Time Instructor in Music</td>
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<td>Pamela Cathrine Salm, M.A.</td>
<td>Adjunct Instructor in Physical Education</td>
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<td>Barbara J. Schmidt, J.D.</td>
<td>Adjunct Professor of Law</td>
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<td>Rin Curtis Seibert, M.S.</td>
<td>Part-Time Instructor in Physical Education</td>
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<td>Robert W. Shamo, M.Mus.Ed.</td>
<td>Part-Time Assistant Professor of Music</td>
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<td>Debra Kay Silvert, B.S.W.</td>
<td>Part-Time Instructor in Music</td>
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<td>Matthew Sonstein, M.F.A.</td>
<td>Part-Time Assistant Professor of Art</td>
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<td>Norma Jean Acker Sorenson, M.S.</td>
<td>Part-Time Instructor in Biology</td>
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<td>Steven Roland Strains, M.S.</td>
<td>Part-Time Instructor in Geography</td>
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<td>James G. Ton, M.S.</td>
<td>Part-Time Lecturer in Education</td>
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Robert D. Truitt, J.D., Adjunct Professor of Law
Nancy Harris Vaidik, J.D., Adjunct Professor of Law
Dawn J. Vician, M.S.B.A., Part-Time Lecturer in the College of Business Administration
Stephen Carl Wall, M.M., Part-Time Instructor in Music
Margaret E. Walls, M.Ed., Part-Time Assistant Professor of Home Economics
William Warrick, B.S., Part-Time Instructor in Communication
Tim Joseph Watts, M.A., Part-Time Instructor in History
Jeffrey Joseph Weisblatt, M.A.H.L., Visiting Lecturer in Theology
Linda S. Whitten, J.D., Adjunct Professor of Law
Eric A. Wignall, M.A., Adjunct Instructor in Communication
Donald Hammond Williams, M.Div., Part-Time Lecturer in Theology
E. Louise Williams, B.A., Part-Time Instructor in Theology
Frank H. Williams, M.S., Part-Time Lecturer in Education
Russell A. Willis, LL.B., Adjunct Professor of Law
Dion Patrick Wolfe, B.S., Adjunct Instructor in Communication
Loretta Ann Wolfe, B.S., Part-Time Instructor in Communication

FACULTY EMERITI, 1989-1990

Rhea Ann Adgate, M.A.L.S., Assistant Professor Emeritus of Home Economics; Michigan State University (B.S., 1949); Valparaiso University (M.A.L.S., 1973)

Kathryn Espy Aller, M.S. in Ed., Assistant Professor Emeritus of Music; Northwestern Univeristy (B.M.E., 1931; M.S. in Ed., 1936); Valparaiso University; American Conservatory of Music


Louis Franklin Bartelt, Jr., LL.M., Louis and Anna Seegers Professor Emeritus of Law; Valparaiso University (B.A., 1944; J.D., 1947); Yale University (LL.M., 1954); University of Wisconsin

Emory G. Bauer, M.A., Professor Emeritus of Physical Education; Valparaiso University (A.B., 1934); University of Colorado; State University of Iowa (M.A., 1939)

William Whiley Bloom, Ph.D., Professor Emeritus of Biology; Valparaiso University (A.B., 1939); The University of Chicago (M.S., 1949; Ph.D., 1954); University of Oregon; Indiana University; University of Tennessee

Ruth M. Brown, R.N., M.S., Associate Professor Emeritus of Nursing; Indiana University (B.S.N., 1965); Purdue University (M.S., 1972)

Vera Rose Bushing, B.L.S., Assistant Librarian Emeritus with rank of Assistant Professor Emeritus; Valparaiso University (B.A., 1946); The University of Chicago (B.L.S., 1947); Indiana University

Kermit H. Carlson, Ph.D., Professor Emeritus of Mathematics; Upsala College (A.B., 1939); State University of Iowa (M.S., 1941); University of Wisconsin (Ph.D., 1954)

Mary M. Crumpacker, Ph.D., Associate Professor Emeritus of Foreign Languages; Butler University (A.B., 1947); The University of Chicago (A.M., 1959; Ph.D., 1965)

William Herbert Dauberman, P.E., M.S., Professor Emeritus of Electrical and Computer Engineering; Bucknell University (B.S. in E.E. 1938); University of Pittsburgh; Illinois Institute of Technology (M.S., 1965)

John Fredrick Deters, Ph.D., Professor Emeritus of Chemistry; State University of Iowa (B.S.Ch.E., 1939); The University of Chicago (M.S., 1945); University of Notre Dame (Ph.D., 1964)

Ruth Ketler Deters, M.S., M.A., Associate Professor Emeritus of Mathematics; Northwestern University (B.S., 1932); The University of Chicago (M.A., 1933; M.S., 1943); Illinois Institute of Technology

Byron Lee Ferguson, M.A., Associate Professor Emeritus of Chemistry; Valparaiso University (B.A., 1948); Indiana University (M.A., 1950)

Walter George Friedrich, Ph.D., Litt.D. (Hon.), Distinguished Service Professor Emeritus of English; Indiana University (A.B., 1920); Columbia University (M.A., 1923); The Johns Hopkins University (Ph.D., 1934); Valparaiso University (Litt.D. [Hon.], 1974)

1Deceased, October 27, 1989
Philip Kleeper Gehring, Ph.D., Frederick A. and Mazie N. Reddel Professor Emeritus of Music; Oberlin College (A.B., 1950; Mus.B., 1950); Syracuse University (M.M., 1955; Ph.D., 1963)

Erwin Elmer Goehring, M.A., Professor Emeritus of Administration and Economics; University of Missouri (B.S. in Bus Adm., 1927); The University of Chicago (M.A., 1938)

Hazel Tallman Guillaumant, M.A., Professor Emeritus of Foreign Languages; Montana State College (B.S., 1925); State University of Iowa (M.A., 1929); Universidad Nacional Autonoma de Mexico; LaSorbonne, Paris (Diploma, 1934); Le College de France

Vera Therese Hahn, Ph.D., Professor Emeritus of Speech and Drama; Stanford University (A.B., 1930; M.A., 1931); Louisiana State University (Ph.D., 1939)

Robert J. Hanson, Ph.D., Professor Emeritus of Biology; Valparaiso University (B.A., 1948); University of Illinois (M.S., 1949; Ph.D., 1955)

Karl Henry Henrichs, M.A., LL.D. (Hon.), Director of the Round Table, Division of Public and Alumni Affairs with rank of Professor Emeritus; Concordia Seminary, St. Louis (Diploma, 1920); Columbia University; Western Reserve University (M.A., 1929); The University of Chicago; Valparaiso University (LL.D. [Hon.], 1971)

Bernhard Hugo Paul Hilla, Ed.D., Professor Emeritus of Education; Suomi Theological Seminary (Diploma, 1941); Boston University (A.B., 1943); Western Reserve University (M.A., 1945); Columbia University (Ed.D., 1955)

Albert George Huegli, Ph.D., LL.D., D.D., Litt.D. (Hon.), LL.D. (Hon.), President Emeritus; Concordia Seminary, St. Louis (M.Div., 1936; D.D. [Hon.], 1968) Wayne State University (A.B., 1938); University of Michigan (M.A., 1937); Northwestern University (Ph.D., 1944); Concordia Teachers College, River Forest (LL.D. [Hon.], 1964); University of Evansville (Litt.D. [Hon.], 1978); Calumet College (LL.D. [Hon.], 1963)

Wilbur Hoover Hutchins, J.D., Professor Emeritus of Administrative Sciences; Western Michigan University (A.B., 1934); University of Toledo (J.D., 1942)

Robert Leslie Isbell, M.S.Ed., Professor Emeritus of Mechanical Engineering; Goshen College (B.S. in Ed., 1952); Ball State Teachers College (M.S.Ed., 1962)

Edwin A. Johnson, M.M., M.A., Librarian Emeritus with rank of Associate Professor Emeritus; Valparaiso University (B.A., 1938); Northwestern University (M.M., 1939); Western Michigan University (M.A., 1964)

Jeff Griffith Johnson, Ph.D., Professor Emeritus of Sociology; Concordia Seminary, St. Louis (B.A., 1948); Washington University; University of Southern California (A.M., 1955; Ph.D., 1961)

Arthur Philip Kautz, Ph.D., Professor Emeritus of History; University of Minnesota (B.A., 1947; M.A., 1948; Ph.D., 1952)

Luther Paul Koepke, S.T.D., Professor Emeritus of Theology; Valparaiso University (B.A., 1940); Concordia Seminary, St. Louis (M.Div., 1941); University of Texas (M.A., 1944); Lutheran Theological Seminary, Chicago (S.T.D., 1950)

Alfred C. Koester, M.A. in Ed., Director Emeritus of Evening Division and Summer Session and Director Emeritus of Institutes and Conferences; Professor Emeritus of Education; Ball State Teachers College (B.S. in Ed., 1952; M.A. in Ed., 1954); Indiana University

John Henry Krause, M.S., Associate Professor Emeritus of Physical Education; American College of Physical Education (B.P.E., 1936); Seattle Pacific College (B.A., 1938); Washington University (M.S., 1950)

Carl Herman Krekelor, Ph.D., Professor Emeritus of Biology; Concordia Seminary, St. Louis (B.A., 1941; Diploma, 1945); Washington University; The University of Chicago (Ph.D., 1955)

Fred Walter Kruger, P.E., M.S.M.E., Professor Emeritus of Mechanical Engineering; Purdue University (B.S.E.E., 1943; B.S.M.E., 1947); University of Notre Dame (M.S.M.E., 1954)

Paul William Lange, Ph.D., Professor Emeritus of Education; The University of Chicago (Ph.B., 1930; M.A., 1933; Ph.D., 1940)

Raymond George Larson, Ph.D., Professor Emeritus of Chemistry; University of North Dakota (B.S., 1931; M.S., 1934); Purdue University (Ph.D., 1938); Cornell University; University of Minnesota; University of Southern California; University of Illinois

Alfred Robert Looman, A.B., Assistant Professor Emeritus; Valparaiso University (A.B., 1942); The University of Chicago

May Elizabeth McCoy, R.N., M.S.N., Associate Professor Emeritus of Nursing; Vanderbilt University (B.S.N., 1950; M.S.N., 1962)

Kenneth Mortimer, P.E., M.S., Professor Emeritus of Civil Engineering; Illinois Institute of Technology (B.S., 1947; M.S., 1949)

Thora Mary Moulton, Ph.D., Professor Emeritus of Foreign Languages and Literatures; Mount Holyoke College (B.A., 1942); The University of Chicago (M.A., 1944); Eberhard-Karls-Universitaet, Tuebingen (Ph.D., 1958)

Deceased, January 13, 1990
Gustav Must, Ph.D., Professor Emeritus of Foreign Languages; University of Dorpat (Ph.M., 1938); University of Budapest; University of Munich; University of Hamburg; University of Goettingen (Ph.D., 1948); University of Michigan

Kenneth Elsworth Nichols, Ph.D., Professor Emeritus of Biology; Valparaiso University (B.A., 1949); The University of Chicago (M.S., 1953; Ph.D., 1962)

Carol O. Petersen, M.A., Professor Emeritus of Foreign Languages; Real Gymnasium, Berlin; University of Greifswald; University of Leipzig; University of Berlin (M.A., 1946); Chevalier des Palmes Academiques de France

Paul Frederick Phipps, Ph.D., Walter G. Friedrich Professor Emeritus of American Literature; Valparaiso University (B.A., 1949); University of North Carolina (M.A., 1950); The Johns Hopkins University (Ph.D., 1961)

Newman Wilson Powell, Ph.D., Professor Emeritus of Music; Ohio University (B.F.A.M., 1942); American Conservatory of Music (M.M., 1944); Stanford University (M.A., 1954; Ph.D., 1959)

Henry William Prahl, M.A., Associate Professor Emeritus of English; Central Michigan College of Education (B.S., 1944); University of Michigan (M.A., 1948); University of Wisconsin

Frederick H. Rechlin, M.A., Director of Admissions Emeritus with rank of Assistant Professor Emeritus; Concordia Seminary, St. Louis (Diploma, 1931); Washington University; Columbia University (M.A., 1932); University of Heidelberg

Walter Martin Reiner, M.S., M.A., Associate Professor Emeritus in Christ College; Springfield College (B.S., 1949); Indiana University (M.S., 1954); Roosevelt University (M.A., 1973)

Edgar Carl Reinke, Ph.D., Professor Emeritus of Foreign Languages; The University of Chicago (A.B., 1928; Ph.D., 1934); University of Minnesota, Library School (A.M., 1957); Vergilian Classical Summer School, Naples, Italy; American School of Classical Studies, Athens, Greece

Marcus Eric John Riedel, Ph.D., Professor Emeritus of Philosophy in Christ College; The University of Chicago (B.A., 1949; Ph.D., 1967)

Herbert Jackson Risley, Ph.D., Professor Emeritus of English; Wabash College (B.A., 1938); Indiana University (M.A., 1941; Ph.D., 1958)

Martin Herman Schaefer, M.A., Associate Professor Emeritus of History; Concordia Seminary, St. Louis (A.B., 1941; Diploma, 1943); Washington University (M.A., 1949); The University of Chicago

William E. Schlender, Ph.D., Richard E. Meier Professor Emeritus of Management in The College of Business Administration; Valparaiso University (B.A., 1941); University of Denver (M.B.A., 1947); Ohio State University (Ph.D. 1955)

Robert V. Schnabel, Ph.D., LL.D. (Hon.), President Emeritus; Bowdoin College (B.A., 1944); Fordham University (M.S., 1951; Ph.D., 1955); Concordia College, Bronxville (LL.D. [Hon.], 1988)

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William Shewan, Ph.D., Professor Emeritus of Electrical and Computer Engineering; Valparaiso University (B.S. in Applied Science, 1950); University of Notre Dame (M.S.E.E., 1952); Purdue University (Ph.D., 1966)

Lois Juliette Simon, M.A., Professor Emeritus of Home Economics; Wittenberg College (A.B., 1928); University of California, Berkeley (M.A., 1936); Kent University; Cornell University; Syracuse University

3Fred Sitton, Ph.D., Professor Emeritus of Speech and Drama; Texas Western College (B.A., 1943; M.A., 1951); University of Texas (M.F.A., 1954); University of North Carolina (L.D.A., 1958); Northwestern University (Ph.D., 1962)

Lewis Oliver Smith, Jr., Ph.D., Professor Emeritus of Chemistry; Grove City College (B.S., 1944); University of Rochester (Ph.D., 1947)

John Henry Strietelmeier, M.A., Litt.D. (Hon.), Professor Emeritus of Geography; Valparaiso University (B.A., 1942); Northwestern University (M.A., 1947); Concordia Seminary, St. Louis (Litt.D. [Hon.], 1963); University of Cambridge

Wayne Eugene Swihart, M.A., Associate Professor Emeritus of Education; Manchester College (B.A., 1940); Ashland College and Theological Seminary; Ohio State University (M.A., 1945); Indiana University

Margaretta Sackville Tangerman, M.A.S.W., Professor Emeritus of Social Work; Indiana University (B.A., 1946); The University of Chicago School of Social Science Administration (M.A.S.W., 1947)

Allen Edmond Tuttle, Ph.D., Professor Emeritus of English; Washburn College (A.B., 1938); The University of Chicago; Northwestern University (A.M., 1947; Ph.D., 1950)

Gerhard A. Vater, M.S.E.E., Associate Professor Emeritus of Electrical and Computer Engineering; University of Wisconsin (B.S.E.E., 1937); Purdue University (M.S.E.E., 1960)

3Deceased, October 17, 1989
University Personnel

Rudolph C. Waldschmidt, Ph.D., Professor Emeritus of Psychology; Valparaiso University (A.B., 1936); The University of Chicago (Ph.D., 1957)

Richard William Wienhorst, Ph.D., Professor Emeritus of Music; Valparaiso University (B.A., 1942); American Conservatory of Music (M.M., 1948); Ecoles D'art Americaines du Fontainbleau (Diploma, 1951); Albert Ludwigs Universitaet, Freiburg; Eastman School of Music, University of Rochester (Ph.D., 1962)


Thiemo Wolf, Jr., Ph.D., Associate Professor Emeritus of Biology and Chemistry; Washington University (A.B., 1947; M.A., 1949); New York University (Ph.D., 1971)

Leslie M. Zoss, P.E., Ph.D., Professor Emeritus of Mechanical Engineering; Purdue University (B.S.M.E., 1949; M.S.M.E., 1950; Ph.D., 1952)
The Administration 1990-1991

Office of the President
President ......................................................... Alan F. Harre, Ph.D.
President Emeritus ............................................. Albert G. Huegli, Ph.D., LL.D., D.D., Litt.D.
President Emeritus .............................................. Robert V. Schnabel, Ph.D.
Assistant to the President ..................................... William O. Karpenko, II, Ph.D.
Executive Secretary to the President ..................... Barbara A. Niksch
University Pastor and Dean of the Chapel .......... Daniel C. Brockopp, S.T.M.
University Associate Pastor and Associate Dean of the Chapel ......................... David H. Kehret, M.Div., M.A.
Director of University Research ......................... Nancy C. Sederberg, Ph.D.
Director of Athletics ........................................... William L. Steinbrecher, Ed.D.
Coordinator of Women’s Athletics ....................... Elise M. Visscher, B.S., B.A.
Sports Information Director ................................. William Rogers
Director of Intramural-Campus Recreation ......... Rin Seibert, M.S.
Director, Affirmative Action .................................... Katharine E. Wehling, J.D.
Executive Director, University Guild .................. L. Jane Lichtfuss, B.A.
Director, Public Relations and News Bureau ....... Patricia L. Downing, M.A.

Office of the Vice President for Academic Affairs
Vice President ...................................................... Richard P. Baepler, Ph.D.
Executive Secretary ............................................. Dorothy R. Herscher, M.A.L.S.
Dean, College of Arts and Sciences ..................... Philip N. Gilbertson, Ph.D.
   Associate Dean ................................................ Katharine H. B. Antommaria, Ph.D.
   Assistant to the Dean ....................................... Eleanor Waldschmidt, M.A.L.S.
Dean, College of Business Administration ........ John A. Miller, D.B.A.
   Assistant to the Dean ....................................... Alice W. Krause, M.Ed.
Dean, College of Engineering .............................. Stuart G. Walesh, P.E., Ph.D.
Dean, College of Nursing ..................................... Freda S. Scales, R.N., Ph.D.
Dean, Christ College .......................................... Mark R. Schwoeh, Ph.D.
   Assistant to the Dean ....................................... Margaret Franson, M.A.L.S.
Dean, School of Law ............................................ Edward M. Gaffney, J.D.
   Associate Dean ................................................ Bruce G. Berner, LL.M.
   Assistant Dean ................................................ Curfis W. Cichowski, J.D.
Dean of Graduate Studies and Continuing Education .............. James W. Albers, Th.D.
Director, International Studies ......................... Hugh E. McGuigan, Ph.D.
   Assistant Director .......................................... Sarah Dorow, B.A.
Director of the Libraries ..................................... Margaret Perry, M.S.L.S.
   Director, Instructional Media Center ............ Irving S. Olsen, M.S.
Director, Academic Computing Center ............... Joel P. Lehmann, Ph.D.
Registrar .......................................................... Ann F. Trost, B.A.
   Associate Registrar ......................................... James F. LePell, M.A.L.S.

Office of the Vice President for Admissions and Financial Aid
Vice President ...................................................... Neil K. Clark, M.Ed.
Director for Admissions Recruitment ................ Karen R. Foust, B.S.
Director for Admissions Selection .................... Douglas B. Watkins, M.A.L.S.
Associate Director of Admissions and Editor for Admissions and Financial Aid ............. Barbara H. Lieske, B.A.
Associate Director of Admissions ......................... Charles E. Krugler, B.S.W.
Assistant Director of Admissions ......................... Sarah L. Accettura, B.A.
Assistant Director of Admissions ......................... K. Robert Blaney, Ed.D.
Assistant Director of Admissions ......................... David R. Boyle, B.A.
Admissions Counselor .......................................... Rebecca L. Balko, M.Ed.
Admissions Counselor .......................................... Tina S. Musgrove, B.A.
Admissions Counselor .......................................... Thomanisa Noble, B.A.
### University Personnel

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions Counselor</td>
<td>Mary K. Speckhard, B.A.</td>
</tr>
<tr>
<td>Director of Financial Aid</td>
<td>Appointment Pending</td>
</tr>
<tr>
<td>Financial Aid Counselor</td>
<td>Sandra K. Fookes, B.A.</td>
</tr>
<tr>
<td>Financial Aid Counselor</td>
<td>Annie Lawrence</td>
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<tr>
<td>Financial Aid Counselor</td>
<td>Phyllis L. Schroeder, B.A.</td>
</tr>
<tr>
<td>Financial Aid Counselor</td>
<td>Joan S. Smith</td>
</tr>
<tr>
<td>Administrative Assistant for Admissions and</td>
<td>Darlene J. Leatz</td>
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<td>Financial Aid</td>
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### Office of the Vice President for Business Affairs

<table>
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<tr>
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<tr>
<td>Vice President</td>
<td>Dorothy P. Smith, Ph.D., J.D.</td>
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<tr>
<td>Executive Secretary</td>
<td>Joan I. Ritter</td>
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<tr>
<td>Director, Data Services</td>
<td>George Sperry</td>
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<tr>
<td>Director of Support Services</td>
<td>Bonnie J. Naumann</td>
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<tr>
<td>Director of Physical Plant</td>
<td>William V. Domke</td>
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<tr>
<td>Director of Food Services</td>
<td>Susanne Dunlap</td>
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<tr>
<td>Director of Personnel</td>
<td>John A. Ohlfest, B.A.</td>
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<tr>
<td>Director of Accounting Services</td>
<td>Donald D. Findling, B.A.</td>
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<tr>
<td>Director of Housekeeping Services</td>
<td>Harold T. Miller, B.S.</td>
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<tr>
<td>Director of Payroll</td>
<td>Arlene L. Miller</td>
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### Office of the Vice President for Student Affairs

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<th>Position</th>
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<tr>
<td>Vice President</td>
<td>Daryll D. Hersemann, Ph.D.</td>
</tr>
<tr>
<td>Executive Secretary</td>
<td>Cheryl Oestreich</td>
</tr>
<tr>
<td>Dean of Men</td>
<td>Robert E. Schroer, M.Ed.</td>
</tr>
<tr>
<td>Dean of Women</td>
<td>Dolores Ruosch, M.S.</td>
</tr>
<tr>
<td>Health Center Administrator</td>
<td>Gwen DeJong, B.S.N.</td>
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<tr>
<td>Director of Career Planning and Placement</td>
<td>Sandra L. McGuigan, B.A.</td>
</tr>
<tr>
<td>Director of Student Counseling and Development Center</td>
<td>Stewart Cooper, Ph.D.</td>
</tr>
<tr>
<td>Director of Valparaiso Union</td>
<td>William G. Smriga, M.S.</td>
</tr>
<tr>
<td>Director of University Police</td>
<td>Edward M. Lloyd</td>
</tr>
<tr>
<td>Director of Minority Affairs</td>
<td>Victor Glover, M.S.</td>
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### Office of the Vice President for Development and Alumni Affairs

<table>
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<tr>
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<tr>
<td>Vice President</td>
<td>Gary A. Greinke, J.D.</td>
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<tr>
<td>Executive Secretary</td>
<td>Mary Ann Simson</td>
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<tr>
<td>Development Director</td>
<td>Ralph P. Betker, B.A.</td>
</tr>
<tr>
<td>Development Director</td>
<td>Marion L. Brown</td>
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<tr>
<td>Development Director</td>
<td>Larry Leatz, M.A.</td>
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<tr>
<td>Development Director</td>
<td>Sylvia Luekens, B.A.</td>
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<tr>
<td>Development Director</td>
<td>Max G. Nagel, B.A.</td>
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<tr>
<td>Development Director</td>
<td>Donald R. Peters, B.A.</td>
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<tr>
<td>Development Director</td>
<td>William T. Seeber, M.B.A.</td>
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<tr>
<td>Development Director</td>
<td>Judith A. Waetjen, B.S.</td>
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<td>Development Director</td>
<td>Norman A. Wells, M.A., C.F.R.E.</td>
</tr>
<tr>
<td>Coordinator, Development-Law-Planned Giving</td>
<td>Curtis W. Cichowski, J.D.</td>
</tr>
<tr>
<td>Alumni/Parents</td>
<td>Karl L. Krueckenberg, Ph.D.</td>
</tr>
<tr>
<td>Editor, &quot;Valpo&quot;</td>
<td>Melvin H. Doering, B.A.</td>
</tr>
<tr>
<td>Office Manager</td>
<td>Kathleen M. Deal</td>
</tr>
<tr>
<td>Matching Gift Coordinator</td>
<td>Lilly Lindstrom</td>
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### University Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
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<tbody>
<tr>
<td>Dixon W. Benz</td>
<td>Elm Grove, WI</td>
</tr>
<tr>
<td>August Bernthal</td>
<td>Winter Haven, FL</td>
</tr>
<tr>
<td>Paul Brandt</td>
<td>Fort Worth, TX</td>
</tr>
<tr>
<td>Arnold Busse (Vice Chairman)</td>
<td>Carmel, IN</td>
</tr>
<tr>
<td>Caroline Collings</td>
<td>Stow, MA</td>
</tr>
<tr>
<td>Victor Dankis (Treasurer)</td>
<td>Warren, NJ</td>
</tr>
</tbody>
</table>
Standing Committees of the Board*

Executive Committee: Gerald E. Pelzer, Chairman
Paul Brandt
Arnold Busse, Vice Chairman
Victor Dankis, Treasurer

Committee on University Relations and Development: Lane B. Hoffman, Chairman
Richard W. Duesenberg
Katharine E. Gerken

Committee on Business Affairs and Physical Plant: Dr. Willard A. Richardson, Chairman
Dr. Paul Brandt
Victor Dankis

Committee on Student Affairs: Dr. Ewald H. Mueller, Chairman
Caroline Collings
David Hessler

Committee on Academic Affairs: Dr. Walter R. Schur, Chairman
Rev. August Bernthal
Dr. Rupert Dunklau

Committee on Admissions and Financial Aid: Ruth Russler, Chairperson
Dixon Benz
Arnold Busse

Investment Committee: Dr. Rupert Dunklau, Chairman
Arnold Busse
Harley W. Snyder

Audit Committee: Frederick Kraegel, Chairman
Victor Dankis

*The Chairman of the Board and the President of the University are ex-officio members of all standing committees.
# University Personnel

## President's Advisory Council

<table>
<thead>
<tr>
<th>Name</th>
<th>City, State</th>
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<tbody>
<tr>
<td>Charles E. Bachman</td>
<td>Short Hills, New Jersey</td>
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<tr>
<td>William A. Bahr</td>
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<tr>
<td>Kohler, Wisconsin</td>
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<tr>
<td>Stephen A. Benz</td>
<td></td>
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<tr>
<td>Fort Wayne, Indiana</td>
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<tr>
<td>Frederick M. Berenthal</td>
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<tr>
<td>Washington, D.C.</td>
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<tr>
<td>Gary A. Beu</td>
<td>Elgin, Illinois</td>
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<tr>
<td>Richard W. Bimler</td>
<td>St. Louis, Missouri</td>
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<tr>
<td>Arnold G. Busse</td>
<td>Carmel, Indiana</td>
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<tr>
<td>Robert W. Clausen</td>
<td>South Bend, Indiana</td>
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<tr>
<td>Paul W. Czamanske, Jr.</td>
<td>Birmingham, Michigan</td>
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<tr>
<td>Burton O. Bosch</td>
<td>Valparaiso, Indiana</td>
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<td>Havre, Montana</td>
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<tr>
<td>Robert L. Koenig</td>
<td>Valparaiso, Indiana</td>
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<tr>
<td>James A. Koltermans</td>
<td>Lake Forest, Illinois</td>
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<tr>
<td>Peter L. Krentz</td>
<td>Bay Village, Ohio</td>
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<tr>
<td>Bruce Dahltorp</td>
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<tr>
<td>Canon City, Colorado</td>
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<tr>
<td>Robert H. Duesenberg</td>
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<tr>
<td>St. Louis, Missouri</td>
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<tr>
<td>Richard K. Fox, Jr.</td>
<td></td>
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<tr>
<td>Washington, D.C.</td>
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<tr>
<td>Ronald Gnau</td>
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<tr>
<td>Mt. Prospect, Illinois</td>
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<tr>
<td>Len R. Golke</td>
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<tr>
<td>Des Moines, Iowa</td>
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<tr>
<td>Stephen E. Gottschalk</td>
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<tr>
<td>Minneapolis, Minnesota</td>
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<tr>
<td>Edward H. Gross</td>
<td></td>
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<tr>
<td>Ridgewood, New Jersey</td>
<td></td>
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<tr>
<td>Harlan J. Hartner</td>
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<tr>
<td>Mission, Kansas</td>
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<tr>
<td>Myron R. Hass</td>
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<tr>
<td>Longwood, Florida</td>
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<tr>
<td>Peter A. Hessler</td>
<td>Seven Hills, Ohio</td>
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<tr>
<td>Oswald C.J. Hoffmann</td>
<td>St. Louis, Missouri</td>
</tr>
<tr>
<td>Gerald E. Hoffmeister</td>
<td>San Diego, California</td>
</tr>
<tr>
<td>Frederick Jenny</td>
<td>Potomac, Maryland</td>
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<tr>
<td>Norman W. Kettner</td>
<td>Murray, Utah</td>
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<tr>
<td>Sharon L. King</td>
<td>Winnetka, Illinois</td>
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<tr>
<td>Edward Kirk</td>
<td>Lakeland, Florida</td>
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<tr>
<td>Philip C. Koenig</td>
<td>Batavia, Illinois</td>
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<tr>
<td>Robert L. Koenig</td>
<td>Valparaiso, Indiana</td>
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<tr>
<td>James A. Kretzschmar</td>
<td>Bay Village, Ohio</td>
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<tr>
<td>Walter J. Kretzmann</td>
<td>Harvey Lange</td>
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<tr>
<td>Richard T. Lindgren</td>
<td>Brookfield, Wisconsin</td>
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<tr>
<td>Beata P. Madeoerin</td>
<td>Charles F. Lembke</td>
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<tr>
<td>Arthur S. Malasto</td>
<td>Spring Lake, Michigan</td>
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<tr>
<td>Charles F. Lieske</td>
<td>Indianapolis, Indiana</td>
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<td>Richard T. Lindgren</td>
<td>Birmingham, Michigan</td>
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<td>Beata P. Madeoerin</td>
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<td>Arthur S. Malasto</td>
<td>Valparaiso, Indiana</td>
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<tr>
<td>Howard M. Metzger</td>
<td>Princeton, New Jersey</td>
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<tr>
<td>Eugene P. Minikel</td>
<td>St. Joseph, Michigan</td>
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<tr>
<td>Harold J. Moellering</td>
<td>Columbus, Ohio</td>
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<tr>
<td>Louis S. Morgal</td>
<td>Jensen Beach, Florida</td>
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<tr>
<td>James W. Mueller</td>
<td>Paradise Valley, Arizona</td>
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<tr>
<td>Dieter H. Nickel</td>
<td>Merrill, Wisconsin</td>
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<tr>
<td>Charles E. Niemier</td>
<td>Warsaw, Indiana</td>
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<tr>
<td>Paul C. Nieter</td>
<td>Fort Wayne, Indiana</td>
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<tr>
<td>Dennis G. Oberly</td>
<td>Dearborn, Michigan</td>
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<tr>
<td>James H. Schloemer</td>
<td>Milwaukee, Wisconsin</td>
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<tr>
<td>Peter B. Schmalz</td>
<td>Wilmington, Delaware</td>
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<tr>
<td>John P. Schroeder</td>
<td>Zionsville, Indiana</td>
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<tr>
<td>Edmund A. Schroer</td>
<td>Hammond, Indiana</td>
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<tr>
<td>Ronald Schultz</td>
<td>Bay Village Ohio</td>
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<tr>
<td>Jon R. Schumacher</td>
<td>Brookfield, Wisconsin</td>
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<tr>
<td>Donald W.C. Stoskopf</td>
<td>Cranston, Rhode Island</td>
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<tr>
<td>Patricia A. Tabor</td>
<td>Valparaiso, Indiana</td>
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<tr>
<td>Charles P. Welter</td>
<td>Valparaiso, Indiana</td>
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<tr>
<td>Joel R. Wilson</td>
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<tr>
<td>Barbara A. Young</td>
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<td>Edwin Zehnder</td>
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### Alumni Association Board of Directors

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<thead>
<tr>
<th>Name</th>
<th>Term Expires</th>
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<tbody>
<tr>
<td>Katharine E. Gerken (1979, 1982) President</td>
<td>1990</td>
<td>Valparaiso, IN</td>
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<tr>
<td>Alton Riethmeier (1963) Vice President</td>
<td>1990</td>
<td>Victor, NY</td>
</tr>
<tr>
<td>Barbara Hambleton (1978) Secretary</td>
<td>1990</td>
<td>Winnetka, IL</td>
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<tr>
<td>Daniel E. Deutsch (1964)</td>
<td>1990</td>
<td>Shaker Heights, OH</td>
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<tr>
<td>Lynette Morrison (1983)</td>
<td>1990</td>
<td>Valparaiso, IN</td>
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<tr>
<td>Martin N. Lewis (1982)</td>
<td>1990</td>
<td>Ft. Wayne, IN</td>
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<tr>
<td>Robert B. Schuemann (1971)</td>
<td>1990</td>
<td>Palm Beach Gardens, FL</td>
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<tr>
<td>David C. Kase (1964)</td>
<td>1991</td>
<td>Rockford, IL</td>
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<tr>
<td>George W. McKissick (1955)</td>
<td>1991</td>
<td>Naperville, IL</td>
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<tr>
<td>Thomas M. Milnikei (1972)</td>
<td>1991</td>
<td>St. Joseph, MI</td>
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<tr>
<td>Susan Rosborough (1978)</td>
<td>1991</td>
<td>Oak Park, IL</td>
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<tr>
<td>Margery Martin (1954)</td>
<td>1992</td>
<td>Oakland CA</td>
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<tr>
<td>Arthur Stamm (1950)</td>
<td>1992</td>
<td>Houston, TX</td>
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<tr>
<td>Sylvia Straub (1960)</td>
<td>1992</td>
<td>Silver Spring, MD</td>
</tr>
<tr>
<td>Nancy Sederberg</td>
<td>1992</td>
<td>Valparaiso, IN</td>
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### Parents Council

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Mr. and Mrs. James Anderson</td>
<td>Troy, MI</td>
</tr>
<tr>
<td>Mr. and Mrs. Robert Bernt</td>
<td>LaPorte, IN</td>
</tr>
<tr>
<td>Mr. and Mrs. Richard Blum</td>
<td>LaGrange, IL</td>
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<tr>
<td>Mr. and Mrs. Allen Burreson</td>
<td>Milford, OH</td>
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<tr>
<td>Mr. and Mrs. David Dressel</td>
<td>East Lansing, MI</td>
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<tr>
<td>Mr. and Mrs. Norman DYGert</td>
<td>Valparaiso, IN</td>
</tr>
<tr>
<td>Mr. and Mrs. Ralph Ganswindt</td>
<td>Brookfield, WI</td>
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<tr>
<td>Mr. and Mrs. James Greiner</td>
<td>Crown Point, IN</td>
</tr>
<tr>
<td>Mr. and Mrs. Darwin Hintz</td>
<td>Appleton, WI</td>
</tr>
<tr>
<td>Mr. and Mrs. John Kahler</td>
<td>Louisville, KY</td>
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<tr>
<td>Mr. and Mrs. Lyal Leibrock</td>
<td>Omaha, NE</td>
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<tr>
<td>Mr. and Mrs. Karl Mueller</td>
<td>Rochester, MI</td>
</tr>
<tr>
<td>Mr. and Mrs. Leslie Olson</td>
<td>Elmhurst, IL</td>
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<tr>
<td>Mr. and Mrs. Steven Parks</td>
<td>Glenview, IL</td>
</tr>
<tr>
<td>Mr. and Mrs. Rolland Preuss</td>
<td>Richland, MI</td>
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<tr>
<td>Mr. and Mrs. Edward Reitz</td>
<td>St. Louis, MO</td>
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<tr>
<td>Mr. and Mrs. Thomas Rodenbeck</td>
<td>Beaver Falls, PA</td>
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<tr>
<td>Mr. and Mrs. Roger Sims</td>
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<tr>
<td>Mr. and Mrs. Martin Wamborgans</td>
<td>Elmhurst, IL</td>
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<tr>
<td>Mr. and Mrs. John Yakimow</td>
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<tr>
<td>College of Arts and Sciences</td>
<td>178-179</td>
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1 Heimlich Hall
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5 Moody Laboratory
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8 Phi Sigma Kappa Fraternity
9 Lambda Chi Alpha Fraternity
10 Sigma Phi Epsilon Fraternity
11 Phi Delta Theta Fraternity
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