VII COLLEGE OF ARTS AND SCIENCES

Paul J. Morman, Dean
Mary Jo Vesper, Associate Dean

The objectives of graduate work in the College of Arts and Sciences coincide with the general aims and philosophy of education that characterize the University of Dayton.

Programs leading to the Master of Arts or the Master of Science are offered in Biology, Communication, English, Mathematics, Pastoral Ministries, Political Science, Psychology, and Theological Studies. The Department of Computer Science offers the Master of Computer Science. The Master of Public Administration is also offered through the Department of Political Science.

The Physics Department, as part of the Center for Electro-Optics, offers graduate courses in support of the Master of Science and the Doctorate of Philosophy in Electro-Optics. The Doctor of Philosophy degree is also offered by the Department of Biology.

Department of

BIOLOGY (BIO)

John J. Rowe, Chair of the Department
Robert J. Kearns, Graduate Program Director

The Department of Biology offers programs leading to the Master of Science and the Doctor of Philosophy. The degrees are in biology, but each program is tailored to the student's own interests and career plans. Specialization is accomplished by selection of courses, by choice of thesis or dissertation topic, and by participation in weekly seminars in the area of interest. The specific program is determined after consultation between the student and the advisory committee. The Department of Biology also offers a Master of Science program without a thesis requirement. Two major areas of specialization are available. These areas and typical spectra of graduate courses available are as follows:

Environmental/Ecological Sciences
Field Biology
Microbial Ecology
Advanced Plant Physiology
Biochemistry
Molecular Biology
Community Ecology
Behavioral Ecology
Biometrics
Biochemical Genetics
Bioinstrumentation
Ecosystem Dynamics

Basic Biomedical Sciences
Advanced Developmental Biology
Biochemical Genetics
Immunology
Biochemistry
Biometrics
Advanced Microbiology
Advanced Cell Biology
Molecular Biology
Bioinstrumentation

ASSISTANTSHIPS

Qualified applicants are eligible for financial assistance in the form of fellowships, traineeships, research or teaching assistantships. Students admitted to the doctoral program are given priority for these awards. In addition to a stipend, all appointments with financial aid are exempt from tuition during both the academic year and the summer session. Financial aid is usually available during the summer on a competitive basis.

ADMISSION REQUIREMENTS

The successful applicant with a bachelor's degree from an accredited university should have a cumulative grade point average of 3.0 or better (based on a 4.0 scale). Those with lower averages may be accepted to the program on probationary status, in which case particular attention will be given to the last 60 semester hours of the undergraduate program.

Prior to admittance, applicants must have the equivalent of the science and mathematics requirements of the University of Dayton's Bachelor of Science in Biology. These include one year of calculus, physics, and organic chemistry, plus sufficient background in biology to demonstrate a knowledge of cellular and molecular biology, organismal biology, ecology, evolution, and population biology. Normally, a student who lacks more than one prerequisite will not be admitted to full graduate status. However, the summer session prior to entry can be used to remove a deficiency.

Application forms, a letter indicating career goals, an official college transcript, three letters of recommendation, and current scores on the General Test and the Subject Test in Biology of the Graduate Record Examinations should be on file in the Office for Graduate Studies no later than one month prior to the new term (by 1 August, 1 December, or 1 April). A final transcript or other proof of graduation is required before a graduate student is permitted to register for courses. Foreign students must submit TOEFL scores. Applicants seeking financial aid should apply before 15 April.

ADVISING

Each student is assigned a provisional advisor for assistance during the first semester. Prior to registration for the second semester each student selects a major professor, who serves as director of the student's advisory

committee. The composition of this committee is representative of the general field of study in which the student expects to work.

The committee helps to plan the student's entire program. Prior to the second semester of the M.S. program, the student declares a choice of thesis or non-thesis option. The non-thesis option is not available for Ph.D. students. The committee generally meets with the student twice a year to offer suggestions and to assess progress in the program and thesis research.

PROGRAM REQUIREMENTS FOR THE MASTER OF SCIENCE

The M.S. degree requires 24 semester hours of course work plus a research thesis. Each student is required to complete BIO 552-553, BIO 501, BIO 601 and two advanced courses by the end of the first year. During the third term of the first year all students (M.S. or Ph.D.) who have not taken a Biostatistics course as an undergraduate must enroll in Bio 550 (Biometrics). Individuals on teaching assistantships must complete the teaching seminar (BIO 503) and teach at least one laboratory course during their course of study.

Students declaring the non-thesis option are required to complete 30 hours of course work consisting of the aforementioned courses. A research paper is required, and the subject matter of the paper is determined by the advisory committee.

DOCTOR OF PHILOSOPHY

Each student is required to complete BIO 552-553, BIO 501, BIO 601 and two advanced courses by the end of the first year. Following completion of the first year, each doctoral student follows the program outlined by the advisory committee. In practice most students find it helpful to take 45 to 60 semester hours of graduate course credits beyond the bachelor's degree to attain the level of competence suitable for a doctoral candidate. When it is desirable, a student will be encouraged to take some work at neighboring institutions or summer laboratories.

Ph.D. CANDIDACY EXAMINATION

The examination for Ph.D. students is administered by the advisory committee, which may be supplemented by members requested by the committee and/or the department chair. The examination will be taken no later than the end of the 4th semester for students entering with a M.S. and 6th semester for those entering the program with a B.S. The purpose of the examination is to judge the student's competence in the special area and in related fields. Following the examination the student may be directed to (a) complete the dissertation, (b) strengthen preparation by demonstrating competence in one or more areas, (c) withdraw from the program. At the committee's discretion, additional competence in an area may be demonstrated by special examination or by completion of specific courses to the committee's satisfaction. The student is considered a candidate for the Ph.D. after successful completion of these requirements.

DEFENSE OF THESIS OR DISSERTATION

1) The examination on the thesis, whether for the M.S. or the Ph.D., will constitute a formal oral examination on the subject matter of the thesis or dissertation.
2) For students electing the non-thesis option, an oral examination is held over the subject matter of the research paper.
3) A Ph.D. student must present the dissertation for defense within four years after admission to candidacy or repeat the candidacy examination.
4) All those working toward the master's degree must complete the program within five years after admission to the program.

RESIDENCE REQUIREMENT

A student is strongly advised to devote as much time as possible to graduate studies. To satisfy the residency requirement, M.S. students must attend the University as a full-time student for at least one full year. The Ph.D. program is a full-time only program. If the advisory committee encourages attendance of a semester or a summer as a full-time student at a neighboring institution or in an off-campus research site, that time may be applied to the residence requirement.

SEQUENCE OF EVALUATION

The program is centered around development of professional competence. Each student is formally assessed in the following steps:

1) A qualifying examination at the beginning of the second year of full-time graduate study for all graduate students.
2) A candidacy examination over the area of specialization (Ph.D. students only); and
3) A defense of thesis.

The overall performance of each student is evaluated, at least yearly, in terms of overall progress toward obtaining the degree by the graduate coordinating committee. A student judged to be making unsatisfactory progress may be placed on probation or dismissed from the program. Further details concerning the policies of the graduate program can be found in *A Manual for Graduate Study in the Department of Biology at the University of Dayton.*

QUALIFYING EXAMINATION

At the beginning of the second full year of graduate work, all (M.S. and Ph.D.) students will take a qualifying examination. An important purpose of the examination is to aid the student's committee in planning the remainder of the program. The examination will cover basic biological concepts, subject matter of graduate courses taken, and broad areas of the student's specialty. The emphasis will be not only on facts

but on the student's command of self-expression, ability to reason, and to integrate knowledge.

Utilizing the student's performance in both the written and oral phase, the advisory committee makes an evaluation and suggests one of the following possible alternatives. The student should:

i. continue to work toward completion of M.S. or Ph.D. degree.

ii. correct obvious deficiencies and retake the written and/or oral examination(s) — (retake must be scheduled no later than the middle of the next semester and result in a clear pass or fail/withdrawal from graduate work);

iii. withdraw from graduate work (student has failed the examination without an opportunity of a second chance).

iv. M.S. students showing outstanding ability and wishing to proceed toward the Ph.D. may be encouraged to stay at U.D. However, they will be required to defend their M.S. thesis in manuscript form (for publication) midway through their 4th semester to qualify for acceptance in the Ph.D. program. Recommendation should be made to the Admissions Committee for final approval and the Departmental Chair should be informed.

v. It should be noted that at this time, both the student and advisory committee have the final opportunity to review the choice of the M.S. program — thesis or non-thesis option. For the non-thesis option the nature of the requirement should be specified at this time by the advisory committee. If under unusual circumstances, a student wishes to change options beyond this date and the advisory committee concurs, it should be recognized that this may result in an additional semester or more of work. However, consideration should be given to the availability of support for continuation of a M.S. program beyond two years.

Students who choose to complete a Master's degree are considered candidates for that degree after the qualifying examination. A student who wishes to continue beyond the Master's degree will be advised to continue for the doctorate (see requirements above) or to terminate his/her studies at the university on the basis of his/her performance in earning the Master's degree.

All other graduate examinations come at specific times in the progress of the student's program and are scheduled and administered by the advisor and advisory committee. These examinations consist of the Ph.D. candidacy examination, the Defense of M.S. Thesis or Ph.D. Dissertation, and the final M.S. Non-thesis Program Exam.

COURSES OF INSTRUCTION

Certain undergraduate courses in biology and in other science or engineering departments may be taken for graduate credit if recommended by the major advisor and approved by the biology chair and the Graduate Dean. A maximum of two undergraduate courses at the 400 level may be applied toward graduate credit.

BIO 501. SEMINAR: Presentation of biological research data by faculty members and visiting scientists. Required of all graduate students each semester. *0 sem. hr.*

BIO 503. COLLEGE TEACHING SEMINAR: To assist graduate teaching assistants in acquiring information, understandings, and skills seen as important components of effective teaching. *1 sem. hr.*

BIO 505. MICROBIAL ECOLOGY: A study of the diversity of microorganisms and the interrelationships between microorganisms and their environments. Emphasis is placed on aquatic ecosystems. *3 sem. hrs.*

BIO 505L. MICROBIAL ECOLOGY LABORATORY: Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory. *1 sem. hr*

.

BIO 511. ECOSYSTEM DYNAMICS: An advanced course examining ecosystem structure and function. Emphasis on community level interactions, applied ecology and the ways in which ecosystem biodiversity can be influenced by the biotic and abiotic forces of the environment, including the global impact of the human species. Prerequisite: Upper-level course in ecology. *3 sem. hr.*

BIO 521. BIOCHEMICAL GENETICS: An analysis of the nature of the gene and gene action. Particular attention will be given to genetic control of protein synthesis and to recent advances in biochemical and physiological genetics. Two hours lecture. *2 sem. hrs.*

BIO 521L. BIOCHEMICAL GENETICS LABORATORY: A laboratory to accompany BIO 521 employing an experimental approach to genetic problems. Students work the entire term on a project. *1 sem. hr.*

BIO 522. IMMUNOLOGY: Study of innate and acquired immunity, cells and organs of the immune system, antigens and immunoglobulins. Specific emphasis on the organization and expression of immunoglobulin genes; genetic restriction; cytokines and immune regulation including hypersensitivity, immune tolerance, transplantation and autoimmunity. Biochemistry recommended. *3 sem. hr.*

BIO 523. ADVANCED MICROBIOLOGY: Lectures, readings and discussions of current concepts in basic and applied microbiology, with emphasis on microbial metabolism and physiology. *3 sem. hrs.*

BIO 524. ADVANCED CELL BIOLOGY: This course will explore the structure and function of cells through their biochemical, molecular, and physiological activities. *3 sem. hrs.*

BIO 530. BEHAVIORAL ECOLOGY: An advanced course examining adaptive individual and social behavior. Cost/benefit analyses of adaptive behavior, using examples from the

current literature. Prerequisite: Courses in ecology, genetics and animal behavior. *3 sem. hr*

BIO 535. PROBLEMS IN FIELD BIOLOGY: A course designed to acquaint students with field-oriented problems in Biology. *1-3 sem. hrs.*

BIO 538. POPULATION BIOLOGY: An advanced course considering the relationship of genetics and ecology. Emphasis on the growth and regulation of natural populations. Prerequisites: ecology and genetics. *3 sem. hrs.*

BIO 538L. POPULATION BIOLOGY LABORATORY: Field and laboratory exercise to accompany BIO 538. *1 sem. hrs.*

BIO 540L. PHYSIOLOGY OF HIGHER PLANTS LABORATORY: Laboratory concerned with uptake and transport of materials, energy metabolism and growth in higher plants. *1 sem. hrs.*

BIO 546. PLANT DEVELOPMENT: Study of the major organ systems of the vascular plants with emphasis on the nature of their cell types and tissue composition and their patterns of development. *3 sem. hrs.*

BIO 546L. PLANT DEVELOPMENT LABORATORY *1 sem. hrs.*

BIO 550. BIOMETRICS: The design and analysis of experiments in quantitative Biology. Parametric and nonparametric analyses of both laboratory and field-generated data sets. *3 sem. hrs.*

BIO 552. BIOLOGICAL INSTRUMENTATION: This course is required of all graduate students, and is designed to acquaint students with advanced laboratory techniques used in biological research. Topics include theory and applications of protein and nucleic acid techniques, data analysis, and preparation of scientific manuscripts, posters and grant proposals. *4 sem. hrs.*

BIO 553. BIOLOGICAL INSTRUMENTATION: A continuation of BIO 552. *4 sem. hrs.*

BIO 555. LABORATORY TECHNIQUES (TOPIC): Advanced treatment of new techniques and instrumentation used in specialized areas of Biology. Changes with advances in a specialty reflected in the course title. *1-3 sem. hrs.*

BIO 560. ADVANCED PLANT PHYSIOLOGY: A treatment of several areas of plant physiology based on current research literature. Since the course is taught from current journals, the topics change. May be repeated. Prerequisite: a course in plant physiology. *2 sem. hrs.*

BIO 570. ADVANCED DEVELOPMENTAL BIOLOGY: An advanced course on the principles of animal development with emphasis on concepts and experimental evidence for underlying mechanisms. This course is designed to present the latest and newest advances in development, and includes discussion on the use of current model systems. Prerequisite: Introductory course in developmental biology, cell biology or permission of instructor. *3 sem. hrs.*

BIO 594. MOLECULAR BIOLOGY: Theory and Practice: A course designed to introduce the student to the theory and practice of molecular biology techniques. Topics and laboratory exercises will include the enzymatic manipulation of DNA and RNA, Southern and Northern blotting, library screening, DNA sequencing, DNA amplification, and gene promoter structure and function. *3 sem. hrs.*

BIO 596. CURRENT BIOLOGY PROBLEMS: The consideration of recent developments in biological thought and procedure. By permission of chair only. *1-3 sem. hrs.*

BIO 599. THESIS: Research for the master's degree. *3-6 sem. hrs.*

BIO 601. SPECIAL TOPICS: The development, presentation, and discussion of topics in specialized areas of biology. Required of all graduate students each semester. *1 sem. hrs.*

BIO 699. DISSERTATION: Research for the doctoral degree. *3-6 sem. hrs.*

Department of

CHEMISTRY (CHM)*

Albert V. Fratini,
Chair of the Department

The Department of Chemistry offers graduate programs leading to the Master of Science in Chemistry.

**At this time, students are not admitted into the program.*

CHEMISTRY PROGRAM

The purpose of the Master's program in Chemistry is to present a rigorous approach to modern theories in Chemistry and to increase the desire and potential for fundamental research through a program of literature search and laboratory experimentation.

Written examinations are given to assist the student and advisor in formulating the student's program.

ASSISTANTSHIPS

Teaching assistantships normally requiring a maximum of 9 hours of laboratory instruction per week are available. The stipend for a 9-12 month appointment is supplemented by tuition remission for graduate course work. Appointment as a teaching assistant requires fluency in spoken English. Research assistantships in selected areas are sometimes available. Current availability may be ascertained by contacting the Chemistry Department.

ADMISSION REQUIREMENTS

The undergraduate prerequisites are the minimum requirements specified by the American Chemical Society. Those students who have graduated from A.C.S.-approved schools will have fulfilled these requirements. Others may have to take certain courses concurrently from the undergraduate program to meet A.C.S. requirements. Complete, current Graduate Record Examination (GRE) scores,

including the Advanced Chemistry examination, are recommended for all applicants and are required of all international students.

PROGRAM REQUIREMENTS

Normally 30 semester hours are required for the Master of Science. These include 21-24 semester hours of course work and 6-9 semester hours of research. The course work hours must include at least three semester hours in each of the major fields of organic, physical, and inorganic Chemistry. The student and advisor decide upon the remainder of the program. Electives in other departments may be chosen with the approval of the Chemistry department chair.

All candidates for the Master of Science are required to submit proof of their ability to do independent work. Normally this proof takes the form of a thesis. Additional course work may be substituted if the student has previously demonstrated research proficiency commensurate with the Master's degree as judged by the department.

BIOCHEMISTRY OPTION

This option is designed for students planning careers in Biochemistry or the medical sciences. Those who want to specialize in Biochemistry should have undergraduate preparation in general, analytical, organic, and physical Chemistry. Applicants with an undergraduate degree in Biology together with a sufficient background in Chemistry are ideally suited for this program. The degree will require 30 semester hours, of which 21-24 semester hours are from approved course work and 6-9 semester hours are from thesis research.

COURSES OF INSTRUCTION

CHM 504. SPECIAL TOPICS IN THEORETICAL CHEMISTRY: A treatment of topics selected from those normally surveyed in a one-year undergraduate course in Physical Chemistry such as electrochemistry, symmetry, spectroscopy, polymers, or others. Prerequisites: CHM 304, MTH 218 or equivalents. *3 sem. hrs.*

CHM 507. SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS: The use of nuclear magnetic resonance, infrared, and mass spectrometry in elucidating structures. Emphasis on interpretation and integration of spectral data in problem solving. Prerequisites: CHM 314, 314L or equivalent. *1 sem. hr.*

CHM 512. INTERMEDIATE ORGANIC CHEMISTRY: Modern theory of organic Chemistry and reaction mechanisms. Prerequisite: CHM 314 or equivalent. *3 sem. hrs.*

CHM 515. ANALYTICAL CHEMISTRY: Methods of analysis based on modern instrumentation including chemical, electrical and spectral methods. Prerequisites: CHM 201, 304 or 302. *2 sem. hrs.*

CHM 515L. ANALYTICAL CHEMISTRY LABORATORY: A laboratory course to accompany CHM 515. *1 sem. hr.*

CHM 517. INORGANIC CHEMISTRY: An introductory course. The fundamentals of modern inorganic chemistry including atomic structure, principles of structure and bonding, acid-based chemistry, periodicity, coordination compounds, nonaqueous solvents, electro-chemistry, molecular symmetry, and the chemistry of representative elements. *3 sem. hrs*

CHM 539. SPECIAL TOPICS IN PHYSICAL CHEMISTRY: Topics of current interest in areas such as chemical instrumentation, electronics, physical biochemistry, macromolecular Chemistry, and spectroscopy *3 sem. hrs.*

CHM 541. TOPICS IN PHYSICAL CHEMISTRY: Modern aspects of physical chemistry, which may include the solid state, electrochemistry, or mathematical methods of physical chemistry. *3 sem. hrs.*

CHM 544. COORDINATION CHEMISTRY: Properties of transition metal ions, reaction mechanisms in coordination compounds, bioinorganic systems, electron transfer mechanisms, and the experimental tools common to coordination Chemistry. Prerequisite: CHM 517 or equivalent. *3 sem. hrs.*

CHM 546. SPECIAL TOPICS IN MODERN ANALYTICAL CHEMISTRY: Modern analytical methods. Subject matter may include NMR, EPR, electroanalytical methods, GLC, mass spectrometry, IR and Raman spectroscopies, visible and ultraviolet spectrophotometric methods, X-ray techniques, ESCA and Auger spectroscopies, atomic absorption, and fluorescence. *3 sem. hrs.*

CHM 550. SPECIAL TOPICS IN ORGANIC CHEMISTRY: Modern physical organic Chemistry, spectroscopy, photochemistry, molecular rearrangements, stereochemistry, and natural products. *3 sem. hrs.*

CHM 551. GENERAL BIOCHEMISTRY I: Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Prerequisites: CHM 201, 314. *3 sem. hrs.*

CHM 552. GENERAL BIOCHEMISTRY II: Discussion of selected topics in bioenergetics, and metabolism of lipids, amino acids, porphyrins, nucleic acids, and proteins. Current aspects of nutrition, biochemical genetics, endocrinology, regulation, and genetic engineering addressed and related to health-science topics as time permits. Prerequisite: CHM 551. *3 sem. hrs.*

CHM 553. TOPICS IN BIOCHEMISTRY: Topics of current interest in biochemistry. Prerequisite: CHM 551 or 552 or permission of instructor. *1-3 sem. hrs.*

CHM 554. DIRECTED READINGS *1-3 sem. hrs.*

CHM 560-561. RESEARCH *0-9 sem. hrs.*

CHM 562L. INTRODUCTORY BIOCHEMISTRY LABORATORY:

Spectrophotometry; pH and dissociation; thin-layer, column, and paper chromatography; enzymology and enzyme purification, quantitative and qualitative techniques for studying proteins, amino acids, lipids, carbohydrates, and nucleic acids; and radioisotopic tracer techniques. Corequisite: CHM 551 or special permission of instructor. *2 sem. hrs.*

CHM 590L. SCIENTIFIC GLASSBLOWING: Theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. One 3-hour laboratory each week. Prerequisite: Permission of the chairperson. *1 sem. hr.*

NOTE: The following courses are not applicable to the Master's degree in chemistry.

CHM 502. PHYSICAL CHEMISTRY: A concise treatment of theoretical Chemistry. Prerequisite: CHM 124. *3 sem. hrs.*

CHM 525-526. PRINCIPLES OF ORGANIC CHEMISTRY: An introduction to the fundamentals of Organic Chemistry. Prerequisite: CHM 124. *3 sem. hrs. each term*

CHM 525-526L. PRINCIPLES OF ORGANIC CHEMISTRY: Laboratory course to accompany CHM 525-526. *One three-hour laboratory per week*

NOTE: The following courses apply only to the Biochemistry option.

CHM 527-528. THEORETICAL PRINCIPLES OF CHEMISTRY: Prerequisite: CHM 201 or equivalent. Corequisite: MTH 218. *3 sem. hrs. each term*

CHM 527-528L. THEORETICAL PRINCIPLES OF CHEMISTRY: Laboratory course to accompany CHM 527-528. One three-hour laboratory per week. *1 sem. hr. each term*

Department of

COMMUNICATION (COM)

Donald D. Yoder,
Chair of the Department
Kathleen B. Watters, Program Director

The graduate program of the Department of Communication leads to the Master of Arts.

The focus of the Department of Communication is upon symbolic processes in human communication. Such a focus is distinguished by the contributions of scholars in rhetoric, communication theory, and mass communication. A solid grounding in research, theory, message development and analysis will prepare graduates to begin or advance their careers in education, business, mass media, government, and business.

The master's student should begin study in the Department of Communication with the standard undergraduate competencies. If the student lacks such competencies, they should be developed prior to attempting the master's program. Students receiving the master's degree from the Department of Communication must:

1. Have a thorough grounding in theories relevant to a particular area of interest, and have the ability to apply this knowledge to the solution of a variety of communication-related problems;
2. Have exposure to a variety of research and analytical or critical methods, have a basic understanding of these, and have demonstrated a working command of at least one methodology; and
3. Have a basic knowledge of and appreciation for approaches to the study of communication from a variety of perspectives.

ASSISTANTSHIPS

Graduate assistantships are available. The assistantships carry a stipend and a tuition remission for courses required for the degree. The assistantships are for 1 year with possible renewal for 1 additional year. No student can receive an assistantship for more than 2 academic years.

Assistantships in the department are, for the most part, teaching assistantships. However, some assistantships may carry a reduced teaching load when combined with other departmental responsibilities such as faculty research assistance.

The minimum requirements for assistantship in the department are:

1. The equivalent of an academic minor in communication and related areas or a demonstrated successful professional background in a communication-oriented occupation for a minimum of 3 years.
2. A 3.0 undergraduate cumulative point average (or the equivalent) and a 3.0 in the academic major or minor (Communication).
3. Admission to the master's degree program in Communication on regular status.

ADMISSION REQUIREMENTS

1. The student seeking admission must have a bachelor's degree from a recognized institution of higher learning. In case of seniors who have almost completed undergraduate requirements, the graduate committee may permit the taking of graduate courses which will be applied to the master's degree only after the appropriate bachelor's degree has been awarded.
2. The student seeking admission should have a 3.0 undergraduate cumulative point average (or the equivalent). The graduate committee will recognize the potential merits of professional experience and/or maturity as they review an applicant's credentials.
3. The student seeking admission must take the Graduate Record Examination (GRE).

4. The student seeking admission will ordinarily have completed those studies required to develop the level of competency in communication necessary for pursuing the master's degree. The graduate committee will recognize demonstrated professional accomplishments in a communication field.
5. Graduate credit from other accredited institutions of higher learning will be reviewed by the graduate committee. Transfer of such credit may be accepted up to a maximum of six semester hours.

ADMISSION PROCEDURES

It is the applicant's responsibility to supply the following information necessary for a completed application:

1. The completed application form. Application forms may be obtained from the Office for Graduate Applications & Records at the University of Dayton (300 College Park, Dayton, Ohio, 45469-1619). *All correspondence concerning the admission should be directed to the Office for Graduate Applications and Records.*
2. Official transcripts of all undergraduate schooling (and graduate schooling where appropriate).
3. At least three letters of recommendation (at least two of these should be from professors familiar with the student's academic work).
4. Scores on the Graduate Record Examination (GRE).
5. Statement of goals: Please respond to the following:
   — Question one: What topics, problems, or areas of communication do you wish to investigate in your master's program?
   — Question two: What education and personal experiences have led you to want to investigate these topics, problems, or areas at the University of Dayton?
   — Question three: What are your career goals?

ADVISOR SELECTION

The advisor serves the student in planning the program of study, supervising the administration of comprehensive examinations, and (when appropriate) directing the student's thesis project.

The Graduate Program Director serves as a temporary advisor to assist the student with initial enrollment and program planning. The student should choose a permanent advisor from among available communication faculty before the middle of the second semester (or completion of 9 credit hours). The student must gain approval from the faculty member and the Program Director before the faculty member will be appointed as permanent advisor. Subsequent changes of advisor require approval of the Program Director.

After consultation with the permanent advisor, the student should submit a proposed program plan (on the forms provided by the Program Director) no later than the end of 12 credit hours. A copy of the proposed program should be on file in the Program Director's office.

The advisor will conduct a mid-program review of the student's progress toward the degree. The time of this review should be specified during the initial program planning meeting; however it should take place by the time 15 credit hours are completed.

PROGRAM OPTIONS AND REQUIREMENTS

General Requirements
All students enrolled in the program are subject to the following general requirements.

1. The number of semester hours as specified by the program options described below.
2. All students must complete the core courses: COM 501 and COM 536. Program B students must also complete COM 503.
3. Demonstration of satisfactory progress toward the degree which includes the requirement that students maintain a minimum average of B (3.0) in course work. Students who fail to meet this requirement are dismissed from the program.
4. Students are permitted no more than six semester hours with grades of C or lower. Students who fail to meet this requirement are dismissed from the program.
5. It is the student's responsibility to know and to meet the requirements of the University and of the Department of Communication graduate program.

NOTE: It is expected that each master's student will enroll in the required core courses as early as possible.

PROGRAM A— COMMUNICATION NON-THESIS OPTION

Program A consists of 36 credit hours of course work of which 24 credit hours must be from the Department of Communication. Students who choose Program A are required to successfully complete COM 501 and COM 536. These required courses should be completed as early as possible in the academic program. Students in Program A are encouraged to complete a capstone project or independent study in their final semester of course work.

All students choosing Program A must take the comprehensive examination during their last semester of classes. The comprehensive examination consists of a minimum of six hours of written examinations and an oral examination. (See the subsequent section on Comprehensive Examinations.)

PROGRAM B— COMMUNICATION THESIS OPTION

Program B consists of 30-33 credit hours of course work, 18 credit hours of which must be from the Department of

Communication including COM 501, COM 503, COM 536. In addition, students complete 3-6 credit hours of Thesis (COM 598 and/or COM 599). Students choosing to write a thesis must complete the comprehensive examinations during their final term of course work. (See the subsequent section on Comprehensive Examinations.)

The student will select a thesis committee consisting of the advisor and at least two other members of the faculty. (One of the faculty members may be from outside the Communication Department.) Students may register for 3 credit hours of Thesis (COM 598) during the term that the prospectus will be presented to the thesis committee for approval.

The thesis should report original research on some important question relevant to the study of communication. The prospectus should also include a detailed description of the methods to be used in the research as well as suggested analytic techniques.

The prospectus will be developed in consultation with the thesis advisor, although the student must have the methodological competence necessary to complete the proposed project. Once the prospectus is approved by the advisor, it must be presented to the thesis committee for approval. The completed prospectus will constitute the first half of the thesis and serves, essentially, as a contract between the student and the committee.

After the prospectus has been approved, the student may register for an additional three hours of thesis credit while completing the thesis (COM 599). The student will then collect and analyze the data required to answer the questions raised in the prospectus. Once this has been completed, the prospectus will become the first half of the thesis, followed by a chapter reporting the results of the study and a chapter discussing the implications of those results. The thesis will be revised until the advisor considers it satisfactory, at which time it will be presented to the members of the thesis committee by the student, who will orally defend the thesis in an examination conducted by the thesis committee. The master's degree is not completed until the thesis has been approved by the committee.

Should a student fail the final oral defense, the thesis may be defended again, provided the student's thesis committee recommends a second attempt. The second attempt to defend the thesis will be final. Failure of the second oral defense will require a majority vote of the student's thesis committee.

PROGRAM C— COMMUNICATION/ INTERDISCIPLINARY

Courses in business administration, English, psychology, and political science have been designated for Communication/Interdisciplinary study leading to the Master of Arts.

Students take 36 semester hours of course work; 24 of those hours must be in communication and 12 of those hours in one of the interdisciplinary areas. All students choosing Program C must take the comprehensive examination during their last semester of classes. The comprehensive examination consists of a minimum of six hours of written examinations and an oral examination.

(See subsequent section on Comprehensive Examinations.)

COMPREHENSIVE EXAMINATIONS

After consultation with the Program Director and the advisor, the student selects faculty members (with their approval) to form an examination committee. The examination committee writes the examination questions, evaluates the student's written answers, and conducts the oral examination. Normally, at least three faculty write questions and evaluate the comprehensive exams. The advisor may or may not participate in the writing and evaluating of exam questions. One of the members of the examination committee may be from outside the Department of Communication. The advisor administers the examination.

Comprehensive examinations consist of at least 6 hours of written examinations and a one-hour oral defense. The form and content of the exams are determined by the advisor and the faculty examination committee.

WRITTEN EXAMINATIONS

The written examinations cover the course work completed by the student including both research methods and communication theory. The particular topic areas covered by the examination, and the number of hours of examinations devoted to each topic area, are determined by the student, the advisor, and the examination committee.

The exams will be written without notes, at a time and place specified by the Program Director. Specific resource materials may be permitted only if indicated by the examiner on the test question.

ORAL EXAMINATION

After satisfactory completion of the written examinations, the students will defend their answers in an oral examination. Students prepare for the oral examination by consulting the advisor and examination committee concerning performance on the written exam.

Under extreme circumstances, an oral exam may be retaken once, only if recommended by the committee. Generally, prior to retaking the oral exam, the student must complete either additional course work or a research paper. A student who has already done additional classes and the research paper will be dismissed from the program. Failure of the second oral exam will result in dismissal.

COURSES OF INSTRUCTION

COM 500. COMMUNICATION COLLOQUIUM: A colloquium providing an introduction to communication studies. Presentation of faculty and graduate student research; critical discussion of current theory, issues and trends in communication studies. Topics vary. May be repeated up to three times. Credit/no credit grading. *0 sem. hr.*

COM 501. COMMUNICATION RESEARCH AND METHODS: Introduction to the study of communication research and methods. Required course for all communication graduate students. *3 sem. hrs.*

COM 502. RHETORICAL CRITICISM: Critical survey and application of traditional to contemporary methods of rhetorical criticism. *3 sem. hrs.*

COM 503. COMMUNICATION RESEARCH SEMINAR: Focused study on the methods and process of conducting communication-related research. Builds upon fundamentals covered in COM 501. Required course for students pursuing the thesis option (Program B). Prerequisite: COM 501. *3 sem hrs.*

COM 504. PRINCIPLES OF COMMUNICATION EDUCATION: Practical application of research, theory, and principles related to communication education. Development of students' pedagogical skills and strategies. Required course for graduate teaching assistants. *0 sem. hr.*

COM 506. ETHICS OF COMMUNICATION: Investigation and application of the general ethical principles of persuasion and the special problems related to professional areas: platform and business communication, electronic and print journalism, public relations, classroom communication, and forensic behavior. *3 sem. hrs.*

COM 508. INTERPERSONAL COMMUNICATION: Focus on the theories, concepts, constructs, and research related to the process of interpersonal communication. *3 sem. hrs.*

COM 511. THEORIES OF PERSUASION: An examination of the major approaches to the study of persuasion from classical rhetorical to contemporary behavioral theorists. *3 sem. hrs.*

COM 515. LANGUAGE AND MEANING: Focuses on the origin and development of language and meaning. Comprehensive exploration of the many perspectives and theories of language and meaning. *3 sem. hrs.*

COM 517. ORGANIZATIONAL COMMUNICATION: A study of communication activities within organizations: theories and systems of organizational communication, internal communication systems, research methods, and the interface of management and communication. *3 sem. hrs.*

COM 520. PUBLIC COMMUNICATION CAMPAIGNS: Investigation of noncommercial public communication campaigns concentrating on social change or public information. Analysis and development of campaigns through mass media, organizational, group and interpersonal communication. *3 sem. hrs.*

COM 525. COMMUNICATION TRAINING & DEVELOPMENT: Explores the theories, methods, and practice of developing, instituting, and evaluating communication training and development programs. *3 sem. hrs.*

COM 526. COMMUNICATION CONSULTING: Explores the theories, methods, and practice of developing, instituting, and evaluating communication consulting programs. *3 sem. hrs.*

COM 527. SMALL GROUP COMMUNICATION: An examination of the theoretical and practical aspects of small group communication. Focus on communication as it relates to decision making, group processes, leadership and roles, and member relations. *3 sem. hrs.*

COM 530. DEVELOPMENT OF MASS MEDIA: History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role and responsibility in political and economic progress of U.S. *3 sem. hrs.*

COM 531. DIRECTED STUDY IN COMMUNICATION: An intensive study of a specialized area of communication selected through consultation with the intructor. Permission. May be repeated for up to six hours. *1- 3 sem. hrs.*

COM 536. THEORIES AND MODELS OF COMMUNICATION: Survey and analysis of current theories and models of communication. Required course for all communication graduate students. *3 sem. hrs.*

COM 537. CONFLICT MANAGEMENT: An analysis of the role of communication in the process of conflict with special emphasis on communication strategies for managing conflict. Special focus on types of conflict, conflict contexts, power, and communication style. *3 sem. hrs.*

COM 547. SEMINAR IN HEALTH COMMUNICATION: An examination of communication theory and research as it relates to health care. Issues include reassurance, the role of the patient, interviews, health organizations, the media and health, compliance, providing explanations, and health care professions frequently neglected. *3 sem. hrs.*

COM 555. PUBLIC RELATIONS: Focuses on the theoretical principles behind the current-day practice of public relations. Special emphasis on public opinion, diffusion, persuasion, problem analysis, and audience assessment within the PR context. *3 sem. hrs.*

COM 562. TOPICS IN COMMUNICATION: Selected topics in communication, for example: argumentation, listening, law and the news media, historical and contemporary public address and criticism. Repeated when topic and instructor change. *3 sem. hrs.*

COM 571. MASS COMMUNICATION PROCESSES AND EFFECTS: An examination of the historical and current research as it relates to our understanding of the processes and effects of mass communication. *3 sem. hrs.*

COM 598/599. THESIS *3 sem. hrs.*

COM 617. ORGANIZATIONAL RHETORIC AND SYMBOLISM: Examination of discourse and symbolism as the principal communicative media through which organizational power relations are maintained and reproduced, member meanings are created, and organizational culture is enacted. *3 sem. hrs.*

COM 620. ELECTION CAMPAIGN COMMUNICATION: Survey of communication research and theories concerning election campaign communication including candidates, voters and the media. Analysis of campaign communication including development of appropriate research methodologies. *3 sem. hrs.*

COM 622. PROPAGANDA ANALYSIS: An examination of the foundations of modern propaganda analysis. Topics include classical rhetorical contributions to argumentative analysis; historical development of propaganda; points of propaganda analysis. Special emphasis on modern mediated propaganda from World War I to the present. *3 sem. hrs.*

COM 630. ISSUES IN INTERNATIONAL COMMUNICATION: Discussion of current issues in international communication. Possible topics include international news flow, globalization of mass media, communication and development, comparative mass media, mass media in political revolutions, democracy and terrorism. *3 sem. hrs.*

Department of

COMPUTER SCIENCE (CPS)

Barbara A. Smith,
Chair of the Department
James P. Buckley,
Raghava G. Gowda,
Yi Pan
Graduate Program Directors

The graduate program in computer science offers a comprehensive approach to the theory and application of computer science. The graduate of the program will have:

1. a thorough grounding in the theory of computing science and have the ability to apply that knowledge to a variety of problem areas, and
2. been exposed to a variety of analytical methods and will demonstrate a basic understanding of these methods.

The program is individualized to meet each student's need and provides a firm foundation for continuing on to the doctorate or a professional career. The program accommodates both full-time and part-time students.

ASSISTANTSHIPS

Graduate assistantships are offered to qualified students in the MCS program for assisting with or teaching sections of introductory Computer Science courses and for assisting faculty with research. Competent assistants making satisfactory progress toward the degree can normally renew their assistantships for a second year. Recipients are expected to complete the requirements for the master's degree in two years. Assistants contribute half-time service of 20 hours per week. Stipends and complete tuition remission for six semester hours per term are provided. Detailed information and forms for application may be obtained from the Computer Science Department.

ADMISSIONS REQUIREMENTS

The student seeking admission should have a Bachelor's degree from an accredited institution of higher education with a cumulative grade point average of 3.00 out of 4.00. For success in the program the student should have the equivalent of at least one year of college mathematics which is normally calculus. A few of the graduate courses have, in addition to the calculus, topics such as linear algebra, statistics, and discrete mathematics as prerequisites.

For admission to the program, the student must demonstrate better than average knowledge of algorithm construction and its implementation on a digital computer in a structured procedure-oriented language, of assembly programming, and of data structures. These requirements can be met by completing the following undergraduate courses (or their equivalents): CPS 150 Algorithms and Programming I, CPS 151 Algorithms and Programming II, CPS 250 Algorithms and Programming III, and CPS 350 Data Structures and Algorithms, with a minimum cumulative grade point average of 3.0. The graduate committee of the department will recognize the potential merit of professional experience and/or maturity as it reviews an applicant's credentials.

Graduate credit from other accredited institutions of graduate learning will be reviewed by the graduate committee. Transfer of such credit may be accepted up to a maximum of six semester hours.

PROGRAM REQUIREMENTS

The degree requires 36 semester hours, 24 of which must be taken from Computer Science courses numbered 510 or above, including CPS 510, CPS 530, and CPS 536. The student must also complete a 2-semester software project (CPS 595). A student may select the remaining 12 semester hours from graduate courses of other departments of the university or from other CPS courses numbered 510 or above.

Each student's program requires the advance approval of a faculty advisor and will require a series of core courses in the specific area of interest of the student. A student failing to make normal progress will be required to withdraw from the program.

APPLICATION

An application for admission to graduate studies in Computer Science may be obtained from the Office for Graduate Applications & Records, Room 117, St. Mary's Hall, University of Dayton 45469-1619. The application, a transcript of credits, and three letters of recommendation must be returned to the Office for Graduate Applications & Records.

INTERNATIONAL STUDENTS

Students from foreign countries should request information and applications for admission to graduate studies from the Office of International Services. A score of 550 or better is required on the TOEFL exam for those for whom English is a second language. A student from a foreign country seeking admission must have earned at least a bachelor's degree or its equivalent and taken the GRE. For further details see International Students Admission.

FACILITIES

Two types of computing facilities are available to students: those provided by the university (through the Office for Computing Activities) and those provided by the Computer Science Department itself.

The Computer Science Department has two laboratories in Anderson Center that house the departmental servers and workstations. In addition, the department has a third laboratory with microcomputers and a fourth laboratory for digital design, microcomputer inferfacing, and networking.

The Office for Computing Activities provides general educational computing facilities to all university students. These facilities include a DEC Alpha computer and a variety of network services.

All the computers provide access to a large variety of application packages and programming languages. Around-the-clock telephone dial-up services to all systems are available to students with appropriate access equipment.

COURSES OF INSTRUCTION

Courses numbered 510 and above have specific prerequisites. It is the students' responsibility to ascertain that they possess the necessary prerequisites for the courses for which they register. Students not having the necessary prerequisites will be required to withdraw from the course.

CPS 502. COMPUTING—GENERAL SURVEY: A nontechnical introduction to the history and organization of digital computers. Survey of the diverse applications of computers in government, business, education, and the arts. Discussion of the psychological and sociological impact of the computer and information age and related ethical issues. Primarily for students in the humanities and in education. *3 sem. hrs.*

CPS 509. TOPICS IN COMPUTER SCIENCE: Lectures in special areas of interest determined by the department. May be taken more than once for additional credit when the topics or contents change. Prerequisite: permission of the department. By arrangement. *1-3 sem. hrs.*

CPS 510. SYSTEMS ANALYSIS: Process-oriented, Data-oriented, and Object-oriented approaches for systems development; comparison of various systems development life cycles; DFD methodology for systems analysis using state-of-the-art CASE (Computer Aided Software Engineering) tools; Logical and Event analyses of DFD specifications; Tools and techniques for modeling Real-Time systems; Data Modeling; Introduction to Object-Oriented Analysis methodologies. Prerequisite CPS 350. *3 sem. hrs.*

CPS 512. SYSTEMS DESIGN: Principles of design, Introduction to software design methodologies; Issues in transition from analysis to logical and physical designs; Detailed discussion of Structured Design methodology (Yourdon, Constantine, Myers); Design guidelines; Transform Analysis; Warnier/Orr and Jackson System Development (JSD) Design methodologies; Designing methodologies for Real-Time Systems; Introduction to Object-Oriented Design; CASE tools and code generators. Prerequisite CPS 510. *3 sem. hrs.*

CPS 514. MANAGEMENT INFORMATION SYSTEMS: The systems approach to managing information; MIS organization within the company; application of organizational behavior to MIS; manager's view of computer systems; planning, designing, and implementing the MIS; advanced concepts of MIS. Prerequisite: CPS 510. *3 sem. hrs.*

CPS 518. SOFTWARE ENGINEERING: The course explores major issues of software engineering, comparison of various manual/automated analysis and design methodologies; Testing and Quality Assurance; software metrics and configuration management; software productivity and human factors in software development; CASE tools for various phases of software development. Prerequisite CPS 350. *3 sem. hrs.*

CPS 528. DISCRETE STRUCTURES: Survey of various mathematical topics with applications to Computer Science. *3 sem. hrs.*

CPS 530. ALGORITHM DESIGN: Concepts of algorithms and data and their use in the systematic design, implementation, and maintaining of software systems including formal analysis and verification of systems. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 532. DATA STRUCTURES: Review of basic data concepts, linear lists, strings, arrays, and orthogonal lists, trees and graphs, multilinked structures, searching and sort techniques. Algorithm design, accessing methods, run time cost and efficiency. Prerequisite: CPS 530. *3 sem. hrs.*

CPS 536. OPERATING SYSTEMS I: Study of operating system principles and the functions of data, job, and task management. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 538. OPERATING SYSTEMS II: Models and algorithms pertinent to the design of computer operating systems; concurrent processes including synchronization, communication, and deadlock problems; process and device scheduling policies, design of file systems, reliability and protection. Prerequisite: CPS 536. *3 sem. hrs.*

CPS 542. DATA BASE MANAGEMENT SYSTEMS: Physical and logical organization of data files; hierarchical, network, and relational data base models; data definition language and data manipulation language of a commercial data base management system; query languages. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 543. COMPARATIVE LANGUAGES: The evolution of programming languages. The study of the concepts common to languages, constructs, organization, specification, and analysis of languages. The role of languages in software development. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 544-545. SYSTEMS PROGRAMMING: Analysis of compilers and their construction; programming techniques discussed in the current literature; advanced computer applications in both mathematical and nonnumeric areas. Prerequisite: CPS 350. *6 sem. hrs.*

CPS 552. DISCRETE EVENT SIMULATION TECHNIQUES: Simulation models; random number generation testing, special purpose simulation languages, statistical analysis of output; regenerative models; trace-driven models. Emphasis on models related to computer operating system design and performance evaluation. Prerequisites: CPS 350, Statistics. *3 sem. hrs.*

CPS 553-554. NUMERICAL METHODS: Solution of nonlinear equations, interpolation and approximation, differentiation and integration, systems of linear equations, eigenvalues, eigenvectors, and introduction to solution of ordinary differential equations. Emphasis placed on applications. Prerequisites: CPS 132 or 150 and MTH 169. *3 sem. hrs.*

CPS 555-556. NUMERICAL ANALYSIS: Functional approximation, quadrature methods, numerical solution of differential equations; matrices and large scale systems, modern iterative matrix methods; minimax approximations; data smoothing. Prerequisites: CPS 132 or 150, MTH 302, 319. *6 sem. hrs.*

CPS 560. COMPUTER GRAPHICS: Types of graphic hardware and their characteristics. Overview of software and techniques used in computer graphics. Two and three dimensional graphics displays. Prerequisites: programming ability in a procedure oriented language, CPS 350. *3 sem. hrs.*

CPS 565. ADVANCED COMPUTER ARCHITECTURE: Hierarchical memory structure, cache and main memory organization; I/O processors and I/O channels; pipeline computers; array computers, multiprocessor systems and their interconnection structures. Prerequisite: CPS 346 or equivalent. *3 sem. hrs.*

CPS 570. DATA COMMUNICATIONS: The study of networks of interacting computers. The analysis of distributed processing and distributed data bases. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 572 COMPUTER NETWORKING: A unified view of the broad field of local area and long haul networks. A survey of the state of the art. Topics covered include networking theory, design approaches, standards, topologies and protocols. Prerequisites: CPS 536, 570. *3 sem. hrs.*

CPS 577-578. COMPUTER SYSTEM DESIGN: Introduction to design and analysis of combinational and sequential circuits of MSI devices to design arithmetic and other computer functions. Analysis of a specific microcomputer architecture including usage of its machine and assembler language. Interfacing of various components with computers. Prerequisites: CPS 250. *6 sem. hrs.*

CPS 580. ARTIFICIAL INTELLIGENCE: Presentation of theoretical concepts for Artificial Intelligence in the areas of knowledge representation and search techniques. These are examined in the context of applications for expert systems, semantic networks and planning problems. Issues concerning functional programming and logic programming are also presented. Prerequisite: CPS 350. *3 sem. hrs.*

CPS 582. AUTOMATA THEORY: Finite automata, sequential machines. Turing machines, computability, existence of self-reproducing machines. Prerequisite: CPS 528. *3 sem. hrs.*

CPS 591. SPECIAL RESEARCH PROBLEMS: Individual readings and research in a specialized area. May be taken for at most 6 semester hours. Prerequisite: permission of the department. By arrangement. *1-3 sem. hrs.*

CPS 592. SPECIAL TOPICS: Lectures and/or laboratory experience in some areas determined by the department. Prerequisite: permission of the department. By arrangement. *1-3 sem. hrs.*

CPS 595. SOFTWARE ENGINEERING PROJECT: Students, either individually or in small teams, must design and implement a software system carefully specified to illustrate the basic concepts and techniques of software engineering. Regular meetings are required where oral and written progress reports are presented and critiqued. May be taken for at most 6 semester hours. Prerequisite: CPS 510, CPS 530, and permission of department. *3 sem. hrs.*

Department of

ENGLISH (ENG)

Alex Cameron,
Chair of the Department
Lawrence A. Ruff,
Graduate Program Director

The English graduate program leading to the Master of Arts degree allows students to concentrate either in English and American literature or in writing.

The program accommodates both full-time and part-time students. Because it offers courses in literary studies and writing, as well as in literature and composition pedagogy, the program serves a wide variety of students, including prospective Ph.D. students in literature or writing, persons committed to teaching in secondary schools or community colleges, students pursuing greater literary understanding or research skills, and persons seeking advanced work in professional, business, technical, or creative writing.

ASSISTANTSHIPS

Graduate assistantships are offered to qualified students in the M.A. program. The assistantship is essentially an apprenticeship in teaching, and assistants gain experience in a traditional freshman composition curriculum using the writing process for basic expository, argumentative, and research essays. Competent assistants making satisfactory progress towards the degree normally renew their assistantships for a second year.

ADMISSION REQUIREMENTS

Students seeking admission must have completed studies in English and American literature, writing, or both that will enable them to pursue graduate studies with distinction. Ordinarily, students will have completed 24 semester hours in literature, composition, or both, beyond the 100 level, with a grade point average of at least 3.0.

PROGRAM REQUIREMENTS

Normally 30 semester hours are required. Every applicant in literary studies who, after completing 12 hours of graduate work, has attained a grade point average of at least 2.75 will take a Diagnostic Examination; this examination will be reviewed by the candidate's advisor, the director of the graduate program, and another member of the graduate faculty or staff. Every applicant in the writing concentration who, after completing 12 hours of graduate work, has attained a grade point average of 2.75 will begin a short Writing or Research Assignment with the approval of the student's advisor. This assignment will ordinarily be completed during the same term in which it is approved by the advisor, and the finished assignment will be assessed by the advisor, the director of the graduate program, and a third member of the graduate faculty or staff. On the basis of the Diagnostic Examination or the completed Writing or Research Assignment, as well as other materials pertaining to the student's graduate performance, the evaluating committee will make recommendations to the department chair about the candidate's graduate program. Among these recommendations will be the total number of hours that the candidate needs to complete the degree. Exceptionally well qualified students may earn the master's degree in fewer than 30 hours; students with deficiencies may be required to take up to 36 semester hours of graduate study.

ENG 601, Research and Bibliography, is required of each applicant for the degree. ENG 588, Studies in Criticism, is required of each applicant in literary studies who has not had a satisfactory undergraduate course in literary criticism. ENG 596, Composition Theory, is required of each applicant in the writing concentration. All students must take at least 12 hours of 600-level courses (including Eng 601). Graduate assistants are required to take the one-credit course, ENG 590, Teaching of College English, during each year of their assistantship.

Because the Master of Arts is not a specialist degree, candidates must take a balanced program of courses. For students of literature, such a program will normally include a balance of early and later literature and of English and American literature. For students in the writing concentration, such a program will normally include 12 hours of writing courses and 12 hours of literary studies. Approved writing courses are ENG 505, 507, 585, 587, 592, 594, 596, 625, 627, and 629.

For students of literature, a thesis upon an approved topic, for which either 3 or 6 semester hours of credit are granted, can be accepted if the Diagnostic Examination committee has agreed. For students in the writing concentration, a writing project approved by the Graduate Committee of the department for which 3 or 6 semester hours of credit may be granted, can be accepted if the Writing or Research Assignment committee has agreed.

COURSES OF INSTRUCTION

Prerequisite for enrolling in any of the following courses for credit is at least 24 undergraduate semester hours in literature, writing, or both, above the basic skills level. The starred courses (*) may be repeated for graduate credit when the topics or contents change.

ENG 505. CREATIVE WRITING*: Supervised practice in various literary forms. Both group discussions and individual conferences and critiques. Permission of chair required. *3 sem. hrs.*

ENG 507. STUDIES IN WRITING*: Special topics in composition, argumentation, technical writing, report writing, and the like. *1-6 sem. hrs.*

ENG 514. MEDIEVAL ENGLISH LITERATURE: A study of the dominant types in the literature of England from the beginning to 1500. *3 sem. hrs.*

ENG 515. CHAUCER: A study of the life, the times, and language of

Chaucer. The main concentration is on *The Canterbury Tales* as rendered in Middle English. *3 sem. hrs.*

ENG 522. EARLY RENAISSANCE LITERATURE: A survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser. *3 sem. hrs.*

ENG 524. SHAKESPEARE*: A study of significant aspects of Shakespeare's plays and poems. *3 sem. hrs.*

ENG 532. LATER RENAISSANCE LITERATURE: A survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton. *3 sem. hrs.*

ENG 536. STUDIES IN DRAMA TO 1642*: Studies in English drama from the beginning to the closing of the theatres. *3 sem. hrs.*

ENG 538. MILTON: A study of the major and minor poems and of selected prose of Milton. *3 sem. hrs.*

ENG 542. STUDIES IN NEO-CLASSICAL LITERATURE*: Studies in literature from Dryden to Johnson. *3 sem. hrs.*

ENG 552. ENGLISH ROMANTICISM: A study of the major poets and critics of the Romantic Age. *3 sem. hrs.*

ENG 556. STUDIES IN NINETEENTH-CENTURY LITERATURE*: A study of the literature in England in the nineteenth century. *3 sem. hrs.*

ENG 560. TWENTIETH-CENTURY BRITISH LITERATURE: A consideration of significant developments in modern British literature. *3 sem. hrs.*

ENG 572. AMERICAN ROMANTICISM: A study of significant developments in American literature of the mid-nineteenth century. *3 sem. hrs.*

ENG 576. MAJOR AMERICAN WRITERS*: An intensive comparative study of two or three American writers. *3 sem. hrs.*

ENG 580. AMERICAN REALISM AND NATURALISM: A study of representative writers from the post-Civil War period in American literature. *3 sem. hrs.*

ENG 584. STUDIES IN TWENTIETH-CENTURY AMERICAN LITERATURE*: A study of significant developments in American literature of the twentieth century. *3 sem. hrs.*

ENG 585. HISTORY OF RHETORIC: A history of rhetoric from the classical to the modern age. *3 sem. hrs.*

ENG. 587. CONTEMPORARY RHETORIC*: An examination of one or more contemporary forms of argumentation and their application in writing. *3 sem. hrs.*

ENG 588. STUDIES IN CRITICISM*: A treatment of significant topics in theoretical and/or practical criticism. *3 sem. hrs.*

ENG 590. TEACHING OF COLLEGE ENGLISH: Discussion, instruction, and practice in the methods of teaching composition and literature. Required of and open only to assistants. *1 sem. hr.*

ENG 591. STUDIES IN LITERATURE*: An analysis of selected literary problems or areas. *1-6 sem. hrs.*

ENG 592. HISTORY OF ENGLISH: A study of stages in the development of the English language and of influences shaping its development from the beginning to the present time. *3 sem. hrs.*

ENG 594. THE STRUCTURE OF ENGLISH: Studies in the grammatical structure of modern English in the light of historical development. Traditional and modern linguistic points of view considered. *3 sem. hrs.*

ENG 596. COMPOSITION THEORY: Study of the principal current theories of composition, with application to the teaching and evaluating of writing. *3 sem. hrs.*

ENG 599. THESIS *3 or 6 sem. hrs.*

ENG 601. RESEARCH AND BIBLIOGRAPHY: An introduction to the methods and tools of literary scholarship. Required of all degree applicants. *3 sem. hrs.*

ENG 605. STUDIES IN AN AUTHOR*: A consideration of the body of an author's work and its relationship to the life of the author. *3 sem. hrs.*

ENG 609. STUDIES IN A GENRE OR MODE*: An intensive analysis of a significant literary form or mode. *3 sem. hrs.*

ENG 613. STUDIES IN A LITERARY MOVEMENT*: An analysis of a significant literary school, group, or movement. *3 sem. hrs.*

ENG 621. STUDIES IN THE TEACHING OF LITERATURE*: An exploration of ways to teach literature more effectively for particular students. *3 sem. hrs.*

ENG 625. STUDIES IN THE TEACHING OF COMPOSITION*: An exploration of ways to teach writing more effectively for particular groups of students. *3 sem. hrs.*

ENG 627. PROFESSIONAL WRITING*: Analysis of and practice in professional writing in different contexts, for example, proposal writing, evaluative report writing, and editing skills. *1-3 sem. hrs.*

ENG 629. WRITING NON-FICTION*: Study of and practice in the writing of non-fiction texts, such as essays, biography, letters, diaries, travel accounts, sermons. *3 sem. hrs.*

Department of
MATHEMATICS (MTH)

Thomas E. Gantner,
Chair of the Department
Paul W. Eloe
Graduate Program Director

The Department of Mathematics offers a Master of Science in applied mathematics. This program is interdisciplinary in nature. A plan of study may include up to a four course concentration in computer science, engineering, or business for students with appropriate backgrounds. The primary objective of the program in applied mathematics is to train students to do professional work in the applications of mathematics. The program provides a background in mathematical, numerical, and statistical analyses and students will gain valuable experience in modeling and computation. Students will have the opportunity to work on a semester or year-long project, the Mathematics Clinic project.

The program strives to offer an individualized plan of study that meets the needs and career goals of the student. This is achieved by offering a core of courses blending analysis, linear algebra, modeling, and numerical analysis in the Department of Mathematics. The student, with departmental approval, will select a four-course concentration. The Mathematics Clinic project, the capstone requirement, is a research project in which the student applies mathematical, numerical, or statistical modeling methods to a problem related to the student's four-course concentration. The Mathematics Clinic project can be a team project and can involve faculty members from several departments.

ASSISTANTSHIPS

Financial assistance is available to qualified students through graduate teaching assistantships. A graduate assistant receives a stipend, tuition remission, and health benefits. Most graduate assistants require two years to complete the requirements for a master's degree.

ADMISSION REQUIREMENTS

Applicants should have a bachelor's degree in a technical area such as mathematics, engineering, computer science, physics, or economics and have at least a 2.8 average on a 4.0 scale. Individuals not having these qualifications may be admitted on a conditional basis. Prerequisites include post-calculus courses in ordinary differential equations and linear algebra, introductory statistics and programming skills.

PROGRAM REQUIREMENTS

The program consists of 30 hours of course work plus at least 3 hours devoted to a research project in the Mathematics Clinic (MTH 541). At least 18 hours of these courses should be taken from the offerings of the Mathematics Department. At most 6 hours of approved 400-level courses may be part of the student's program. The core areas required of all students in the program are as follows:

	Semester Hours
1) Real and Complex Analysis - MTH 430, 521, or 573 and MTH 431 or 525	6
2) Numerical Analysis - MTH 555 or 556	3
3) Differential Equations - MTH 531 or 535	3
4) Linear Algebra - MTH 565	3
5) Mathematics Clinic (Project) - MTH 541	3-6

An individualized degree program consists of courses satisfying the five core areas, an area of concentration, and electives. The program is approved by the student's committee and program director, and is intended to satisfy the specific needs and interests of the individual. Any core course which is already part of the student's academic background may be replaced with an elective consistent with the other requirements of the program.

To satisfy the requirement of an area of concentration, a student will be required to take 12 semester hours of 500-level coursework in the selected area of concentration. Examples of areas of concentration include (but are not limited to):

I. Differential Systems. Advanced and Partial Differential Equations (MTH 531 and MTH 535) plus 6 additional hours of mathematics courses approved by the committee.
II. Engineering Systems. Continuum Mechanics and Theory of Elasticity (EGM 503 and EGM 533) plus 6 additional hours of engineering courses (of a mathematical nature) approved by the committee.
III. Computational Systems. Numerical Analysis (MTH 555 and MTH 556) plus 6 additional hours of computer science courses approved by the committee.

COMPUTING FACILITIES

Departmental PCs, the MATHSCI Computer Learning Environment, and the University of Dayton's mainframe computer are available for student use in conjunction with projects or coursework.

COURSES OF INSTRUCTION

MTH 519-520. STATISTICAL INFERENCE: Sample spaces, Borel fields, random variables, distribution theory, characteristic functions, exponential families, minimax and Bayes' procedures, sufficiency, efficiency, Rao-Blackwell theorem, Neyman-Pearson lemma, uniformly most powerful tests, multi-variate normal distributions. *3 sem. hrs. each.*

MTH 521-522. REAL VARIABLES: The topology of the real line, continuity and differentiability, Riemann and Stieltjes integrals, Lebesgue measure and Lebesgue integral. Measure and

integration over abstract spaces, Lp-spaces, signed measures, Jordan-Hahn decomposition, Radon-Nikodym theorem, Riesz representation theorem, and Fourier series. *3 sem. hrs. each.*

MTH 525. COMPLEX VARIABLES I: Analytic functions, integration on paths, the general Cauchy theorem. Singularities, residues, inverse functions and other applications of the Cauchy theory. *3 sem. hrs.*

MTH 526. COMPLEX VARIABLES II: Infinite products, entire functions, the Riemann mapping theorem and other topics as time permits. Prerequisite: MTH 525 or equivalent. *3 sem. hrs.*

MTH 531. ADVANCED DIFFERENTIAL EQUATIONS: Existence and uniqueness theorems, linear equations and systems, self-adjoint systems, boundary value problems and basic nonlinear techniques. Prerequisite: MTH 403 or equivalent. *3 sem. hrs.*

MTH 535. PARTIAL DIFFERENTIAL EQUATIONS: Classification of partial differential equations; methods of solution for the wave equation, Laplace's equation, and the heat equation; applications. Prerequisite: MTH 403 or equivalent. *3 sem. hrs.*

MTH 540. MATHEMATICAL MODELING: An introduction to the use of mathematical techniques and results in constructing and modifying models designed to describe and/or predict behavior of real-world situations. Prerequisite: permission of the instructor. *3 sem. hrs.*

MTH 541. MATHEMATICS CLINIC: Student teams will be responsible for the development or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance will be provided. May be repeated once for a maximum of 6 credit hours. Prerequisite: permission of the chair. *3 sem. hrs.*

MTH 543. LINEAR MODELS: Least square techniques, lack of fit and pure error, correlation, matrix methods, F test, weighted least squares, examination of residuals, multiple regression, transformations and dummy variables, model building, ridge regression, stepwise regression, multiple regression applied to analysis of variance problems. Prerequisite: MTH 368 or equivalent. *3 sem. hrs.*

MTH 545. SPECIAL FUNCTIONS: The special functions arising from solutions of boundary value problems which are encountered in engineering and the physical sciences. Hypergeometric functions, Bessel functions, Legendre polynomials. Prerequisite: MTH 403 or equivalent. *3 sem. hrs.*

MTH 547. STATISTICS FOR EXPERIMENTERS: Covers those areas of design of experiments and analysis of quantitive data that are useful to anyone engaged in experimental work. Designed experiments using replication and blocking. Use of transformations. Applications of full and fractional factorial designs. Experimental design for developing quality into products using Taguchi methods. Prerequisite: MTH 367 or equivalent. *3 sem. hrs.*

MTH 551. METHODS OF MATHEMATICAL PHYSICS: Linear transformations and matrix theory, linear integral equations, calculus of variations, eigenvalue problems. Prerequisite: MTH 403 or equivalent. *3 sem. hrs.*

MTH 552. METHODS OF APPLIED MATHEMATICS: Dimensional analysis and scaling, regular and singular perturbation methods with boundary layer analysis, the stability and bifurcation of equilibrium solutions, other asymptotic methods. Prerequisites: MTH 403 or equivalent. *3 sem. hrs.*

MTH 555. NUMERICAL ANALYSIS I: Solutions of nonlinear equations, Newton's methods, fixed point methods, solutions of linear equations, LU decomposition, iterative improvement, QR decomposition, SV decomposition. Prerequisites: CPS 132 or 150 or equivalent, MTH 302 or equivalent. *3 sem. hrs.*

MTH 556. NUMERICAL ANALYSIS II: Interpolating functions, numerical differentiation, numerical integration including Gaussian quadrature, numerical solutions of differential equations. Prerequisites: CPS 132 or 150 or equivalent, MTH 219 or equivalent. *3 sem. hrs.*

MTH 561. MODERN ALGEBRA I: Groups, rings, integral domains and fields; extensions of rings and fields; polynomial rings and factorization theory in integral domains; modules and ideals. *3 sem. hrs.*

MTH 562. MODERN ALGEBRA II: Finite and infinite field extensions, algebraic closure, constructible numbers and solvability by use of radicals, Galois theory, and selected advanced topics. Prerequisite: MTH 561. *3 sem. hrs.*

MTH 565. LINEAR ALGEBRA: Vector spaces, linear transformations and matrices; determinants, inner product spaces, invariant direct-sum decomposition and the Jordan canonical form. *3 sem. hrs.*

MTH 571. TOPOLOGY I: An axiomatic treatment of the concept of a topological space; bases and subbases; connectedness, compactness; continuity, homeomorphisms, separation axioms and countability axioms; convergence in topological spaces. *3 sem. hrs.*

MTH 572. TOPOLOGY II: Compactification theory, paracompactness and metrizability theorems, uniform spaces, function spaces, and other advanced topics of current interest. Prerequisite: MTH 571 or equivalent. *3 sem. hrs.*

MTH 573. FUNCTIONAL ANALYSIS: The study of linear metric spaces with emphasis on Banach and Hilbert spaces. The Hahn-Banach theorem, the Banach fixed point theorem, and their consequences. Approximations and other selected advanced topics. *3 sem. hrs.*

MTH 575. DIFFERENTIAL GEOMETRY: Vector and tensor algebra; covariant differentiation. An introduction to the classical theory of curves and surfaces treated by means of vector and tensor analysis. *3 sem. hrs*

MTH 582. VECTOR AND TENSOR ANALYSIS: The differential and integral calculus of scalar and vector fields with emphasis on properties invariant under transformations to curvilinear coordinate systems. An introduction to tensor analysis via Cartesian tensors and then more general tensors. Derivation of the divergence, gradient, and curl in generalized coordinates. Prerequisites: MTH 218 and MTH 302 or equivalent. *3 sem. hrs.*

MTH 583. DISCRETE AND CONTINUOUS FOURIER ANALYSIS: Fourier representations of complex-valued functions, rules for finding Fourier transforms, mathematical operators associated with Fourier analysis, fast algorithms, selected applications. Prerequisites: MTH 302 or equivalent, and MTH 219 or 319 or equivalent. *3 sem. hrs.*

MTH 590. TOPICS IN MATHEMATICS: This course, given upon appropriate occasions, deals with specialized material not covered in the regular courses. May be taken more than once as topics change. Prerequisite: consent of advisor. *3 sem. hrs. each term.*

MTH 598. THESIS *3-6 sem. hrs.*

Department of

PHILOSOPHY (PHL)*

Patricia A. Johnson,
Chair of the Department

**There is no graduate program in philosophy at this time. The courses listed below support other graduate programs.*

COURSES OF INSTRUCTION

PHL 621 AMERICAN PRAGMATISM
PHL 653 AESTHETICS

PHL 654. PHILOSOPHY OF RELIGION

PHL 655 SOCIAL AND POLITICAL PHILOSOPHY

PHL 690 SEMINAR

PHL 690 is regularly taught to the School of Law. PHL 653 is still sometimes taught for the School of Education.

PHL 695. DIRECTED STUDIES: To augment the graduate student's previous training or to allow advanced study on a particular problem, philosopher, or historical era. Arrange through the chair. *3 sem. hrs.*

Department of

PHYSICS (PHY)

J. Michael O'Hare,
Chair of the Department

The Physics Department, as part of the Center for Electro-Optics, offers graduate courses in support of the Master of Science, and Doctor of Philosophy in Electro-Optics. For more details on the program requirements, see Electro-Optics (EOP) in the School of Engineering.

ASSISTANTSHIPS

A limited number of graduate assistantships are available for graduate students in the Electro-Optics Program. These generally carry a stipend and tuition remission for the courses required for the degree. Recipients are expected to complete the requirements for the Master's degree in two years. Detailed information and forms for making application may be obtained from the Chair of Physics or the Director of Electro-Optics.

COURSES OF INSTRUCTION

PHY 520. SOLID STATE PHYSICS: Crystal structure, thermal properties of solids; insulators; band theory of solids; semi-conductors; luminescence. *3 sem. hrs.*

PHY 525. QUANTUM MECHANICS I: The physical basis of quantum mechanics, wave packets, free particle motion: Schrodinger's equation applied to potential problems; harmonic oscillator and the hydrogen atom; three-dimensional extrapolation and scattering. *3 sem. hrs.*

PHY 599/EOP 501 GEOMETRIC OPTICS: Wavefronts and rays; Fermat's principle; Gaussian optics and axially symmetric systems; aperture stops; pupils and fields lenses; Lagrange invariant; angular and visual magnification; optical systems; plane mirrors and prisms; aberration theory; introduction to computer ray tracing. *3 sem. hrs.*

PHY 599/EOP502. OPTICAL RADIATION AND MATTER: Maxwell's equations; electromagnetic waves; interaction of radiation with atomic electrons; molecular and lattice vibration; study of phenomena related to the interaction of optical radiation with matter; polarization; crystal optics; nonlinear dielectric effects. *3 sem hrs.*

PHY 599/EOP 505. INTRODUCTION TO LASERS: Laser theory; coherence; Gaussian beams; optical resonators; properties of atomic and molecular radiation; laser oscillation and amplification; methods of excitation of lasers; characteristics of common lasers; laser applications. Prerequisites: EOP 502 or a working knowledge of Maxwell's Equations, and physical optics, or permission of the course instructor or program director. *3 sem. hrs.*

Department of
POLITICAL SCIENCE (POL)

David W. Ahern,
Chair of the Department
Peter B. Nelson,
Director, MPA Program

The Department of Political Science offers two graduate programs, each designed to accomplish a particular objective.

- **Master of Arts in Political Science (concentration in International Affairs)*** This program affords mid-career professionals and other interested individuals an opportunity to enhance their ability to analyze and interpret contemporary issues in international affairs. The program combines theoretical, regional, and functional approaches to the study of world affairs. Students are encouraged to draw insights from the fields of international and comparative politics and from such related disciplines as history, economics, law, and business.
- **Master of Public Administration** is a professional degree designed to prepare students for administrative careers in contemporary society.

ASSISTANTSHIPS

The department offers two graduate assistantships each year. The graduate assistants perform research and administrative tasks for the faculty. Each assistant receives full tuition remission plus stipend. An assistantship once granted is renewable for a second year.

MASTER OF ARTS—CONCENTRATION IN INTERNATIONAL AFFAIRS

**At this time, students are not admitted into the MAIA program.*

ADMISSION REQUIREMENTS

1. Baccalaureate degree from an accredited college or university.
2. Undergraduate concentration in one of the fields of the social sciences. Candidates without this qualification may still be admitted on a *conditional* basis.
3. Cumulative grade point average of 2.7 or better in a 4.0 grading system, or a combined score of at least 1000 on the verbal and quantitative sections of the Graduate Record Examination. Those candidates with lower cumulative averages or GRE scores may be considered for acceptance on a *conditional* basis. In such cases particular attention will be given to the information contained in the applicant's statement on career objectives and the letters of recommendation.
4. Candidates who have earned their degrees in a pass-fail grading system must submit their scores in the verbal and quantitative sections of the GRE.

DEGREE REQUIREMENTS

I. To receive the Master of Arts degree with a concentration in International Affairs, the student must satisfactorily complete 36 hours of course work with a cumulative grade point average of 3.0 or better.
   A. The 36 hours of course work must include POL 503 (Colloquium in Comparative Politics), POL 502 (International Relations), POL 590 (Research Seminar), and POL 504 (Politics of International Economic Relations).
   B. The remainder of the 36 hours must consist of courses selected from the M.A.I.A. curriculum which emphasizes the areas of International Relations/Foreign Policy and Comparative Politics/Modernization. No more than *six semester hours* of courses may be taken outside of the M.A.I.A. curriculum and these courses must be approved by the department. Students can take up to *six hours* of courses at the 400-1evel but such courses must be approved by the department.

II. At the completion of 12 semester hours of credit, the academic progress of the student will be evaluated by a committee of departmental faculty. It is *incumbent* upon the student after the completion of 12 semester hours of credit to *initiate* the petition for review with the chair of the M.A.I.A. Committee.

CURRICULUM

General courses:

POL 567	Independent Study
POL 590	Research Seminar
POL 591	Special Seminar

International Relations/Foreign Policy courses:

POL 504	Politics of International Economic Relations
POL 509	Russian Foreign Policy
POL 502	International Relations
POL 506	Comparative Foreign Policy Analysis
POL 517	American Foreign Policy
POL 518	U.S. National Security Policy
POL 519	Chinese Foreign Policy
POL 524	U.S.-Latin-American Relations
POL 406	International Law and Organization

Comparative Politics/ Modernization courses:

POL 503	Colloquium in Comparative Politics
POL 527	Russian Politics
POL 523	Latin American Politics
POL 525	Politics in the Middle East
POL 528	Communism and Post Communism
POL 529	West European Politics
POL 530	Chinese Politics
POL 531	Japanese Politics
POL 583	Comparative Public Policy
POL 457	Political Change in the Third World
POL 544	Politics of Human Rights

MASTER OF PUBLIC ADMINISTRATION

ADMISSION REQUIREMENTS

1. Baccalaureate degree from an accredited college or university.
2. Cumulative grade point average of 2.7 in a 4.0 grading system, or a combined score of at least 1000 on the verbal and quantitative sections of the Graduate Record Examination. Those with lower averages and GRE scores may be considered for acceptance on a conditional basis subject to stipulations determined by the Program Director. In such cases particular attention will be given to the information requested in admissions requirements 4 and 5.
3. Students applying from schools operating on a pass-fail grading system are required to submit scores from the verbal and quantitative sections of the GRE. Other applicants are encouraged to submit GRE scores as additional evidence of their competence to do graduate work.
4. The following will also be considered:
   (a) At least three letters of recommendation from individuals in a position to judge the applicant's capacity for graduate work. Persons who have graduated from college within the past five years must submit at least one letter from a former professor. These letters are considered to the extent they show evidence of the applicant's ability to perform graduate work.
   (b) The applicant's work experience and statement of career objectives as related to public administration.
   (c) The applicant's undergraduate academic preparation and achievements in disciplines related to the public service.
5. An applicant may be required to submit additional information when the MPA committee feels that such information is necessary.

DEGREE REQUIREMENTS

I. To receive the Master of Public Administration degree, the student must satisfactorily complete 36 semester hours of course work with a cumulative grade point average of 3.0 or better.
   A. The 36 hours of course work must include MPA 500, MPA 510, MPA 520, MPA 530, and MPA 540. The required courses may be waived for students with appropriate academic backgrounds.
   B. The remainder of the 36 hours must consist of courses selected from the M.P.A. curriculum. Exceptions may be made, on the determination of the program director, if the student's career objectives make public management-related courses in other graduate programs particularly useful. No more than six semester hours outside the M.P.A. curriculum may be taken.

II. Within the general requirements in A and B above, the student may select one of three options:
   A. The student may take 30 to 33 semester hours of academic course work and 3 to 6 hours of MPA 595, Government Internship. A student taking this option is encouraged to begin the internship only after completing 18 semester hours of other courses and successfully passing the Certifying Examination. The internship is required of pre-career students.
   B. The student, under certain conditions, may take 30 to 33 hours of academic course work and 3 to 6 hours of MPA 597, Public Service Project. This option is available only to students employed in Administrative positions other than internships in public or nonprofit agencies. Students should enroll in MPA 597 only after completing 18 hours of other courses and successfully passing the Certifying Examination.
   C. The student must take the full 36 semester hours in regular academic courses.

III. Students are required to take a written Certifying Examination in the semester of their eighteenth hour of M.P.A. course work (excluding credit from other schools or programs). Students are responsible for having completed the five required courses (MPA 500, MPA 510, MPA 520, MPA 530 and MPA 540) by the end of that semester. Application to take the examination must be submitted to the Program Director no later than the sixth full week of that semester.

The Certifying Examination will evaluate the student's mastery of core concepts and ability to analyze problems consistent with the scope of the required courses.

Certifying Examinations will be graded by a committee of faculty members who teach M.P.A. courses. This committee will take one of three actions:
   A. Certify the student for further course work without restriction.
   B. Certify the student for further course work with restrictions.
   C. Require that the student be re-examined. No more than one re-examination per student may be given. Failure to pass the re-examination will result in removal from the program.

CURRICULUM

General Administration and Management

MPA 500	Public Administration
MPA 502	Intergovernmental Relations
MPA 504	State and Local Government
MPA 506	Urban Administration
MPA 508	Contemporary Issues in Public Management

Analytic Tools

MPA 510	Quantitative Methods
MPA 512	Computer Applications for Public Administration
MPA 514	Government Planning

Group and Organization Dynamics

MPA 520	Organization Theory
CMM 517	Organizational Communications
CMM 537	Conflict Resolution through Communication

Fiscal Management

MPA 530	Fiscal Administration
MPA 532	Governmental Fund Management and Reporting

Human Resources

MPA 540	Public Sector Human Resource Management
MPA 542	Public Sector Labor Management Relations

Policy Studies

MPA 551	Introduction to Public Policy
MPA 555	Selected Topics in Public Policy

The Nonprofit Sector

MPA 561	Introduction to Nonprofit Organizations

Public Law/Bureaucracy

MPA 571	Administrative Law

Topical Seminars/Independent Work

MPA 591	Seminar in Public Administration
MPA 593	Independent Study in Public Administration
MPA 595	Government Internship

COURSES OF INSTRUCTION
(M.A.I.A. Program)

Graduate students in Political Science and Public Administration may take no more than two 400-1evel courses for graduate credit, with the permission of the chair of the appropriate graduate committee. Undergraduate courses specified as a condition for admittance to the graduate program do not count as graduate credit.

POL 500. POLITICS OF INTERNATIONAL ECONOMIC RELATIONS: A structural—analytical study of the political dimension of the international economic system. Focus upon the Western system of interdependence, the North-South system of dependence, and the East-West system of independence. *3 sem. hrs.*

POL 503. COLLOQUIUM IN COMPARATIVE POLITICS: An examination of various theoretical and empirical approaches in the study of comparative politics and political development with special emphasis on cross-national comparison and the use of aggregate data in comparative analysis. *3 sem. hrs*

POL 509. SOVIET FOREIGN POLICY: This course is designed to provide the student with a broad introduction to Soviet views on East-West relations. The course will deal with cooperative and competitive aspects of those relations in three areas—political, economic, and military, and the problem and opportunities they present for Soviet foreign security and policy. *3 sem. hrs.*

POL 515. INTERNATIONAL RELATIONS: Analysis of selected theories and approaches in the study of international relations, with particular emphasis on the nature of power and the sources of transformation in the contemporary international system. *3 sem. hrs.*

POL 516. COMPARATIVE FOREIGN POLICY ANALYSIS: Systematic analysis of the external factors shaping the foreign policies of selected states and of current models of foreign policy decision-making. Special emphasis will be placed on comparison of Soviet and American policy. *3 sem. hrs.*

POL 517. AMERICAN FOREIGN POLICY: Study and analysis of the factors, both internal and external, which have shaped American foreign policy in the post World War II period, the major instruments of policy and their effectiveness, and the impact of changes since 1970. *3 sem. hrs.*

POL 518. UNITED STATES NATIONAL SECURITY POLICY: Analysis of United States global security policies and defense strategies with attention to continuities and changes in doctrines, commitments, perceptions of the Soviet threat, and the impact of technology. *3 sem. hrs.*

POL 519. CHINESE FOREIGN POLICY: Analysis of the Chinese foreign policy structures and processes as well as the development of Chinese foreign policy and relations with the Soviet Union, the United States, and the Third World. *3 sem. hrs.*

POL 520. SOVIET POLITICS: The nature of the Soviet state, its economic system, the role of the Communist party and the influence of Marxist-Leninist ideology will be examined along with contemporary problems and political dynamics. *3 sem. hrs.*

POL 523. LATIN AMERICAN POLITICS: Systematic analysis of the political, economic, and social structures and forces shaping politics in selected Latin American countries. *3 sem. hrs.*

POL 524. U.S.-LATIN AMERICAN RELATIONS: Examines the evolving relations between the United States and the other member-states of the Inter-American system, and introduces students to a wide variety of theoretical perspectives on Inter-American relations. Special attention is focused on the issues that dominate the agenda of Inter-American relations. *3 sem. hrs.*

POL 525. POLITICS IN THE MIDDLE EAST: Analysis of major political and social forces, such as religion and nationalism, that shape the contemporary Middle Eastern states. *3 sem. hrs.*

POL 528. THEORY AND PRACTICE OF COMMUNISM: An analysis of the content and development of Communist theory and practice with primary emphasis on the Soviet Union, China, and Yugoslavia. Select coverage will also be given to the experiences of Cuba and Romania. *3 sem. hrs.*

POL 529. SEMINAR IN EUROPEAN POLITICS: Systematic analysis of the political structures and processes of two or more countries in Western Europe and two or more in the Soviet Union and Eastern Europe, with emphasis on selected contemporary political, economic, and social problems. May be repeated once when focus changes. *3 sem. hrs.*

POL 530. SEMINAR: CHINESE POLITICS: Analysis of the political process and policy-making in China with emphasis upon elite interaction concerning leadership succession and economic development strategies. *3 sem. hrs.*

POL 531. SEMINAR: JAPANESE POLITICS: Analysis of the political process, policy-making, and select public policies in Japan with emphasis upon the dynamics of one- party democracy and factionalism in Japanese politics. *3 sem. hrs.*

POL 567. INDEPENDENT STUDY IN POLITICAL SCIENCE: Reading and research on special topics in political science under the direction of a faculty member. Research paper. May be repeated once when topic changes. *3 sem. hrs.*

POL 583. COMPARATIVE PUBLIC POLICY: Study of the applicability and limitations of current approaches in public policy analysis for cross-national and/or cross-cultural comparison. Emphasis on the analysis of how such public policy issues as defense, welfare, education, and economic development are determined by select political systems in the developed and developing world. *3 sem. hrs.*

POL 590. RESEARCH SEMINAR IN POLITICAL SCIENCE: Directed research on a selected topic in American or comparative politics which requires the application of a specific approach, generation and analysis of data which result in a major research paper. *3 sem. hrs.*

POL 591. SPECIAL SEMINAR: An in-depth investigation and analysis of a specific area in comparative politics or international relations. May be repeated once when area of analysis changes. *3 sem. hrs.*

POL 597. RESEARCH PROJECT: Required of all M.A. students. Completion of the research paper begun in POL 590; evaluation of the substance, methodology, and findings of the paper by the professor; and presentation of the paper to students and faculty of the Political Science department. *3 sem. hrs.*

COURSES OF INSTRUCTION
(MPA Program)

MPA 500. PUBLIC ADMINISTRATION: Study of administrative organization, systems, processes and methods as applied to government programs and operations, with a comparison of structural and behavioral approaches *3 sem. hrs.*

MPA 502. INTERGOVERNMENTAL RELATIONS: Study of the interaction processes of various levels of government in the United States, including problems of federalism, interstate cooperation, and federal-urban relations. *3 sem. hrs.*

MPA 504. STATE AND LOCAL GOVERNMENT: An in-depth examination of particular state-local institutional relationships with emphasis upon current issues. *3 sem. hrs.*

MPA 506. URBAN ADMINISTRATION: Study of the structures, processes, programs, policies and problems of administrative agencies of local government, with particular emphasis on metropolitan areas. *3 sem. hrs.*

MPA 508. CONTEMPORARY ISSUES IN PUBLIC MANAGEMENT: An in-depth examination of a current management issue supported by recent literature in public administration and relevant to surrounding local governments. Analysis of root causes of the problem issue. Exploration of management approaches available to local governments. May be repeated once when course focus changes. *3 sem. hrs.*

MPA 510. QUANTITATIVE METHODS IN PUBLIC ADMINISTRATION. Introduction to research techniques involving quantitative methods and analysis applicable to the formation and implementation of public programs. Emphasis on basic statistics and research methodology. Aimed at understanding appropriate application and interpretation of quantitative methods rather than competence in practical or scholarly use. *3 sem. hrs.*

MPA 512. COMPUTER APPLICATIONS FOR PUBLIC ADMINISTRATION: Microcomputer applications in the practice of public administration and policy research. Course strongly oriented toward problem-solving. *3 sem. hrs.*

MPA 514. GOVERNMENT PLANNING: Consideration of the planning function in the administrative process and the role of planning agencies in decision making and problem solving. Evaluation of trends and changing characteristics of planning in the United States. *3 sem. hrs.*

MPA 520. ORGANIZATION THEORY: Survey of current literature and research on the theory of complex organizations. Rationality in decision making; problems of authority; behavioral, political, and technical influences on organization. *3 sem. hrs.*

MPA 530. FISCAL ADMINISTRATION: Study of governmental expenditures and revenues, budgetary and financial reporting, fiscal policy, and other areas of fiscal management, with emphasis on current practices and problems. *3 sem. hrs.*

MPA 532. GOVERNMENTAL FUND MANAGEMENT AND REPORTING: Examination of the fund structures within local/state governments and selected nonprofit entities. Emphasis upon understanding the managerial implications of financial statements and reports. *3 sem. hrs.*

MPA 540. PUBLIC SECTOR HUMAN RESOURCE MANAGEMENT: A broad-based study of people management ranging from the development and integration of organizational policy, through the many personnel administrative processes, and the human and regulatory aspects affecting the contemporary public sector workforce. *3 sem. hrs.*

MPA 542. PUBLIC SECTOR LABOR MANAGEMENT RELATIONS: This course is designed to focus on the labor relations function as it is found in the public sector. Topics to be covered include the rise of government employee labor unions, collective bargaining and policy impacts of public employee unions. *3 sem. hrs.*

MPA 551. INTRODUCTION TO PUBLIC POLICY: This course is designed to introduce students to the study of public policy and public policymaking. The central concerns of the course involve competing models of the policy process, the policymaking process in the United States, the interplay between the political and economic systems in policymaking, and the processes of policy analysis and evaluation. *3 sem. hrs.*

MPA 555. SELECTED TOPICS IN PUBLIC POLICY. Policy process, policy outcomes, and policy impact in an area or areas of public policy varying among such topics as transportation, education, welfare, national defense, science, civil rights, and urban and community development. May be repeated when topic changes. *3 sem. hrs.*

MPA 561. INTRODUCTION TO NONPROFIT ORGANIZATIONS: This course surveys the generalized body of knowledge common to all nonprofit organizations, distinguishing them from governmental and for-profit entities. Emphasis placed upon an overall understanding of the nonprofit sector and its emerging role in society. *3 sem. hrs.*

MPA 571. ADMINISTRATIVE LAW: Study of the judicial function and activities of federal agencies; formal and informal processes in administrative hearings; basic principles of administrative law; judicial interpretation; the question of increased judicialization of the administrative process. *3 sem. hrs.*

MPA 591. SEMINAR IN PUBLIC ADMINISTRATION: Seminar on selected problems in public administration. Students are expected (as individuals or team members) to produce research manuscript suitable for professional dissemination. May be repeated when topic changes. *3 sem. hrs.*

MPA 593. INDEPENDENT STUDY IN PUBLIC ADMINISTRATION: Intensive independent research under the direction of a faculty member. Research paper. May be repeated when topic changes. Prior approval of formal project proposal required. *3-6 sem. hrs.*

MPA 595. GOVERNMENT INTERNSHIP: Assignment to appropriate government agencies or units for the purpose of gaining wide experience with the administrative system through a program of work experiences. Internship includes a related academic requirement. *1-6 sem. hrs.*

MPA 597. PUBLIC SERVICE PROJECT: For students currently employed in administrative positions in public or nonprofit agencies. Completion of a written project relating theories and information from the field of public administration to the student's work experience and career objectives. Prior approval of formal project proposal required. *3 sem. hrs.*

Department of

PSYCHOLOGY (PSY)

F. Thomas Eggemeier,
Chair of the Department
David W. Biers, Director of Human Factors and Research
John R. Korte,
Director of Clinical Program
Charles E. Kimble,
Coordinator of General Program

The Department of Psychology offers three Graduate Programs leading to the Master of Arts:

- Clinical Psychology
- Experimental-Human Factors Psychology
- General Psychology

In all programs emphasis is on integrating theory and research with appropriate applied experience and on competence in the development of relevant and original research. This is the product of individual supervision and a low student-to-faculty ratio. The aim of the department is to prepare the student for (a) further graduate studies at the Ph.D. level, and/or (b) work at the M.A. level in an applied/community setting, in teaching, or in research.

To further specific research interests graduate students are encouraged to work with faculty members on a one-to-one basis. Academic advisors and the chair of the department will direct students to faculty members who share their specific interests and areas of specialization.

Graduate teaching and research assistantships are available on a com-

petitive basis and include a stipend as well as tuition and fee remission. The Department of Psychology also offers a limited number of traineeships to students in the Clinical Psychology program. The traineeship placements are at local mental health agencies and vary in number and stipend from year to year depending upon the budgets and needs of the agencies participating in the traineeship program.

ADMISSION REQUIREMENTS AND PROCEDURE

Under normal circumstances an undergraduate grade point average of 3.0 or better (based on a 4.0 system) is required to be considered for admission to the graduate program. In addition, a minimum of 3.0 average in undergraduate course work in psychology is required.

It is expected that the applicant will have completed the requirement of a four-year undergraduate college, usually in liberal arts or science, including a minimum of 15 semester hours in psychology. These psychology courses must include a course in introductory statistics, a course in experimental psychology or research design or the equivalent, and six semester hours in upper-level psychology courses. For students in Clinical Psychology, the upper-level courses should include Abnormal Psychology and Theories of Personality.

As a result of accreditation by the Human Factors and Ergonomics Society, applicants to the Experimental-Human Factors Program are required to have satisfactorily completed an undergraduate course in calculus and one in a structured computer programming language (either structured BASIC, FORTRAN, Pascal, or C). Students who have acquired knowledge of a computer programming language on their own may substitute demonstration of that knowledge for formal course work. Applicants deficient in either or both of these requirements may be admitted to the program with the stipulation that they make up any deficiency prior to the beginning of their second year. However, students admitted with deficiencies in either calculus or computer programming are strongly urged to satisfy these requirements prior to matriculating to the University of Dayton.

Students without psychology preparation may be admitted to the Experimental-Human Factors Psychology program on a conditional basis. Regular admission will follow contingent upon the completion of undergraduate work specified by the admissions committee. Students are urged to contact the Director of Human Factors and Research if they are considering this option.

Acceptance within a specific program is competitive, based upon the strength of the student's application and the number of positions available.

APPLICATIONS

Application forms may be obtained from the Office for Graduate Applications & Records at the University of Dayton to which all correspondence concerning the completion of the application should be directed. For the Fall term, the application deadline is March 1. Applications received after this deadline will be reviewed depending upon the availability of openings in specific programs. For information about application for the Spring and Summer terms contact the chair of the Department of Psychology.

Inquiries concerning the master's program, its curriculum, and the Department of Psychology should be directed to the Chair, Department of Psychology, University of Dayton, Dayton, Ohio 45469-1430. It is the applicant's responsibility to supply the following information necessary for a completed application:

A. The completed application form.
B. Official transcripts of all undergraduate schooling (and graduate schooling where appropriate).
C. At least three letters of recommendation (at least two of these should be from professors familiar with the student's academic work).
D. Scores on the Graduate Record Examination (both general and Psychology scores are required).
E. The Miller's Analogies Test score (MAT) is optional.
F. A summary of undergraduate grade point averages.

Under unusual circumstances the chair of the Department of Psychology may waive one or more of the application requirements.

STUDENT STATUS

Each student admitted to the graduate program is placed in one of the following categories:

1. Regular standing: students meeting the entrance requirements of the department.
2. Conditional standing: students considered probationary pending the successful completion of 9 to 15 semester hours of graduate work or other requirements as determined by the department.
3. Unclassified standing: students enrolled in graduate courses of the department who are not working toward a degree. Normally a student is permitted to enroll for a limited number of semester hours of credit under this status. Permission of either the chair or program director is required.

PROGRAM REQUIREMENTS

All students enrolled in any of the three programs leading to the Master of Arts with a major in Psychology are subject to the following general requirements of the Department of Psychology. Full time students normally complete program requirements in two years:

1. The number of semester hours and required courses as specified by the individual programs described below.
2. Demonstration of satisfactory progress toward the degree which includes the requirement that students maintain a minimum average of B (3.00) in course work. Students who fail to meet this requirement are either placed

on academic probation or dismissed from the program.
3. Students are permitted no more than six semester hours with grades of C or lower. Students who fail to meet this requirement are dismissed from the program.
4. No more than six semester hours of 400-1evel courses may apply toward the master's degree, and normally no more than six semester hours of graduate work approved by the chair of the department may be transferred from other institutions.
5. Attendance is required at regularly scheduled extra-course seminars on selected issues in psychology and at occasional specialized programs.
6. Thesis must deal with an approved research problem, incorporating an appropriate review of theory and literature, and demonstrating competence in the application of research methodology.
7. Students are expected to conduct themselves in a professional and ethical manner in accordance with generally accepted standards for psychologists. Failure to do so may result in dismissal.
8. It is the student's responsibility to know and to meet the requirements of the University and of the graduate program.

CLINICAL PSYCHOLOGY

In addition to a broad academic background and competence in the application of research methodology, the Clinical Psychology program provides the student with:

(a) Thorough exposure to the areas of personality, psychopathology, and psychotherapy,
(b) Intensive training in the assessment of intelligence and personality,
(c) Supervised practice in interviewing and therapeutic intervention, and
(d) The opportunity to emphasize work with either children or adults.

Through practicum experience in various community and clinical settings affiliated with the University, the student can translate classroom learning into practical experience. The program is designed to prepare the student for competence at the Master's-level or for pursuing a doctoral degree in Clinical Psychology.

The Master of Arts with a major in Psychology (Clinical) requires 46 semester hours consisting of 42 hours of academic course work, including thesis, and 4 hours of practicum as specified below.

		Semester Hours
Psychology Core Requirements		12
PSY 501	Experimental Design & Statistics I	3
PSY 502	Experimental Design & Statistics II	3
PSY 510	History & Systems	3
PSY 599	Thesis	3
Clinical Core Requirements		28
PSY 550	Introduction to Clinical Psychology	3
PSY 551	Assessment of Intelligence	3
PSY 553	Theories & Research in Psychopathology	3
PSY 555	Theories of Personality & Psychotherapy	3
PSY 556	Assessment of Personality	3
PSY 564	Individual Psychotherapy	3
PSY 565	Ethical & Cultural Issues in Clinical Assessment & Psychotherapy	3
PSY 569	Practicum (1 credit each)	4
PSY 573	Developmental Psychology	3
Child Emphasis Requirements		6
PSY 560	Childhood Psychopathology & Psychotherapy	3
PSY 566	Marriage & Family Therapy*	3
Adult Emphasis Requirements		3
PSY 558	Group Psychotherapy*	3
PSY 566	Marriage & Family Therapy*	3
Total Semester Hours		46

**With approval of the Director of the Clinical Program, an elective may be substituted for either Psy 558 or 566.*

EXPERIMENTAL-HUMAN FACTORS PSYCHOLOGY

The Master's program in Experimental-Human Factors Psychology is designed for the student who wishes to integrate the theory, methods, and data of experimental psychology with that of human factors. The program is accredited by the Human Factors and Ergonomics Society. The overall program is structured to prepare the student for further graduate study in experimental psychology or human factors at the Ph.D. level, and/or for a career as a research applied scientist in human factors psychology. The curriculum stresses integration of knowledge in three key areas: (l) the theoretical issues and quantitative research methodology associated with perception, human information processing, motor skills, and other psychological processes; (2) the application of the knowledge about basic psychological processes to the development of equipment, equipment interfaces, and work environments; and (3) the tools which the human factors specialist applies to system analysis, design, test, and evaluation. Emphasis is on the integration of course work with research and practical experience.

The Master of Arts with a major in Psychology (Experimental-Human Factors) requires 39 semester hours, including thesis, as specified below.

		Semester Hours
Core Requirements		12
PSY 510	History & Systems	3
PSY 501	Experimental Design & Statistics I	3
PSY 502	Experimental Design & Statistics II	3
PSY 599	Thesis	3
Experimental-Human Factors Core Requirements		18
PSY 533	Engineering Psychology	3
PSY 531	Human Factors in Systems Development	3

PSY 529	Perception	3
PSY 524	Human Information Processing	3
PSY 535	Ergonomics	3
PSY 539	Practicum in Human Factors	3
Electives		9

Courses may be selected from the following list or, with permission of the program director, from other graduate courses within the department, and from graduate courses outside the department in such related disciplines as engineering or computer science. No more than six hours of courses taken outside the department may count toward program credit.

PSY 506	Selected Topics in Advanced Research Methodology	3
	(May be taken more than once for credit)	
PSY 534	Human Computer Interaction.	3
PSY 522	Advanced Cognitive	3
PSY 528	Psychophysiology	3
PSY 532	Special Topics in Human Factors	3
	(May be taken more than once for credit)	
PSY 536	Training System Development	3
PSY 537	Team and Group Processes	3
PSY 596	Experimental Research	1-3
PSY 597	Readings	1-3
	Total Semester Hours	39

GENERAL PSYCHOLOGY: Cognitive, Developmental, and Social Processes

The Master of Arts in General Psychology offers students a broad background in some of the basic areas of psychology. The program is designed to prepare students for doctoral work by providing training through research and basic courses. A student takes a minimum of two courses in Cognitive Psychology, Developmental Psychology, and Social Psychology. Selected courses, but not a multi-course concentration, in Human Factors and/or Clinical Psychology are also available to the General Psychology student. With the six elective hours, it is also possible to develop interdisciplinary interests in computer science, education, business, engineering, communication, or biology.

The Master of Arts with a major in Psychology (General) requires 36 semester hours, including thesis, as specified below.

Core Requirements		12
PSY 501	Experimental Design and Statistics I	3
PSY 502	Experimental Design and Statistics II	3
PSY 510	History & Systems	3
PSY 599	Thesis	3
General Psychology Requirements		18

These 18 hours are to be 6 semester hours selected from the courses under the three content areas below. In special cases, a Readings (PSY 597) course or some other course in one of the content areas (e.g., PSY 588, Interpersonal Processes) may be substituted for one of the named courses.

Developmental Psychology Courses 6

PSY 573	Developmental Psychology
PSY 574	Cognitive Development in Children
PSY 457	Television and its Effects on Children

Cognitive Psychology Courses 6

PSY 522	Advanced Cognitive Processes
PSY 529	Perception
PSY 524	Human Information Processing

Social Psychology Courses 6

PSY 585	Experimental Social Psychology
PSY 537	Team and Group Processes
PSY 444	Environmental Psychology

Electives 6

Six semester hours, some of which may be from other departments of the university, selected in consultation with the advisor.

Total Semester Hours 36

COURSES OF INSTRUCTION

PSY 501. EXPERIMENTAL DESIGN AND STATISTICS I: Study of the logic of the design of experiments in psychology with special emphasis on the use of the analysis of variance. Students will be expected to perform statistical procedures on the computer using canned statistical packages. Prerequisite: undergraduate statistics. *3 sem. hrs.*

PSY 502. EXPERIMENTAL DESIGN AND STATISTICS II: Further study of the logic of the design of experiments in psychology with special emphasis on the use of bivariate correlation and regression, and multiple regression. Students will be expected to perform statistical procedures on the computer using canned statistical packages. Prerequisite: *PSY 501.* *3 sem. hrs.*

PSY 506. SELECTED TOPICS IN ADVANCED RESEARCH METHODOLOGY: Study of special topics in statistics, research design, behavior research methods, and computer technology. The specific topic will vary from one offering to the next. Possible topics include applied multivariate statistics, programming microcomputers for psychology experiments, evaluation research methods, program evaluation, and performance measurement. May be repeated. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 510. HISTORY & SYSTEMS: An extensive survey of the theories and research paradigms that comprise the science of psychology. Topics include an historical overview of the field, the structure of the modern profession, and selected current areas of application and inquiry. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 522. ADVANCED COGNITIVE PROCESSES: Basic research paradigms for the experimental investigation of cognitive processes, with attention to the current information-

processing theories of cognition. Topics include selective attention, visual short-term memory, pattern recognition, encoding processes, imagery, search and retrieval processes, theories of human memory, and cerebral dominance. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 524. HUMAN INFORMATION PROCESSING: Current psychological and artificial intelligence models of cognition. Topics include coding mechanisms in the central nervous system, simulation of sensory processes and recognition, computer models of human memory, semantic information processing by humans and machine, fast retrieval theories, recent theories of language comprehension and problem solving. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 528. PSYCHOPHYSIOLOGY: Neurophysiology of attention, sensation, perception, emotion, learning, memory, and motor control. Emphasis on electrophysiological indicants and cybernetical analyses. Prerequisite: Graduate student status in psychology or permission of instructor. *3 sem. hrs.*

PSY 529. PERCEPTION: Systematic study of methods and research findings in the field of human perception, with an evaluation of theoretical interpretations. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 531. HUMAN FACTORS IN SYSTEM DEVELOPMENT: Introduction to human factors during the system development process. Treats the design process from initial conceptual stages to final testing and evaluation. Emphasis is upon methods and techniques which permit development of data to support human factors functions throughout the process. Prerequisite: Graduate Student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 532. SPECIAL TOPICS IN HUMAN FACTORS: Wide ranging topics related to Human Factors Psychology are envisioned. For example: human tracking performance, tactual communication, vigilance, motor memory, skill development, visual displays, technical invention, electrophysiological indicants of human performance, etc. May be repeated. Prerequisite: Graduate student status in Psychology or permission of instructor. *1-3 sem. hrs.*

PSY 533. ENGINEERING PSYCHOLOGY: Treatment of the relationship between problems in human factors engineering and theory-based research in experimental psychology and human performance. Topics covered include theory and research in such areas as decision making, attention, perception, and motor performance and their potential application to the design of the person-machine interface in complex systems. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 534. HUMAN COMPUTER INTERACTION: A critical review of human factors issues in the design of user interfaces of interactive computer systems. Emphasis will be placed on topics of cognitive engineering as they apply to user-centered systems design. Prerequisites: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 535. ERGONOMICS: Ergonomics, the study of work, emphasizes the physical aspects, capabilities, and limitations of humans. Students participate in an anthropometric measurement laboratory, employ computerized biomechanical models, and examine the literature in a specific area of interest. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 536. TRAINING SYSTEM DEVELOPMENT: Treatment of the systems approach to training program analysis, design, and evaluation. Topics covered include assessment of training objectives, development of training program content, selection of training media, application of simulation technology, and program evaluation procedures, including transfer of training methodology. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem hrs.*

PSY 537. TEAM AND GROUP PROCESS: Study of group processes and theories with special application to team training, communication, performance, and coordination in human factors settings and problems. Group decision making and leadership are also emphasized. Prerequisite: Graduate student status in Psychology or permission of instructor. *3 sem. hrs.*

PSY 539. HUMAN FACTORS PRACTICUM: Experience in applying the theory, methods, and data of experimental-human factors psychology to person-machine problems is acquired through placement in an approved human factors organization. Prerequisites: PSY 501, 524, 529, 531 and 533 or permission of the director of Human Factors Program. *3 sem. hrs.*

PSY 550. INTRODUCTION TO CLINICAL PSYCHOLOGY: Introduction to interviewing skills with adults and children. Academic and applied components include supervised practice interviews and documentation. Professional components addressed include diversity, ethics, and mental health systems. Prerequisite: Graduate status in Clinical Program. *3 sem. hrs.*

PSY 551. ASSESSMENT OF INTELLIGENCE: Theoretical rationale and techniques of individual mental testing, with emphasis on the Wechsler Scales and the Stanford-Binet. Major content areas include theories of intelligence, test development and evaluation, clinical interpretation, and current research. Prerequisite: Graduate status in Clinical Program or permission of instructor. *3 sem. hrs.*

PSY 553. THEORIES AND RESEARCH IN PSYCHOPATHOLOGY: Survey of mental disorders with respect to their characteristics, etiol-

ogy, and treatment alternatives. Emphasis is on the process of expanding knowledge through research. Practice in the use of current diagnostic classifications. Graduate status in Clinical Program or permission of instructor. *3 sem hrs.*

PSY 555. THEORIES OF PERSONALITY AND PSYCHOTHERAPY: Survey and critical analysis of the major current theories of personality and psychotherapy integrating their contributions into a diversified, functional, and adaptable approach to therapy. Graduate status in Clinical Program or permission of instructor. *3 sem. hrs.*

PSY 556. ASSESSMENT OF PERSONALITY: Variety of approaches to personality assessment as well as the techniques of administration and interpretation of specific instruments. Emphasis is on the MMPI-2, Rorschach, and TAT. Strategies of test construction and evaluation, ethical issues, and research are discussed. Prerequisite: Graduate status in Clinical Program, PSY 551, and PSY 553, or permission of instructor. *3 sem. hrs.*

PSY 558. GROUP PSYCHOTHERAPY: Survey of theories and techniques of group psychotherapy, including a review of the theoretical and empirical literature, as well as a training group experience. Prerequisite: Graduate status in Clinical Program and PSY 555, or permission of instructor. *3 sem. hrs.*

PSY 560. CHILDHOOD PSYCHOPATHOLOGY AND PSYCHOTHERAPY: Current views of the etiology and differential diagnosis of psychopathological disorders of childhood and adolescence are examined. Relevant therapeutic approaches are presented and evaluated in relation to recent research. Prerequisite: Graduate status in Clinical Program and PSY 553, PSY 555, or permission of instructor. *3 sem. hrs.*

PSY 564. INDIVIDUAL PSYCHOTHERAPY: In-depth study of the principles and techniques of dynamic, individual psychotherapy as developed from clinical and empirical findings. Prerequisite: Graduate status in Clinical Program and PSY 555, or permission of instructor. *3 sem hrs.*

PSY 565. ETHICAL & CULTURAL ISSUES IN CLINICAL ASSESSMENT AND PSYCHOTHERAPY: An examination of ethical theories and principles applied to clinical assessment and psychotherapy. Issues addressed include ethical frameworks, ethical codes, assessment practices, psychotherapy techniques, and common problems arising in clinical practice. Graduate status in Clinical Program or permission of instructor. *3 sem hrs.*

PSY 566. FAMILY AND MARRIAGE THERAPY: Survey of the major therapeutic approaches to family and marital problems and related research findings. Prerequisites: Graduate status in Clinical Program and PSY 555, or permission of instructor. *3 sem. hrs.*

PSY 567. SPECIAL TOPICS IN CLINICAL PSYCHOLOGY: A variable topics course on issues relevant to the training of students preparing for work in clinical psychology. May be repeated with different topics. Prerequisites: Graduate status in Clinical Program or permission of instructor. *1-3 sem. hrs.*

PSY 569. CLINICAL PRACTICUM: Experience in interviewing, psychological testing and therapy is acquired through placement in approved mental health agencies. Prerequisite: Graduate status in the Clinical Program. Clinical students register for one semester hour of practicum each term. To be repeated to four semester hours. *1 sem. hr.*

PSY 573. DEVELOPMENTAL PSYCHOLOGY: The science of human development with emphasis on theory, research, methods, findings and applications. Topics selected from but not limited to personality and social development, language acquisition, problem-solving, attachment, sex roles, children's rights, moral and prosocial behavior, family relations and extrafamilial influences such as television and schools. Prerequisite: Graduate status or permission of the instructor. *3 sem. hrs.*

PSY 574. COGNITIVE DEVELOPMENT IN CHILDREN: Major approaches to the study of cognitive development: attentional and mediational development as demonstrated in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite: Graduate status or permission of instructor (also PSY 452.) *3 sem. hrs.*

PSY 585. EXPERIMENTAL SOCIAL PSYCHOLOGY: Designed to provide information and perspective about such social psychological topics as attitude change, interpersonal attraction, social influence, attribution, aggression, helping and intrinsic motivation. Prerequisite: Graduate status. *3 sem. hrs.*

PSY 588. INTERPERSONAL PROCESSES: Seminar in research in some prominent sub-areas of Social Psychology. Emphasis on critical skills and research ideas in topics such as non-verbal communication, self-disclosure, affiliation and attraction, and equity theory. Prerequisite: PSY 585, permission of instructor. *3 sem. hrs.*

PSY 595. SEMINAR IN SPECIAL TOPICS IN PSYCHOLOGY: Various topics of special interest to faculty and students. An intensive critical evaluation of the appropriate literature. May be repeated . Prerequisite: Graduate status or permission of instructor. *1-3 sem. hrs.*

PSY 596. EXPERIMENTAL RESEARCH: Individual graduate students explore particular research areas. Under guidance of the instructor, research projects are formulated and conducted. Project reports are required. May be repeated. Prerequisite: permission of instructor. *1-3 sem. hrs.*

PSY 597. READINGS: Designed for individual, student-faculty study in a specialized area of interest. Topic and criteria for evaluation to be specified prior to registration. May be repeated. Prerequisite: permission of instructor. *1-3 sem. hrs.*

PSY 599. THESIS: An original research project incorporating an appropriate review of theory and literature and demonstrating competence in the application of research methodology. Required of all graduate students. *3 sem. hrs.*

Department of

RELIGIOUS STUDIES (REL)

Terrence W. Tilley, Chair of the Department, and Program Director

The Department of Religious Studies is an ecumenical community of students and professors engaged in the study, research, and interpretation of religious issues. It considers these issues from the context of the more classical disciplines of the Judaeo-Christian heritage, with particular emphasis on the Roman Catholic tradition, as well as the burgeoning areas of multi-cultural and cross disciplinary concerns. It offers a Master of Arts individualized to meet each student's need, whether it be for an advanced degree or professional preparation. The student may therefore choose to follow one of two programs which lead to the Master of Arts degree.

PROGRAM IN THEOLOGICAL STUDIES

The master's program in Theological Studies offers a comprehensive approach to the study of theology and religion. Each student is expected to develop an understanding of biblical sources, historical developments, moral and contemporary theologies, especially in the Roman Catholic tradition. Ecumenical perspectives, among Christians and world religions, provide an important matrix for study.

Concentration in Marian Studies:

A concentration in Marian Studies is available for students who take a minimum of twelve hours up to a maximum of sixteen hours in specially designated courses in this area. These designated courses are listed under Marian Studies Concentration. They are offered by the International Marian Research Institute at the University of Dayton. Students will find the world-renowned resources of the Marian Library to be most useful for their studies.

PROGRAM IN PASTORAL MINISTRIES

The master's program in Pastoral Ministries offers the student an opportunity to prepare for a variety of service careers emerging in the contemporary Church. Courses and workshops, particularly in religious education and telecommunications, family and parish ministries, and the social teachings of the Church, ensure the vitality of the program. This program, grounded in the study of theology, shaped distinctively by general principles of pastoral ministry, is open to a variety of applications. It prepares students for pastoral positions in catechetics and religious education, family, parish, and campus ministry. Taking into account the individual interests and needs of the students, the program responds to contemporary pastoral needs through an integration of theory and practice.

SPECIAL RESOURCES

Students have the opportunity to draw upon the resources of other departments of the University, as well as upon the Centers of the University (the Family Center and the Center for Christian Renewal in which may be found the offices for Creative Ministry, Aging, Strategies for Responsible Development, Educational Services and Religious Telecommunications). Interaction with an area seminary and other institutions, interchange of facilities, sharing of library resources, cooperative innovative programming, and cross-registration make available to students not only a greater variety of courses but also provide the opportunity for even more flexible construction of their degree programs.

The University of Dayton is also the home of the International Marian Research Institute which administers a doctoral program in Theology (S.T.D.) sponsored by the Pontifical Marianum University in Rome. Graduate students in the Department of Religious Studies may take courses in the Institute. Consult the chair for further information.

GRADUATE ASSISTANTSHIPS

The department offers several graduate assistantships granted on a competitive basis. They provide for tuition remission for 18 credit hours a year and an annual stipend. Write the chair for further information.

ADMISSION REQUIREMENTS

An applicant is admitted to graduate study if the admitting committee of the department is satisfied that the applicant is fully qualified to undertake graduate study. Twenty-four semester hours in philosophy and theology with a 3.0 grade-point average or their equivalent is recommended. Adjustments may be made by the chair for special situations.

PROGRAM REQUIREMENTS

Each program, though different in its internal structure, requires 36 credit hours for graduation. In the construction of a program it is expected that the majority of the student's course work will be taken in the Department of Religious Studies. A 3.0 quality point average in departmental courses and in

the student's overall program is required for graduation.

Both programs in the Master of Arts are to be pursued in an individualized manner. Upon admission to the program each student is to draw up a proposal for the program to be followed. This design of course work is done in conjunction with a graduate advisor and in light of the student's needs, interests, and background. This program proposal is then submitted to the Graduate Committee of the department for its approval.

The programs leading to the master's degree may be pursued in summer sessions with courses of one to six weeks duration, or be pursued full-time, i.e., throughout the year. They must be completed within seven calendar years from the time of matriculation.

STRUCTURE OF THE PROGRAMS AND COURSE WORK

THEOLOGICAL STUDIES

Three arrangements are possible:

(1) 36 hours of course work, with submission to the graduate committee of the Department of a research paper done as a part of one of the courses taken between the 15th and 24th hour of course work;
(2) 33 hours of course work and a 3-hour project; or
(3) 30 hours of course work and a 6-hour thesis. An oral defense of the thesis is required.

PASTORAL MINISTRIES

This program is divided into three parts:

(1) theological foundations (12-15 hours);
(2) basic principles for effective ministry (6-9 hours); and
(3) the practice and study of specific ministries (9-12 hours), including a practicum (3 hours) and a synthesis seminar (3 hours).

Language Proficiency

There is no language requirement for the degree. For specialization in the biblical or historical areas a working knowledge of the language employed in the area, e.g., Hebrew, Greek, or Latin, is encouraged. The language proficiency is particularly recommended for those students preparing for doctoral work.

COURSES OF INSTRUCTION

Biblical Languages

REL 501, 503. BIBLICAL HEBREW I, II: Introduction to the morphology and syntax of biblical Hebrew to facilitate the handling of basic tools and the reading of simple prose texts. *3 sem. hrs. each.*

REL 502, 504. BIBLICAL GREEK I, II: Introduction to Hellenistic Greek. Vocabulary, grammar, and syntax. Selective readings of New Testament texts. *3 sem. hrs. each.*

Biblical Studies

REL 511. CONTEMPORARY OLD TESTAMENT CRITICISM: Introduction to the principal methodological approaches to the Old Testament and a survey of the major results of contemporary biblical scholarship. *2-3 sem. hrs.*

REL 513. OLD TESTAMENT EXEGESIS: Critical study of selected writings of the Old Testament. May be taken more than once. (1) Hexateuch, (2) Historical Books, (3) Prophets, (4) Psalms, (5). Wisdom Literature, (6) Apocalyptic Literature. *2-3 sem. hrs.*

REL 514. OLD TESTAMENT THEOLOGY: An examination of the discipline of Old Testament theology. Special consideration to the relationship of history and theology. *2-3 sem. hrs.*

REL 516. CONTEMPORARY NEW TESTAMENT CRITICISM: Introduction to the major methodological approaches to the New Testament with an emphasis on introductory matters, content, and cultural heritage. *2-3 sem. hrs.*

REL 517. NEW TESTAMENT BACKGROUNDS: Thorough study of selected individual points, e.g., Gnosticism, Qumran, needed for an understanding of the New Testament. May be taken more than once. *2-3 sem. hrs.*

REL 518. NEW TESTAMENT EXEGESIS: Critical exegetical study of selected writings of the New Testament. May be taken more than once. (1) Synoptics: Matthew and Mark, (2) Luke/Acts, (3) John, (4) Pauline Corpus, (5) Pastoral Epistles, (6) Book of Revelation. *2-3 sem. hrs.*

REL 519. NEW TESTAMENT THEOLOGY: A thorough study of one theme in the theology of the New Testament. May be taken more than once. *2-3 sem. hrs.*

Historical Theology

REL 520. HISTORY AND THEOLOGY OF THE MEDIEVAL CHURCH: Early Medieval foundations, the Carolingian Renaissance, the preparation of the 11th and 12th centuries, as well as the post-13th century movement toward nominalism, to give perspective to the High Scholasticism of the 13th century. *2-3 sem. hrs.*

REL 521. CHRISTIAN DOCTRINE IN THE EARLY CHURCH: The development of doctrine from the post-apostolic age to the beginning of the Middle Age including the Apostolic Fathers, the Apologists, Gnosticism, Irenaeus, Marcion, Tertullian, John of Damascus, and the Schools of Antioch, Alexandria, and Cappadocia. *2-3 sem. hrs.*

REL 522. AUGUSTINE TO OCCAM: Analysis of the life and thought of individual leaders of the Church. *2-3 sem. hrs.*

REL 523. TRENT TO VATICAN II: Historical account of Christianity's theological reponse to the major reformers and of further theological developments of Christianity in the context of philosophy, science, and political revolutions up to Vatican II. *2-3 sem. hrs.*

REL 524. PROTESTANT CHRISTIANITY: Survey of the development of Protestant thought from the Reformation to the present. Analysis, in their own writings and their historical context, of selected Protestant theologians, such as Luther, Calvin, Knox, Cranmer, Schleiermacher, Ritschl, Harnack, and Barth. *2-3 sem. hrs.*

Systematic Theology

REL 530. MODERN THEOLOGICAL METHODS AND MOVEMENTS: Selected theological works or movements in theology in the 19th and 20th centuries. May be taken more than once. *2-3 sem. hrs.*

REL 534. SEARCH FOR IMMORTALITY: Study of how a variety of disciplines understand immortality. A theological evaluation of these insights with reference to traditional and prospective theology. *2-3 sem. hrs.*

REL 535. GOD AND HUMAN EXISTENCE: A survey of Christian theologies of God, traditional and modern, and viewpoints they represent on the nature and purpose of human existence. *2-3 sem. hrs.*

REL 537. CHRISTOLOGY: An examination of the approaches taken by contemporary theologians in discussing Jesus and his significance for Christian faith. *2-3 sem. hrs.*

REL 540. ECCLESIOLOGY: Study of the nature and mission of the church, with an emphasis on Catholic perspectives. Topics include the church as mystery, models of the church, ecumenism, authority, laity, and the church-world relationship. *2-3 sem. hrs.*

REL 541. THEOLOGY OF MINISTRY: Study of ministry as the right and responsibility of all Christians; Jesus' dying and rising as the unifying thread linking the description, division and chief aspects of ministry to evangelization and the kingdom; pastoral implications of the foregoing. *2-3 sem. hrs.*

REL 543. SACRAMENTAL THEOLOGY: Detailed study of the principle of sacramentality and of the individual sacraments, stressing the historical development of each and its contemporary renewal. *2-3 sem. hrs.*

REL 544. SELECTED CATHOLIC DOCTRINES: An examination from several perspectives (biblical, historical, and systematic) of Catholic doctrines and dogmas, including the notion of dogma, its development, Scripture and Tradition, Papal Infallibility, Freedom of Conscience, the Marian Dogmas, and the Salvation of non-Christians. *2-3 sem. hrs.*

REL 546. LITURGY: Study of the theological perspective on the history and the future of Christian liturgy. *2-3 sem. hrs.*

REL 547. THEOLOGY OF CHRISTIAN DISCIPLESHIP: An examination of the meaning of Christian discipleship in light of the Scriptures and contemporary theological insights. Emphasis on the baptismal roots of the call to Christian holiness and the principal dimensions of this call. *2-3 sem. hrs.*

REL 548. THEOLOGY OF PRAYER: Study of the meaning of prayer, focusing on prayer in the Hebrew and Christian Scriptures, prayer as reflected in selected classical mystical writers, and contemporary approaches to prayer. *2-3 sem. hrs.*

REL 549. MARIAN QUESTION TODAY: Detailed treatment of selected issues of contemporary interest relating to the role of the Virgin Mary in the history of salvation. May be taken more than once. *2-3 sem. hrs.*

Christian Ethics

REL 561. APPROACHES TO MORALITY: An attempt to establish the foundations of Christian morality, consisting of an historical survey of approaches and developments from the New Testament period to the present. *2-3 sem. hrs.*

REL 562. CONTEMPORARY MORAL PROBLEMS: An open approach to contemporary moral issues within theological perspectives. *2-3 sem. hrs.*

REL 577. THE RELIGIOUS AND MORAL QUEST IN LITERATURE AND ART: Study of the religious and moral quest in various modes of poetry, novel, drama, film, and art with an emphasis on the form of expression. *2-3 sem. hrs.*

Pastoral Ministries

REL 581 . THEOLOGY OF REVELATION: Study of God's self-disclosure to His people as found in scripture, tradition, and the living experience of the Church immersed in history. *2-3 sem. hrs.*

REL 582. TEACHING CHRISTIAN BELIEFS: A consideration of the issues that must be considered in the development and teaching of the basics of Christian belief—Jesus, grace, church, redemption, and sin. *2-3 sem. hrs.*

REL 583. RELIGIOUS PSYCHOLOGY: Study of the human response to God in the light of contemporary psychology. The implications for catechesis in the various stages of human development, in the process of conversion and commitment, and in the crises of faith. *2-3 sem. hrs.*

REL 584. CONTEMPORARY CATECHETICAL PROCESS: An attempt to identify and relate specific characteristics of various historical and contemporary approaches to religious education. Specific emphasis on the thought of authors such as Bushnell, Moran, Westenoff, and Lee, exploring their impact on developing a philosophy of religious education in a pluralistic society for the future. May be repeated for graduate credit when topic changes. *2-3 sem. hrs.*

REL 585. PASTORAL COUNSELING: Brief study of the methods of counseling with emphasis on those modes most in practice today. Concentration on the major problems faced by counselors in the pastoral area. *2-3 sem. hrs.*

REL 586. LEADERSHIP IN PARISH MINISTRY: Study of the traditional parish structure as seen against the background of biblical and historical perspectives on the local church. An

examination of the forces for change in the contemporary parish with an effort, out of the theoretical framework of leadership and administration, to assist the student in developing a philosophy and strategy of leadership. *2-3 sem. hrs.*

REL 587. RELIGIOUS STUDIES AS AUTOBIOGRAPHY: An invitation to reflect systematically on the religious dimension of one's own life story by asking questions about meaning, purpose, values, and identity, through the study of the lives of great religious figures. An assessment of the potential of this autobiographical approach for religious education. *2-3 sem. hrs.*

REL 588. TEACHING MORALS AND VALUES IN RELIGIOUS EDUCATION: An integration of theory and practical techniques for teaching Morals and Values in religious education today. An exploration of Value and Moral Development with emphasis on authors such as Piaget, Kohlberg, Erikson, Fowler, and Rokeach. May be repeated for graduate credit when topic changes. *2-3 sem. hrs.*

REL. 589. PRACTICUM: Approved supervised pastoral involvement coupled with theological reflections. *3-6 sem. hrs.*

General Courses of Instruction

REL 590. SELECTED QUESTIONS: A study of specific questions and developments in biblical, historical, systematic, or catechetical theology. May be taken more than once. *1-3 sem. hrs.*

REL 591. SPECIAL TOPICS: A graduate workshop and/or seminar investigating and analyzing a specific area of theology and interdisciplinary scholarship concerning contemporary issues. *1-6 sem. hrs.*

REL 592. CONTEMPORARY ISSUES: Study of issues and subjects pertinent to Theological Studies and Pastoral Ministry. May be taken more than once. *1-6 sem. hrs.*

REL 593. DIRECTED STUDY: A directed study of a particular theologian, problem, or historical period. May be taken more than once. *1-3 sem. hrs.*

REL 599. THESIS *6 sem. hrs.*

REL 693. IMRI DIRECTED STUDY: Courses studying, analyzing, or investigating a specific area of Mariology. *1-3 sem. hrs.*

Marian Studies

REL 611. MARY AND THE NEW TESTAMENT: Study of the principal New Testament texts with reference to Mary as Mother of the Redeemer, as figure of the Church, and with reference to her role in the history of salvation. *2 sem. hrs.*

REL 624. MARY: PATRISTIC PERIOD: Initial development of Marian doctrine and devotion in Greek, Latin, and Oriental patristics (first six centuries). *2 sem. hrs.*

REL 625. MARY: MEDIEVAL PERIOD: Study of the development of Mariology from the 7th century to the Renaissance: Marian doctrines, Marian devotions, Mary in art and liturgy, Marian feasts, and principal Marian works. *2 sem. hrs.*

REL 626. MARY: MODERN PERIOD: Study of the development of Mariology from the Renaissance to the 20th century: principal Marian questions/controversies, Marian devotions, Marian shrines, Mary in art and liturgy, Marian feasts, and principal Marian works. *2 sem. hrs.*

REL 630. MARY: CONTEMPORARY PERIOD: Study of the teaching of Vatican II about the Blessed Virgin Mary, especially in chapter VIII of LUMEN GENTIUM and its implications and developments in contemporary Marian doctrine and devotion. Recent encyclicals on Mary. *2 sem hrs.*

REL 631. MARIAN DOCTRINE: Historical and theological study of principal Marian doctrines: Divine maternity, virginity, Immaculate Conception, and Assumption. Study of the question of Mary's spiritual maternity, intercession, and mediation. *2 sem. hrs.*

REL 632. MARIAN SPIRITUALITY: Study of the spirituality of Mary, e.g., Mary and the Holy Spirit; Mary's virtues; Mary as first disciple of the Lord, as Servant of the Lord, and as model of the Church. *2 sem hrs.*

REL 691. SPECIAL MARIAN TOPICS: A study of issues and subjects pertinent to Mariology. May be taken more than once. *2 sem. hrs.*