HOFSTRA COLLEGE OF LIBERAL ARTS AND SCIENCES (HCLAS)

BERNARD J. FIRESTONE, DEAN
Barbara J. Bohannon, Associate Dean for Student Academic Affairs
Steven R. Costenoble, Associate Dean for Budgeting and Planning
Barry N. Nass, Associate Dean for Curriculum and Personnel

OFFICE: SECOND FLOOR, HEGER HALL, TELEPHONE: (516) 463-5412, FAX: (516) 463-4861

HCLAS PROGAMS OFFERED

BIOLOGY

COMPARATIVE LITERATURE AND LANGUAGES

COMPUTER SCIENCE

ENGLISH

FINE ARTS, ART HISTORY AND HUMANITIES

MATHEMATICS

PSYCHOLOGY

ROMANCE LANGUAGES AND LITERATURES

SPEECH-LANGUAGE-HEARING SCIENCES

HCLAS ELECTIVE COURSES

HOFSTRA COLLEGE OF LIBERAL ARTS AND SCIENCES (HCLAS)

Office: Second Floor, Heger Hall, Telephone: (516) 463-5412, Fax: (516) 463-4861, E-mail: hclas@hofstra.edu

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Graduate education in the Hofstra College of Liberal Arts and Sciences reflects the College's commitment to advanced scholarship and professional training that is responsive to the diversity of human experience and constantly expanding boundaries of human knowledge.

GRADUATE DEGREES

The College of Liberal Arts and Sciences provides master's and doctoral programs in a wide range of disciplines that afford students the opportunity for professional growth and advanced study. The college offers graduate programs leading to the degrees of Master of Arts, Master of Science, Doctor of Psychology, and Doctor of Philosophy. Master's programs in nine disciplines span the arts and sciences and prepare students for advanced studies in professions such as biology research, creative writing, secondary education, organizational training and development, speech-language pathology, audiology, and human resource management. The M.A. programs in speech-language pathology and audiology are accredited by the American Speech-Language-Hearing Association. Programs are described individually under their respective departments.

The College's two doctoral programs are offered by the Psychology Department. The Ph.D. Program in combined Clinical and School Psychology is accredited by the American Psychological Association and prepares professional psychologists for work in mental health centers, hospitals, public schools, special educational facilities, university-based academic departments, and independent private practice. The Psy.D. Program in School-Community Psychology prepares psychologists for service to schools and community health services.

ORGANIZATION OF DEPARTMENTS

The College is made up of the Division of the Humanities; the Division of the Natural Sciences, Mathematics, Engineering and Computer Science; and the Division of the Social Sciences. In addition, Military Science is under the supervision of the College.

Division of the Humanities
The Division of the Humanities has three related objectives that apply to every student who takes courses within this area: first, to improve the habits and skills of communication; second, to develop the capacities of logic, sensibility, imagination, and receptivity within the fields of experience common to all educated persons; third, to provide specialized vocational training that conforms to the preceding objectives.

Division of the Natural Sciences, Mathematics, Engineering and Computer Science
The Division of Natural Sciences, Mathematics, Engineering and Computer Science prepares students for careers in the sciences and in engineering by fostering an understanding of science and mathematics.

Division of the Social Sciences
The Division of the Social Sciences aims to provide its students with a coherent interpretation of human behavior. Reliable social-scientific knowledge is attained by careful examination, comparison and testing of rational, communicable hypotheses. Comprehension of this process leads to the student's own discovery and development.

BIOLOGY (BIO)

Professor Seagull, Chairperson, 130 Gittleson Hall
Associate Professor Daniel, Graduate Program Director, (516) 463-6718, biopcd@hofstra.edu

Professor Pumo
Associate Professors Burke, Clendening, Daniel, Morrissey, Sanford, Willey
Assistant Professors Krause, Vallier, Williams

MASTER OF ARTS: BIOLOGY *(33 s.h.)*

Applicants must have a bachelor's degree (or equivalent) in biology. Any undergraduate deficiencies (including physics, mathematics and organic chemistry) must be made up before the completion of 15 semester hours of graduate work. Graduate students are expected to receive a grade of B or better in their biology courses. All students should meet with the Graduate Program Director at least once each semester. Graduates with a master's degree pursue professional degrees in the health sciences, continue graduate work at the doctoral level, and find employment as lab technicians for hospitals and companies and as marine and wildlife specialists for governmental and nongovernmental organizations.

Candidates must complete 33 semester hours of graduate work including an essay (BIO 303). At least 27 credits must be in biology courses numbered 200 or higher including 305A and 305B (Graduate Seminar); up to 6 credits of electives may be chosen with permission of the Graduate Program Director.

Students may complete a general biology course of study and choose any course from the departmental offerings or they may pursue concentrations in marine and freshwater biology or cell and molecular biology.

MARINE AND FRESHWATER BIOLOGY

This concentration enables students to focus their studies on aspects of marine biology, limnology and aquaculture. All students are expected to complete their essay (BIO 303) on a subject related to marine or freshwater biology. Students are encouraged to take 18 semester hours from the following courses.

BIO	201	Statistical Analysis of Biological Data, 3 s.h.
	204	Tropical Marine Biology for Teachers, 3 s.h.
	205	Marine Microbiology, 3 s.h.
	207A	Biology of Fishes, 3 s.h.
	208	Biology of Marine Mammals, 3 s.h.
	229	Limnology, 3 s.h.
	270	Physiological Ecology and Functional Morphology of Aquatic Vertebrates, 3 s.h.
	275	Advanced Conservation Biology, 3 s.h.
	307	Internship in Marine or Freshwater Biology, 3 s.h.

CELL AND MOLECULAR BIOLOGY

This concentration allows the student to focus on aspects of biology that are especially pertinent to biotechnology. Emphasis is on cell and molecular biology, genetics, cell culture, laboratory use of microcomputers and general laboratory techniques. Students are encouraged to take 18 semester hours from the following courses.

BIO	210	Advanced Genetics, 3 s.h.
	237	Biochemical Mechanisms in Cell Biology, 3 s.h.
	238	Animal Cell Culture, 4 s.h.
	239	Microscopic Techniques, 4 s.h.
	240	Virology, 3 s.h.
	241	Mechanisms of Cellular Aging, 3 s.h.
	243	Experimental Developmental Biology, 4 s.h.
	244	Biology of the Cancer Cell, 3 s.h.
	2139*	Techniques in Molecular Biology, 3 s.h.

MASTER OF SCIENCE: BIOLOGY *(30 s.h.)*

Applicants must have a bachelor's degree (or equivalent) in biology. Any undergraduate deficiencies (including physics, mathematics and organic chemistry) must be made up before the completion of 15 semester hours of graduate work. Graduate students are expected to receive a grade of B or better in their biology courses. All students should meet with the Graduate Program Director at least once each semester. Graduates with a master's degree pursue professional degrees in the health sciences, continue graduate work at the doctoral level, and find employment as lab technicians for hospitals and companies, and as marine and wildlife specialists for governmental and nongovernmental organizations.

Candidates must complete 30 semester hours of graduate work including a thesis (BIO 301-302). At least 24 credits must be in Biology courses numbered 200 or higher including 305A and 305B (Graduate Seminar); up to 6 credits of electives may be chosen with the permission of the Graduate Program Director.

Students may complete a general biology course of study and choose any course from the departmental offerings or they may pursue concentrations in marine and freshwater biology or cell and molecular biology.

MARINE AND FRESHWATER BIOLOGY

This concentration enables students to focus their studies on aspects of marine biology, limnology and aquaculture. All students are expected to complete a thesis (BIO 301-302) on a subject related to marine or freshwater biology. Students are encouraged to take 18 semester hours from the following courses.

BIO	201	Statistical Analysis of Biological Data, 3 s.h.
	204	Tropical Marine Biology for Teachers, 3 s.h.
	205	Marine Microbiology, 3 s.h.
	207A	Biology of Fishes, 3 s.h.
	208	Biology of Marine Mammals, 3 s.h.
	229	Limnology, 3 s.h.
	270	Physiological Ecology and Functional Morphology of Aquatic Vertebrates, 3 s.h.
	275	Advanced Conservation Biology, 3 s.h.
	307	Internship in Marine or Freshwater Biology, 3 s.h.

CELL AND MOLECULAR BIOLOGY

This concentration allows the student to focus on aspects of biology that are especially pertinent to biotechnology. Emphasis is on cell and molecular biology, genetics, cell culture, laboratory use of microcomputers and general laboratory techniques. Students are encouraged to take 18 semester hours from the following courses.

BIO	210	Advanced Genetics, 3 s.h.
	237	Biochemical Mechanisms in Cell Biology, 3 s.h.
	239	Animal Cell Culture, 4w s.h.
	240	Virology, 3 s.h.
	241	Mechanisms of Cellular Aging, 3 s.h.
	243	Experimental Developmental Biology, 4 s.h.
	244	Biology of the Cancer Cell, 3 s.h.
	2139*	Techniques in Molecular Biology, 3 s.h.

MASTER OF SCIENCE: HUMAN CYTOGENETICS

This program is designed for students who wish to pursue careers in human cytogenetics. It provides a strong biology and cell biology base with special courses in cytogenetics and an internship period in a clinical cytogenetics laboratory. Graduates of the program will be prepared for laboratory careers in cytogenetic technology or further education in a related field.

Applicants must have a bachelor's degree (or equivalent) in biology or a related field (cell biology, biochemistry, genetics, etc.). It is recommended that students have had one semester of biochemistry, genetics, cell biology, statistics, one year of calculus and physics and two years of chemistry including organic laboratory. Deficiencies must be made up before the student accrues more than 15 credits towards the master's degree. All students should meet with the Graduate Program Director at least once each semester.

PROGRAM REQUIREMENTS *(38 s.h.)*

Required Courses: 25 s.h.

BIO	210	Advanced Genetics, 3 s.h.
	212	Cytogenetics, 3 s.h.
	214	Human Cytogenetics, 3 s.h.
	215	Clinical Cytogenetics, 3 s.h.
	238	Animal Cell Culture, 4 s.h.
	244	Biology of the Cancer Cell, 3 s.h.
	255	Seminar: Current Topics in Cytogenetics, 2 s.h.
	305A,305B	Graduate Seminars, ½ s.h. each
	306	Internship in Cytogenetics, 3 s.h.

Recommended courses (at least seven semester hours):

BIO	201	Statistical Analysis of Biological Data, 3 s.h.
	224	Immunology and Serology, 3 s.h.
	240	Virology, 3 s.h.
	241	Mechanisms of Cellular Aging, 3 s.h.
	243	Experimental Developmental Biology, 4 s.h.
	246	Comparative Microscopic Anatomy, 4 s.h.
	251A,252A	Special Topics in Biology (selected readings), 2-4 s.h. each
	253A	Special Topics in Biology (lectures and seminars), 2-4 s.h. each
	264A	Scanning Electron Microscopy, 3 s.h.
	2139*	Techniques in Molecular Biology, 3 s.h.

All students are required to complete and successfully defend either an essay (BIO 303) or a thesis (BIO 301-302).

Students who wish to be eligible for the certification examination for Clinical Laboratory Specialist in Cytogenetics upon completion of the program, must enroll in BIO 306 (Internship in Cytogenetics) for two semesters (6 s.h. total). The second semester of 306 can be used as one of the electives.

*2000 level course (see page 12) combines with BIO 139, see undergraduate bulletin

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(BIO) COURSES

BIO 200 **Periodically** **3 s.h.**
Computer Utilization in Biological Research
Lectures and laboratory experiences concerning the use of computers and other sophisticated electronic equipment for the collection and analysis of biological data. (Standard statistical tests covered in BIO 201 are not covered.) Topics may include geographic information systems, phylogenetic analysis, bioinformatics, analysis of movement and spatial patterns, and electrophysiology. Students will be expected to work on an independent project, analyzing a substantial data set relevant to the theory and techniques covered in class.

BIO 201 **Periodically** **3 s.h.**
Statistical Analysis of Biological Data
Practical application of statistical techniques to the analysis of data typically encountered by researchers in the life and health sciences. Students learn practical and intuitive approaches to choosing statistical techniques appropriate for particular experimental designs. Parametric statistical tests covered include single and two-way ANOVA, regression and correlation. Tests of "messy" or nonparametric data are considered as well, including analysis of frequencies and substitutions for ANOVA. (2 hours lecture, 1 hour recitation.)

BIO 202 **Summer** **3 s.h.**
Laboratory/Research Techniques for High School Biology Teachers
This course is designed to help high school teachers develop research methods classes and inquiry-driven laboratory experiences for their students. The course will introduce teachers to model systems that can be applied to research and inquiry-based laboratories at the high school level. Model organisms to be used may include Drosophila, Hydra, C-Fern, Dictyostelium, and others. One or two organisms will be utilized as models for each offering of this class. Model organisms may change with separate offerings of this course. Course content will include the basic biology of the organisms and an introduction to the types of research for which the organisms are currently being used. Techniques that can be used for inquiry-driven investigations will be introduced. In the second half of the course, class participants will work in groups to design new experiments or avenues of investigation. The course may be repeated for credit when the model systems covered change.

BIO 204 **Summer** **3 s.h.**
Tropical Marine Biology for Teachers
An intensive introduction to the biology of seashores, turtle grass beds, mangrove swamps and coral reefs. Teachers are shown how to prepare materials for use in classrooms. (2 hours lecture, 5 hours laboratory and field study daily.) Course meets for 12 days at the Caribbean Hofstra University Marine Laboratory, Jamaica.

BIO 205 **Spring** **3 s.h.**
Marine Microbiology
Morphology, physiology, ecology and distribution of marine and estuarine bacteria, algae, fungi, protozoa and other planktonic organisms. Biological corrosion, pollution, pathogenicity and economic significance of marine microorganisms will also be considered.
Prerequisite, one of the following: BIO 143, 151A or 172.

BIO 207A **Every other year** **3 s.h.**
Biology of Fishes
Anatomy, systematics, biogeography, respiration, osmoregulation, buoyancy and sensory systems of marine and freshwater fishes. The course concludes with a discussion of the interactions between humans and fishes, including poisonous and venomous fishes and fisheries management and conservation.
Prerequisites: BIO 24, 181 or permission of instructor. (Formerly Marine Ichthyology.)

BIO 208 **Every other Fall** **3 s.h.**
Biology of Marine Mammals
This course covers the anatomy and physiology of sea otters, seals, sea lions, manatees, dolphins and whales. Topics of discussion include their systematics, anatomy, thermoregulation, osmoregulation, diving physiology, sensory biology, feeding, life history and captive husbandry. Topics are discussed from an evolutionary perspective by comparing a terrestrial archetype (such as a human or dog) with these highly derived marine mammals.

BIO 210 **Once a year** **3 s.h.**
Advanced Genetics
Problems of modern genetics based upon the most recent research.
Prerequisite: BIO 135.

BIO 212 **Once a year** **3 s.h.**
Cytogenetics
Structure, function and behavior of chromosomes in eukaryotes, prokaryotes and viruses. Also considered are lampbrush and polytene chromosomes in differentiation, the mitotic apparatus, and the synaptinemal complex.
Prerequisite: BIO 135.

BIO 213 **Once a year** **3 s.h.**
Current Topics in Genetics and Evolution
A problem-based overview of biology for graduate students. Designed for students with little or no prior experience in biology coursework, this course covers the basics of genetics, the function and manipulation of DNA, evolution, and ecology. Problems within each topic allow the student to understand the conceptual basis of the topic and obtain the skills needed to approach more complex issues. May not be taken for credit toward a B.A., B.S., M.S., or an M.A. in Biology. Recommended for Elementary Education majors. May not be taken on a P/F basis.

BIO 214 **Once a year** **3 s.h.**
Human Cytogenetics
Topics covered include karyotype analysis, chromosomal anomalies including structural rearrangements and numerical disorders, various banding methods, chromosomes, cancer, and gene mapping by in situ hybridization. May not be taken on a Pass/Fail basis.
Prerequisite: BIO 212 or 210 or equivalent.

BIO 215 **Periodically** **3 s.h.**
Clinical Genetics
Clinical aspects of human genetic disorders including autosomal dominant and recessive and X-linked disorders, polygenic inheritance. Chromosomal disorders and prenatal diagnosis. May not be taken on a Pass/Fail basis.
Prerequisites: BIO 212, 214.

BIO 220 **Periodically** **3 s.h.**
Endocrinology
A consideration of the role of the major endocrine glands in the body economy, with emphasis upon the phylogeny and comparative physiology of these structures and upon the pertinent methodology.
Prerequisites: BIO 144, CHEM 132A, 132B.

BIO 221 **Periodically** **3 s.h.**
Molecular Pharmacology
Interaction of drug molecules with cells, tissues and organ systems with emphasis on the basic mechanisms involved in the absorption, distribution, action, metabolism and excretion of pharmacologically active agents. Current concepts in receptor theory and structure activity relationships.
Prerequisites: BIO 144, 162, 137.

BIO 222 **Periodically** **3 s.h.**
Comparative Vertebrate Hematology
Morphology, physiology and evolutionary development of the blood and hematopoietic organs of vertebrates with emphasis on their application to experimental methods in hematology. Phylogenetic relationships of blood cells and hemopoietic organs in the five classes of vertebrates.
Prerequisite: BIO 144.

BIO 223 **Periodically** **3 s.h.**
General Mammalian Hematology
Embryogenesis, morphology and function of the blood cells. Dynamics and kinetics of hemopoiesis. Proliferation, maturation, differentiation and destruction of blood cells. Neurohumoral regulation and maintenance of homeostasis in blood. Phyletic theories of stem cell derivatives.
Prerequisite: BIO 144.

BIO 224 **Periodically** **3 s.h.**
Immunology and Serology
Antigens and antibodies are considered both as components of immunologic systems and as a means of solving biological problems.
Prerequisites: BIO 144, CHEM 132A.

BIO 229 **Periodically** **3 s.h.**
Limnology
Physical, chemical and biological interrelationships in fresh water habitats. (2 hours lecture plus Saturday field trips by arrangement.)
Prerequisites: BIO 1 & 2, CHEM 3A & 4A, 3B & 4B.

BIO 230 **Periodically** **4 s.h.**
Algae of Long Island and Adjacent Areas
Taught in the field and in the lab, dealing primarily with organisms collected on the field trips. Emphasis on field observation, laboratory study, identification and maintenance of collected specimens.
Prerequisite: BIO 1 & 2.

BIO 231 **Periodically** **4 s.h.**
Fungi of Long Island and Adjacent Areas
Fieldwork is expected as emphasis is on study of fungi from collected samples. Isolation, culture and identification are an integral part of course work.
Prerequisite: BIO 1 & 2.

BIO 237 **Periodically** **3 s.h.**
Biochemical Mechanisms in Cell Biology
Course covers recent research concerning the biochemical mechanisms involved in regulating various processes in cell biology. Selected advanced topics may include some of the following: transcellular signaling, vesicle traffic, quality control of protein synthesis, protein translocation, nuclear transport, extracellular matrix, cytoskeletal function and G-protein function. Students analyze recent reviews and journal articles from the primary literature. May not be taken on a Pass/Fail basis.
Prerequisites: BIO 135, 137, CHEM 131A & 132A, 131B & 132B, or equivalents.

BIO 238 **Fall** **4 s.h.**
Animal Cell Culture
Study and utilization of techniques involved in the establishment and maintenance of animal cell lines including preparation of media and aseptic methods, types of cell culture, experimental design employing cultured cells, cloning, cell cycle analysis, karyotyping, preparation of monoclonal antibodies, etc. Theory of techniques learned in the laboratory are discussed in lecture.
Prerequisites: BIO 137 and permission of instructor. Recommended for students interested in cell biology and biochemistry research.

BIO 239 **Periodically** **4 s.h.**
Microscopic Techniques
Practice and theory involved in various techniques for preparing and staining tissues and cells, and also unicellular organisms for microscopic and cytochemical studies. (2 hour lecture, 4 hours laboratory.)
Prerequisites: BIO 1 & 2.

BIO 240 **Spring** **3 s.h.**
Virology
Molecular and clinical aspects of viruses that infect humans. Includes replication, gene expression, changes in host cells, pathogenesis, and transmission. Particular attention is paid to Human Immunodeficiency Virus—the cause of AIDS.
Prerequisites: BIO 1 & 2, 135, 137.

BIO 241 **Fall** **3 s.h.**
Mechanisms in Cellular Aging
Possible mechanisms involved in cellular aging including mutagenesis, free radicals, thermal damage, DNA repair and chemical cross-linkage; the role of development and protein aging.
Prerequisite: BIO 135. BIO 137 recommended.

BIO 243 **Periodically** **4 s.h.**
Experimental Developmental Biology
A survey of experimental approaches and techniques employed in the analysis of animal development emphasizing microsurgical manipulations, in vitro cultivation, autoradiographic detections, electrophoretic separations, biochemical isolations and an independent research project.
Prerequisites: BIO 23 or 24 and permission of instructor.

BIO 244 **Spring** **3 s.h.**
Biology of the Cancer Cell
Various aspects of cancer cell biology on the histological, cellular and molecular level. Emphasis is on basic research problems including cancer as a misprogramming of normal development, alterations in cell-cell recognition, changes in nuclear events, the oncogene theory and the mechanisms of action of chemical carcinogens.
Prerequisite: BIO 137. CHEM 162 recommended.

BIO 245 **Periodically** **3 s.h.**
Morphology and Physiology of Bones and Teeth
The anatomy and development of bone and teeth. Discussion of experimental tooth embryogenesis, the calcification process and pulp and periodontal histopathology. Recent advances in replantation and transplantation of teeth will be considered.
Prerequisite: BIO 191 or 190 or permission of instructor.

BIO 246 **Periodically** **4 s.h.**
Comparative Microscopic Anatomy
Microscopic study of human tissues and organs, and a histological comparison between the human and those of other vertebrate organisms. Students submit a paper which deals in detail with the comparative histology of an organ or system of their choice.
Prerequisite: BIO 137 or equivalent.

BIO 251A, 252A **Fall, Spring** **2-4 s.h. each**
Special Topics in Biology
Selected readings on the development of the great areas and philosophies and current literature in selected fields of biology. Oral and written reports at seminar sessions or consultation periods. May be repeated for credit when topics vary. (Formerly 251, 252, Special Topics Seminar.)

BIO 253A **Fall, Spring** **2-4 s.h. each**
Special Topics in Biology
Lectures and seminars on special advanced topics in biology. Emphasis is on subjects of current investigation, the scientific literature, and theoretical and philosophical aspects of research. May be repeated for credit when topics vary. (Formerly 253, Special Topics Seminar.)

BIO 255 **Periodically** **2 s.h.**
Seminar: Current Topics in Cytogenetics
Course covers recent research in cytogenetics. Students are required to read, understand and discuss primary research articles in cytogenetics and are evaluated on the basis of preparation, participation and understanding of the material.
Prerequisite: BIO 212 or BIO 214 or permission of instructor.

BIO 259 **Spring** **4 s.h.**
Electron Microscopy for the Biologist
Principles and practice of basic techniques used in transmission electron microscopy. Lectures discuss theory of the techniques learned in lab. Laboratory consists of instruction in the techniques of fixation and embedding, ultramicrotomy, use of the electron microscope and photography.
Prerequisite: permission of instructor.

BIO 260 **Fall** **2 s.h.**
Electron Microscopic Analysis I
Ultrastructural histology. A detailed analysis of the ultrastructure of the major tissue types in mammalian organisms.
Prerequisite: BIO 133 or 246.

BIO 261 **Spring** **2 s.h.**
Electron Microscopic Analysis II
Ultrastructural pathology and interpretation of micrographs. Guest speakers illustrate and discuss tissue pathology at the ultrastructural level. Problems of interpretation of micrographs are analyzed using published materials as examples.
Prerequisites: BIO 259, 260.

BIO 262 **Periodically** **2 s.h.**
Servicing the Electron Microscope
Lectures by qualified electron microscope servicemen on common service problems. Instruction on dismantling and reassembly procedures associated with routine maintenance.
Prerequisites: BIO 259 and permission of instructor.

BIO 263 **Periodically** **2 s.h.**
Advanced Techniques and Theory of Electron Microscopy
Discussion and illustration of advanced electron microscopic techniques such as autoradiography, shadow-casting, negative staining and freeze-etching. Discussion includes problems of data interpretation.
Prerequisites: BIO 259 and permission of instructor.

BIO 264A **Periodically** **3 s.h.**
Scanning Electron Microscopy
Discussion and instruction in tissue preparation including critical point drying, use and maintenance of the scanning electron microscope. Each student undertakes his or her own project as a requirement of the course.
Prerequisites: BIO 259 and permission of instructor.

BIO 270 **Every other Spring** **3 s.h.**
Physiological Ecology and Functional Morphology of Aquatic Vertebrates
This course covers how fish, aquatic amphibians, reptiles, and birds interact with the environment. The primary focus of the course is fish. It uses an interdisciplinary approach encompassing the areas of anatomy, function, physiology and ecology. Particular attention is given to the way these vertebrate groups overcome problems associated with aquatic life. May not be taken on a Pass/Fail basis.
Prerequisites: BIO 24, 144, 207A, or equivalents, or permission of instructor.

BIO 275 **Spring** **3 s.h.**
Advanced Conservation Biology
This course reviews the basic topics in conservation biology and considers in detail advanced topics. Topics include the origin and measurement of genetic, species and ecosystem biodiversity, ancient and contemporary extinction processes, species and ecosystem management, and the political and economic aspects of biodiversity preservation. Students use computer simulations to compare strategies for managing and restoring endangered species and ecological communities. (2 hours lecture, 1 hour recitation.)
Prerequisites: BIO 1&2. No credit for BIO 275 if BIO 115 is on undergraduate transcript.

BIO 301-302 **Fall, Spring** **3 s.h. each**
Master's Thesis
Laboratory and library research. BIO 302 includes a public oral presentation and examination. Binding fee payable upon registration in 302.
Prerequisite: permission of instructor. Recommend taking BIO 201 prior to or at the same time.

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BIO 303 **Fall, Spring** **3 s.h.**
Master's Essay
Library-based research paper comprising a critical review of scientific literature on a selected topic. The thesis portion is the student's own evaluation of the topic. Course includes a public oral presentation and examination. Binding fee payable upon registration.
Prerequisite: permission of instructor. Recommend taking BIO 201 prior to or at the same time.

BIO 304 **Periodically** **3 s.h.**
Internship in Electron Microscopy
Intensive full-time work in an electron microscope laboratory (at Hofstra or a neighboring institution) to demonstrate the student's ability to function as a professional microscopist.
Prerequisite: admission to the program.

BIO 305A, 305B **Fall, Spring** **1/2 s.h. each**
Graduate Seminar
A broad range of research topics in the biological sciences are discussed in weekly seminars. Presentations are made by invited speakers. May not be taken on a Pass/Fail basis. (Formerly BIO 305.)

BIO 306 **Fall, Spring, Summer** **3 s.h.**
Internship in Cytogenetics
Intensive work (four days/week) in a cytogenetics laboratory at a neighboring institution, to gain expertise in the technical aspects of laboratory cytogenetics including karyotyping, banding, photography and analysis of karyotypes. Students must attend biweekly meetings with faculty adviser at Hofstra in addition to their time at the laboratory site. Students wishing to apply for certification must enroll in 306 for two semesters. Student evaluation is based on meeting participation and evaluation by laboratory supervisor. May not be taken on a Pass/Fail basis.
Prerequisites: BIO 212, 214, 238, and admission to the program.

BIO 307 **Fall, Spring, Summer** **3 s.h.**
Internship in Marine or Freshwater Biology
Intensive work at an institution specializing in marine or freshwater biology to enable the student to develop practical expertise in these fields. Students may choose from a large selection of participating facilities including (but not limited to) a neighboring institution, a museum, or a zoological park/aquarium.
Prerequisite: admission to the concentration.

COMPARATIVE LITERATURE AND LANGUAGES (CLL)

Professor Donahue, Chairperson, 322 Calkins Hall
Professors D'Acierno, Leonard
Associate Professors Lekatsas, Mihailovic
Assistant Professors Berlinerblau, Marchesi, Welch, Zhou
Instructor Naaman

MASTER OF ARTS: COMPARATIVE LITERATURE

See M.A. in Humanities Program, page 58.

LINGUISTICS (LING)

MASTER OF ARTS: APPLIED LINGUISTICS (TESL)

Assistant Professor Greany, Graduate Program Director, (516) 463-5651, cllglg@hofstra.edu

This program is designed to broaden the theoretical and practical base of people involved in all aspects of working with adult or college-level non-native speakers of English including teaching, materials development and publishing or related areas. The program shares a common core of courses with the M.S. in Ed. program leading to primary and secondary school certification in TESL for New York State.

ADMISSION REQUIREMENTS

1. A bachelor's degree from an accredited institution with a background in linguistics and a major in TESL, English, a foreign language, linguistics, reading or other related area;
2. Proficiency in English including reading, writing, and speaking;
3. 12 semester hours of foreign language study including at least 6 hours at the 100-level or equivalent;
4. A letter of recommendation from a college instructor and an interview with the Graduate Program Director;
5. If the student's background shows deficiencies in foreign language study or linguistics, admission will be conditional until deficiencies are made up by taking some undergraduate courses without graduate credit, as specified by the adviser.

GRADUATION REQUIREMENTS

1. The completion of a minimum of 36 semester hours, of which a total of 30 must be taken in the primary courses and linguistic track;
2. Completion of a supervised research project in conjunction with the LING 299 seminar course.
3. A minimum grade point average of 3.0 in overall graduate course work.

PROGRAM REQUIREMENTS *(36 s.h.)*

1. Primary Courses

A. Methodological component, 9 s.h.

CT	266	The Learner in the School, 3 s.h.
SED	267	Teaching English to Adolescent & Adult Speakers of Other Languages, 3 s.h.
READ	239	Psycholinguistic Foundations for Reading & Writing Instruction or, under advisement, LYST 200A, 3 s.h.

B. Linguistic component, 9 s.h.

ENGL	203	Approaches to English Grammar, 3 s.h.
LING	210	Second Language Acquisition, 3 s.h.
SPCH	209	Developmental Psycholinguistics or, under advisement, CT 226, 3 s.h.

2. Applied linguistics track, 12 s.h.

LING	212	Workshop: English Language Program, 3 s.h.
	262	Applied Linguistics, 3 s.h.
	299	Seminar: Applied Linguistics, 3 s.h.
SPAN	213	Development of Social & Psychological Bilingual Trends in the United States, 3 s.h.

3. Recommended electives, 6 s.h., to be chosen under advisement, according to student's interests:

RES	241	Testing & Evaluation of Bilingual Students, 3 s.h.
ELED	246	Methods & Materials for Bilingual Teaching of Reading in a Bicultural Setting, 3 s.h.
	247	Social Studies & Communication Arts for Bilingual/Bicultural Children, 3 s.h.
	248	Methods & Materials for Bilingual Teaching of Mathematics & Science, 3 s.h.
LYST	213	Introduction to Bilingual & Biliteracy Instruction for Children & Adolescents, 3 s.h.
READ	255	Psychological Foundations of Reading & Writing Instruction, 3 s.h.
	256	Psycholinguistics, Sociolinguistics, & the Processes of Reading & Writing, 3 s.h.
SPAN	212	Contrastive Bilingualism, 3 s.h.
	214	Bilingualism in Perspective, 3 s.h.

and appropriate 200-level courses chosen from English, Comparative Literature, French, etc.

(LING) COURSES

LING 210 **Once a year** **3 s.h.**
Second Language Acquisition
Designed to familiarize students with current issues in second language acquisition. The course examines the linguistic, psychological and sociocultural processes that relate to second language acquisition. The relevance of such findings for classroom teachers is explored.

LING 212 **Every other year** **3 s.h.**
Workshop: English Language Program
Field experience in the tutorial component of the English Language Program and classroom observations. Overview of the various methods and materials used in teaching English as a second language to college students.

LING 262 **Every other year** **3 s.h.**
Applied Linguistics
Application of current linguistic theory to problems in the teaching and learning of language. Topics include varieties, contrastive studies, the learner's language, the syllabus and pedagogic grammars, evaluation and testing and computer assisted language instruction.

LING 299 **Every other year** **3 s.h.**
Seminar: Applied Linguistics
Reading and analysis of research literature in applied linguistics. Individual supervised research and discussions of investigations undertaken by students in their areas of specialization.
Prerequisite: 15 s.h. in linguistics or related areas in 200-level courses.

COMPUTER SCIENCE (CSC)

Professor Burghardt, Chairperson, 211 Adams Hall
Associate Professor Pillaipakkamnatt, Graduate Program Director, (516) 463-5560, csckzp@hofstra.edu

Professor Impagliazzo
Associate Professors Barr, Pillaipakkamnatt
Assistant Professors Divakaran, Doboli, Kamberova, Liang, Ostheimer

MASTER OF ARTS: COMPUTER SCIENCE

This program is designed to prepare students for diverse careers in computing, including the design of computer systems and equipment, the development of software to control operations and process information, and the research to satisfy the growing computer needs in all segments of society. New computer application areas are expanding at a rapid pace in all areas including medicine, the media, architecture, engineering and business overall. Businessmen and women, and science professionals, will find electives specifically for their specialties. The program is also intended for computing professionals who wish to advance their careers by staying abreast of state-of-the art techniques for the design, implementation, test and deployment of modern computing systems. The fundamental courses in algorithms and operating systems support the eight elective courses the students are required to complete. The program is targeted to meet the needs of the technical and business-oriented markets we serve with individual programs designed by the student in consultation with an adviser. The eight elective courses provide the needed flexibility. Students are engaged with a project as their capstone experience.

Graduates of this program have found challenging, fulfilling and lucrative positions in varied areas of industry including software manufacturers, communication and networking companies, banks, publishers, stock brokerages, and business consulting. They perform a wide range of tasks including programming, systems and network administration, database administration, systems analysis, and network security analysis.

ADMISSION REQUIREMENTS

1. Completion of a bachelor's degree from an accredited institution,
2. An undergraduate minimum grade-point average of 3.0 on a 4.0 scale, and
3. Achievement in General (verbal, quantitative and analytical writing) GRE scores.

PREREQUISITE REQUIREMENTS

Students may satisfy any or all of the prerequisites listed below by having completed, or enrolling in, these courses or their equivalents at an accredited institution. With the permission of the Graduate Program Director, eligible students may elect to sit for proficiency examinations. Applicants without undergraduate computer science degrees may be admitted as provisionally matriculated students if they meet all admission criteria except for the required prerequisites. They can enroll in graduate courses if they meet individual course prerequisites and satisfy the general requirements before completing 12 semester hours of graduate study. This condition is automatically lifted as soon as the prerequisites or their equivalents are satisfactorily completed.

Discrete Mathematics
Computer Science I
Computer Science II
Algorithms and Data Structures
Computer Organization/Computer Architecture
Operating Systems
Theory of Computing (Formal Languages and Automata Theory)
Calculus II (Integral Calculus and Analytical Geometry)

PROGRAM REQUIREMENTS *(33 s.h.)*

The M.A. in Computer Science requires the satisfactory completion of a 33 semester hour program including 3 required courses (including the project course), and 8 electives. Full-time students can complete the program in four semesters. Part-time students usually complete the program in 6 or 7 semesters. Courses taken in other departments as electives require written departmental approval. At least 27 semester hours must be in graduate computer science courses. Up to 6 semester-hours of graduate courses in areas outside of computer science may be taken with the written approval of the Graduate Program Director. At least 27 semester hours must be completed in residence at Hofstra. A minimum 3.0 average with a grade of C or better in all courses is required.

Required courses, 9 s.h.

CSC	204	Algorithms I: Sorting and Searching, 3 s.h.
CSC	256	Advanced Operating Systems Design, 3 s.h.
CSC	300	Independent Projects, 3 s.h.

Elective courses, 24 s.h.

Choose any graduate level course in computer science or from other graduate programs with written approval.

MASTER OF SCIENCE: COMPUTER SCIENCE

This program is differentiated from the M.A. in Computer Science by the provision for a balance between the three major areas of computer science, namely theory, software and hardware. In addition to the fundamental courses in algorithms and operating systems, this program requires students to select one additional course from each of these three primary areas. Four elective courses allow a student to narrow their specialization into a specific area or subfield in computing. The program thus ensures that students take courses that provide both breadth and depth in computer science courses. The two-semester thesis capstone experience challenges students to expand the frontiers of the discipline. It also provides a path towards a terminal degree (Ph.D. or D.Sc.) in computer science. Students have completed capstone experiences in areas such as data mining, distributed computing, medical imaging, network emulation, archeological artifact assembly, and character recognition.

ADMISSION REQUIREMENTS

1. Completion of a bachelor's degree from an accredited institution,
2. An undergraduate minimum grade-point average of 3.0 on a 4.0 scale, and
3. Achievement in General (verbal, quantitative and analytical writing) GRE scores.

PREREQUISITE REQUIREMENTS

Students may satisfy any or all of the prerequisites listed below by having completed, or enrolling in, these courses or their equivalents at an accredited institution. With the permission of the Graduate Program Director, eligible students may elect to sit for proficiency examinations. Applicants without undergraduate computer science degrees may be admitted as provisionally matriculated students if they meet all admission criteria except for the required prerequisites. They can enroll in graduate courses if they meet individual course prerequisites and satisfy the general requirements before completing 12 semester hours of graduate study. This condition is automatically lifted as soon as the prerequisites or their equivalents are satisfactorily completed.

Discrete Mathematics
Computer Science I
Computer Science II
Algorithms and Data Structures
Computer Organization/Computer Architecture
Operating Systems
Theory of Computing (Formal Languages and Automata Theory)
Calculus II (Integral Calculus and Analytical Geometry)

PROGRAM REQUIREMENTS *(33 s.h.)*

The M.S. in Computer Science requires the satisfactory completion of a 33 semester hour program including 4 required courses (including the thesis courses), 3 breadth courses and 4 electives. Full-time students can complete the program in four semesters. Part-time students usually complete the program in 6 or 7 semesters. Courses taken in other departments as electives require written departmental approval. At least 27 semester hours must be in graduate computer science courses. Up to 6 semester hours of graduate courses in areas outside of computer science may be taken with the written approval of the Graduate Program Director. At least 27 semester hours must be completed in residence at Hofstra. A minimum 3.0 average with a grade of C or better in all courses is required.

Required courses:

CSC	204	Algorithms I: Sorting and Searching, 3 s.h.
CSC	256	Advanced Operating Systems Design, 3 s.h.
CSC	301,302	Thesis, 3 s.h.

Breadth courses: Choose 1 course from each area

Theory:

CSC	201B	Logic Application to Software, 3 s.h.
CSC	202	Computability, 3 s.h.
CSC	205	Algorithms II: Combinatorial Algorithms, 3 s.h.
CSC	206	Analysis of Algorithms and Complexity Theory, 3 s.h.
CSC	207	Advanced Data Structures, 3 s.h.
CSC	208	Formal Languages, Grammars, Automata, 3 s.h.

Software:

CSC	252	Survey of Programming Languages, 3 s.h.
CSC	253	Design of Programming Languages, 3 s.h.
CSC	254	Database Design, 3 s.h.
CSC	258	Compiler Construction, 3 s.h.

Hardware:

CSC	280	Logic Design and Switching Theory, 3 s.h.
CSC	282	Real-Time Systems, 3 s.h.
CSC	284	Computer Communication Networks and Distributed Processing, 3 s.h.
CSC	286	Computer Organization I, 3 s.h.
CSC	287	Computer Organization II, 3 s.h.

Elective courses: 12 semester hours

Choose any graduate level course in computer science or from other graduate programs with written approval.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(CSC) COURSES

CSC 200A **Fall** **6 s.h.**
Themes of Computer Science
Designed as a transition course for those students who wish to do graduate work in computer science but who need additional preparation. Covers such topics as theoretical foundations, logic, induction, scientific models and formal aspects of programming. *Prerequisite: CSC 120. May not be taken on a Pass/Fail basis. No credit toward the M.A. or M.S. degree in Computer Science.*

CSC 201A **Periodically** **3 s.h.**
Mathematical Logic
The propositional calculus: truth tables and axiomatizations. First order theories: completeness theorem, formal number theory, Gödel's incompleteness theorem. Same as MATH 202.
Prerequisite: MATH 145 or CSC 161.

CSC 201B **Every other year** **3 s.h.**
Logic Application to Software
Application of predicate logic and nontruth functional logics to software design and use. Logic programming (PROLOG), database and telecommunications schemata, query analysis, correctness proofs for subroutines, operating system kernels, security. Finite state machines and temporal logic applied to protocol specification.
Prerequisite: CSC 201A or MATH 202.

CSC 202 **Fall, Spring** **3 s.h.**
Computability
Mathematical language of theoretical computer science (sets, n-tuples, relations, functions, languages, predicates, quantifiers, proof methods such as induction, diagonalization and the pigeonhole principle). The equivalence of various models of computation (Church's Thesis): Turing machines, extended Turing machines, nondeterministic Turing machines, the m-recursive functions. Primitive recursive functions, Gödel numbering, the halting problem, other unsolvable problems as time permits. Recursive sets and recursively enumerable sets.
Prerequisite: CSC 161.

CSC 204 **Fall, Spring** **3 s.h.**
Algorithms I: Sorting and Searching
Basic techniques for estimating the efficiency of algorithms. Searching algorithms: sequential, binary, Fibonacci, tree search, tries, hashing (study of several hash functions). Sorting algorithms: heapsort, mergesort, quicksort, binsort. Balanced trees: AVL trees, Hoffman's algorithm. Equivalence relations and compressed balanced trees. Topological sorting. External sorting: merge sorting, multiway merge, B-trees (2-3 trees, 5-way trees).
Prerequisite: CSC 120.

CSC 205 **Once a year** **3 s.h.**
Algorithms II: Combinatorial Algorithms
String and pattern matching algorithms. Maximum flow. Other graph algorithms: spanning trees, shortest path, transitive closure, biconnectivity, strong connectivity, and the like. Fast median algorithm. Fast matrix multiplication. Fast matrix inversion.
Prerequisite: CSC 120.

CSC 206 **Periodically** **3 s.h.**
Analysis of Algorithms and Complexity Theory
Asymptotics, recurrence relations, lower bound theory including comparison trees for sorting and searching. Oracles. Lower bounds on parallel computation. Combinatorial optimization. Branch and bound: Knapsack problem, FFT and applications. Integer and polynomial arithmetic. Analysis of divide and conquer algorithms, dynamic programming, greedy algorithms, backtracking. Nondeterministic algorithms. The classes P and NP. NP completeness. Complexity hierarchy
Prerequisite: CSC 161.

CSC 207 **Fall, Spring** **3 s.h.**
Advanced Data Structures
Managing multiple stacks and queues. Stack series. Permutations obtainable from stacks and queues. Concatenatable queues. Locating repeated substrings: an application of stacks. Stack and queue operation sequences. Set representation methods. The union-find algorithm. Trees: Robson traversal, Lindstrom scanning, Siklossy traversal. Generalized lists. Mergeable heaps. Files as a data structure. Storage compaction. Garbage collection.
Prerequisite: CSC 120.

CSC 208 **Once a year** **3 s.h.**
Formal Languages, Grammars and Automata
Languages, the grammars that generate them and the machines that accept them. Regular languages. Finite automata—deterministic and nondeterministic. Transition functions and state diagrams. Context-free languages and pushdown automata. Context- free grammars and compiler design. Context-sensitive languages and linear-bounded automata. Closure results.
Prerequisite: CSC 161.

CSC 212 **Periodically** **3 s.h.**
Database Design II
Advanced aspects of the IMS data model and data sublanguage. A study of the network database design including the COADASYL DBTG system. A comparative analysis of the relational, hierarchical and network approaches to database design.
Prerequisite: CSC 254.

CSC 214 **Periodically** **3 s.h.**
Computer Modeling
Construction of models for computer simulation of real systems. Application of probability and distribution theory, statistical estimation techniques, Monte Carlo methods. Application of modeling to large-scale political and social systems. Implementation on computer using various simulation languages. Pass/Fail option for non-majors only
Prerequisites: CSC 16, 185. Credit given for this course or CSC 132, not both.

CSC 216 **Periodically** **3 s.h.**
Quantitative Approaches to Decision Making
The role of operations research and management science in the decision-making process integrated with the development and use of computer programs for problem solving. Topics include network analysis, decision theory, inventory models, waiting line models, dynamic programming, Markov processes, and parametric and integer programming.
Prerequisite: CSC 185 or equivalent. No credit toward the M.S. degree in Computer Science.

CSC 252 **Once a year** **3 s.h.**
Survey of Programming Languages
Survey and comparative analysis of high-level languages such as PL/1, FORTRAN, SNOBOL, LISP, APL, Pascal, ALGOL, C, Ada, SETL, with emphasis on special features. Consideration of data types, control structures, storage allocation and other programming language constructs.
Prerequisite: CSC 120. Credit given for this course or CSC 123, not both.

CSC 253. **Once a year** **3 s.h.**
Design of Programming Languages
Topics include: libraries, subroutines, parameter transmission, data abstraction, exception handling, design and implementation of Ada, Simula 67, SETL. Concurrency, input-output, functional programming, dataflow programming languages, VAL, object-oriented programming languages.
Prerequisites: CSC 207, 252 or 123, or both 120 and permission of instructor.

CSC 254 **Once a year** **3 s.h.**
Database Design
Study current methods of information system design. Data independence, data models and sublanguages. An overview of the hierarchal, relational and network approaches to database design. An in-depth study of the relational database design.
Prerequisite: CSC 120.

CSC 256 **Once a year** **3 s.h.**
Advanced Operating Systems Design
Analytical models of operating systems. An examination of the major models that have been used to study operating systems and the computer systems which they manage. Petri nets, dataflow diagrams and other models of parallel behavior are studied. Introduction to the fundamentals of queuing theory.
Prerequisite: CSC 112.

CSC 258 **Once a year** **3 s.h.**
Compiler Construction
Design and implementation of compilers for Pascal and ALGOL type languages. Lexical scanning, symbol tables, BNF grammars, parsing techniques. Error detection and diagnostics. Data representation, data structures, run-time storage organization and dynamic storage allocation. Semantic routines, internal forms, code generation and optimization techniques. Credit given for this course or CSC 124, not both.
Prerequisites: CSC 110, 161.

CSC 259 **Periodically** **2 s.h.**
Compiler Construction Laboratory
Hands-on experience writing and debugging lexical analysis and parsing phases of compilers. Memory management: stacks and heaps. Dataflow analysis, error handling and patching. High performance compilers.
Prerequisite: CSC 258.

CSC 260 **Once a year** **3 s.h.**
Combinatorics and Graph Theory
Study of combinatorial and graphical techniques for complexity analysis including generating functions, recurrence relations, Polya's theory of counting, planar directed and undirected graphs, and NP-complete problems. Applications of the techniques to analysis of algorithms in graph theory, and sorting and searching.
Prerequisite: CSC 205.

CSC 265 **Periodically** **3 s.h.**
Numerical Methods I: Analysis
Floating-point arithmetic. Finite-difference calculus. Polynomial, inverse, spline interpolation. Approximation: least-squares, polynomial, Chebyshev, rational functions. Numerical integration and differentiation. Solution of nonlinear equations. Solution of ordinary differential equations. Same as MATH 265.
Prerequisite: CSC 102 or ENGG 101 or MATH 147.

CSC 267 **Periodically** **3 s.h.**
Numerical Methods II: Linear Algebra
Review of linear algebra. Direct methods for linear equations. Norms, condition numbers, error analysis. Relaxation and iterative methods. Solution of eigenvalue problems. Boundary-value problems and over-determined systems.
Prerequisite: CSC 265.

CSC 269 **Once a year** **3 s.h.**
Computer Graphics
Survey of the hardware, software and techniques used in computer graphics. Three types of graphics hardware: refresh, storage and raster scan. Two-dimensional transformation, clipping, windowing, display files, input devices. Three- dimensional graphics covered as time permits.
Prerequisite: CSC 120.

CSC 270 **Once a year** **3 s.h.**
Artificial Intelligence I
Goals of artificial intelligence, state-space search methods, optimal search, chronological backtracking, dependency-directed backtracking, BLOCKSWORLD, and/or trees and goals, question-answering, production systems, expert system examples, mini-maxing with alpha-beta pruning and game playing. Control paradigms, GPS, geometric analogies, SOUNDEX code, propagating numeric constraints, inductive inference and computer learning, introduction to mechanical theorem proving for the propositional logic.
Prerequisite: CSC 120.

CSC 271 **Once a year** **3 s.h.**
Artificial Intelligence II
Rigorous study of optimal search methods, decomposable and commutative production systems, mechanical theorem proving for the predicate logic, skolem functions, more on computer learning, introduction to LISP, pattern matching, introduction to natural language processing, use of logic in problem-solving and problem representation, readings from the literature.
Prerequisite: CSC 270.

CSC 274 **Periodically** **3 s.h.**
Natural Language Processing
Study of NLP systems such as question-answering systems, dialogue systems, paraphrasing and summarizing systems, etc. Transformational grammars, augmented transition networks, frames, semantics, logic in NLP. The computational applicability of various linguistic frameworks.
Prerequisite: CSC 270.

CSC 275 **Periodically** **3 s.h.**
Pattern Recognition
Feature evaluation, selection and extraction; similarity measures and classifications. Maximum likelihood, minimax procedures. Data structures for recognition. Applications to image and character recognition, chemical analysis, speech and voice recognition, automated medical diagnosis.
Prerequisite: CSC 120.

CSC 276 **Once a year** **3 s.h.**
Robotics
Surveys geometrical, kinematic, dynamic and software issues relating to the design and use of robot manipulators. Motion in three-dimensional space, force sensors, LED sensors, robot programming languages, (e.g., AML) and parts assembly using robots. Experimental research involving robot sensors of various kinds.
Prerequisites: MATH 29, CSC 120.

CSC 278 **Once a year** **3 s.h.**
Expert Systems
Survey of existing expert systems and the principles that underlie them. Production systems, problem-solving systems. Representation of knowledge, including data structures for knowledge representation. Machine learning; reasoning about problems. Programming techniques; introduction to Prolog and LISP languages; expert-system generators.
Prerequisite: CSC 270.

CSC 279 **Once a year** **3 s.h.**
Computer Vision
Surveys the tools used in image formation, mathematical foundations of the Canmar processing method. Segmented images, texture, pattern recognition, matching, inference, 2D and 3D structures, relaxation labelling, enhancements and deblurring.
Prerequisite: CSC 270.

CSC 280 **Once a year** **3 s.h.**
Logic Design and Switching Theory
Review of Boolean algebra and combinatorial circuits. Karnaugh maps. Finite-state transducers. Deterministic and non-deterministic finite-state automata. State minimization, incompletely specified machines, testing sequences. Lattices, regular sets.
Prerequisite: CSC 110.

CSC 282 **Once a year** **3 s.h.**
Real-Time Systems
A comprehensive examination of real-time systems from inception to implementation, focusing on introductory hardware and software concepts, design of applications programs, function and structure of online operating systems, organization of files and databases. Testing of online systems. Basic theory of data transmission and telecommunications access methods.
Prerequisites: CSC 110, 112.

CSC 284 **Once a year** **3 s.h.**
Computer Communication Networks and Distributed Processing
Introduction to data communication. Standard protocols and methods. Detailed study of an existing network (e.g., AR- Panet). Problems, techniques and performance measurements. Problems and methods for distributed processing and distributed databases.
Prerequisite: CSC 112.

CSC 286 **Once a year** **3 s.h.**
Computer Organization I
A comparative analysis of the design and capability of microprocessors, minicomputers and large scale systems. Multiprocessor systems, distributed systems, LSI technology, emulators and microprogramming, high speed buffer storage, parallelisms, pipeline computers. A review of current and future trends in computer design.
Prerequisites: CSC 110, 112.

CSC 287 **Once a year** **3 s.h.**
Computer Organization II
Design and evaluation of computer system models. Modelling languages and simulation. Design automation of digital systems. Memory hierarchies and I/O processing. Highly parallel architectures; array processors. Use of pipelining in computer architectures. High-level-language machines.
Prerequisite: CSC 286.

CSC 290 **Fall, Spring** **3 s.h.**
Seminar: Special Topics
Topics are chosen from areas of current interest such as microprocessors, minicomputers, structured programming, computer resource management, newly released computer systems, new programming languages, heuristic programming, automatic deductive systems, parsing methods, compiler optimization, theory of computability, formal languages and automata. May be repeated when topics vary.
Prerequisite: permission of department.

CSC 300 **Fall, Spring** **3 s.h.**
Independent Projects
Prerequisite: permission of department and the completion of 21 graduate credits. Credit given for this course or CSC 301-302, not both.

CSC 301-302 **Fall, Spring** **3 s.h. each**
Thesis
Advanced project carried out by the student, under supervision of a faculty member. An oral presentation is required as well as a written thesis.
Prerequisite: permission of department and the completion of 21 graduate credits. Credit given for CSC 300 or 301-302, not both.

ENGLISH (ENGL)

Associate Professor Uruburu, Chairperson, 204 Calkins Hall
Professor Klause, Graduate Program Director, (516) 463-6284, engjlk@hofstra.edu

Professors Bryant, Couser, DiGaetani, Klause, Krieg, Levin, Lopate, MacCary, Markus, McLaren, Prigozy
Associate Professors Alter, Berger, Brand, Brogger, Fichtelberg, Harshbarger, Janssen, Levine, Lorsch, Otis, Rustici, Sargent, Sawhney, L. Zimmerman, S. Zimmerman
Assistant Professors Baron, Fizer, McPhee, Sills, Smith, Sulcer, Jr., Torpey

The English department offers a full range of courses in literature, creative writing, expository writing, and publishing. The department also offers tutorial services through the Writing Center, see page 413.

MASTER OF ARTS: ENGLISH

This program, scheduled in late afternoons and evenings Monday through Thursday, requires the completion of 33 credits as outlined below. It is possible, on a limited basis, to elect a tutorial in a subject not available in regular offerings. Candidates will be expected to complete their studies within five years. Applicants must present evidence of successful completion of an undergraduate major in English or receive special permission from the director of the program. They must also have an average grade of B or better for undergraduate courses in English or a satisfactory score on the GRE.

ADMISSION REQUIREMENTS

1. Successful completion of a baccalaureate degree from an accredited university with an overall GPA of at least 3.0
2. Grade of B or better in 24 credits of upper-division English courses in literature

Applicants who do not meet these academic standards are invited to apply, but they may be asked to complete additional undergraduate coursework in English. They may also be asked to submit a) satisfactory scores on the GRE, b) a personal statement explaining the student's rationale for pursuing advanced literary study, and c) a recent writing sample demonstrating a clear ability to analyze a literary text.

PROGRAM REQUIREMENTS *(33 s.h.)*

I Required courses, 9 s.h.

3 s.h. in Research Methods*
3 s.h. in Critical Theory*
3 s.h. in Shakespeare or Milton
(*Research Methods and Critical Theory ought ideally to be completed during a student's first year in the program.)

II Distribution Requirements, 9 s.h.**

6 s.h. (or two courses) in pre-1800 British or American Literature
3 s.h. (or one course) in pre-1900 British or American Literature
(**One, and only one, of these distribution requirements may be satisfied with a course in American Literature.)

III Electives, 15 s.h.

200-level courses in English and/or American Literature. (Under advisement, certain courses in comparative literature, history or humanities may be accepted. No more than 3 s.h. of courses in Creative Writing may count towards the M.A. in English. Students are encouraged to complete a 3-credit Master's Essay (ENGL 301), which will count in this category.)

MASTER OF ARTS: ENGLISH AND CREATIVE WRITING

This program, scheduled in late afternoons and evenings, Monday through Thursday, offers students the opportunity to earn an M.A. through the completion of 33 credits of course work in both English and American literature and creative writing. Candidates will be expected to complete their studies within five years. Applicants must show a grade of B or better in 15 credits of upper-division English courses in literature. Applicants who do not meet these academic standards may still apply but are asked to submit satisfactory scores on the GRE, a personal statement, and a recent writing sample demonstrating a clear ability to analyze a literary text. In addition, all applicants must submit a portfolio of approximately 30 pages of recent creative work to be evaluated by the creative writing faculty.

PROGRAM REQUIREMENTS *(33 s.h.)*

33 s.h. distributed as follows:

1. At least 18 s.h. in 200-level literature courses. At least 6 credits must be in courses that deal in literature written before 1900.
2. At least 9 s.h. of 200-level creative writing workshops or tutorials.
3. At least 3 s.h. earned by the completion of an extended creative writing project under the guidance of an adviser.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(ENGL) COURSES

ENGL 200 Every other year 3 s.h.
The Analysis of Prose
Investigation of the way in which written prose conveys meaning, generally, and of the relation between style and meaning, specifically. Consideration of stylistic features, such as diction, syntax, figures of speech and sound patterns; of rhetorical issues, such as speaker, audience, topic and tone; and of various conventions of reading. Emphasis on nonfiction, with consideration of texts from various fields of discourse and from various periods.

ENGL 201 Every other year 3 s.h.
Rhetoric
The main issues and developments in the formal study of rhetoric from antiquity to the present, with emphasis on the applicability of formal rhetoric to the theory and practice of writing in various circumstances.

ENGL 203 Every other year 3 s.h.
Approaches to English Grammar
A thorough investigation of grammatical principles with a comparison of traditional, structural and transformational approaches. Consideration of the purposes of language study and practical applications of grammatical knowledge in teaching students to write.

ENGL 210 Every other Fall 3 s.h
20th-Century American Fiction
Major novelists such as Dreiser, Wharton, Hemingway, Fitzgerald, Faulkner and Bellow will be studied, with major criticism of the American novel.

ENGL 240 Every other year 3 s.h.
Poetry Writing Workshop
A graduate-level workshop in the writing of poetry. In addition to writing their own poetry and discussing their poetry with the instructor and other members of the workshop, students read and discuss what poets have written about writing poetry. They also read and discuss poems in connection with the study of meter and other formal structures, the connection of poetry to music, and the distinction between poetry and other literary genres.

ENGL 241 Every other year 3 s.h.
Fiction Writing Workshop
A graduate-level workshop in the writing of fiction. In addition to writing their own fiction and discussing their work with the instructor and other members of the workshop, students read and discuss what fiction writers have written about writing fiction. They also read and discuss works of fiction in connection with the study of narrative voice, theme, plot, pacing, setting, character development, and the creation of convincing and/or coherent fictional and psychological worlds.

ENGL 242 Every other year 3 s.h.
Playwriting Workshop
A graduate-level workshop in playwriting. In addition to writing their own plays and discussing their work with the instructor and other members of the workshop, students read and discuss what playwrights have written about writing plays. They also read and discuss plays in connection with the study of plot, dramatic action, characterization, setting, dialogue, spectacle, and imagery.

ENGL 243 Every other year 3 s.h.
Personal Essay Writing Workshop
A graduate-level workshop in the writing of personal essays. In addition to writing their own essays and discussing their essays with the instructor and other members of the workshop, students read and discuss what essayists have written about the theory and practice of the personal essay. They also read personal essays in connection with the study of the characteristic topics, strategies, and formal issues associated with the genre. Some attention is also paid to the historical development of the personal essay and to the way in which the conventions of the form differ in different cultures.

ENGL 250 Periodically 1-3 s.h.
Readings in English
Designed to permit students to pursue an individualized plan of study in subject areas of interest under the guidance of a member of the English faculty. Students prepare a list of assignments in consultation with their tutor with whom they confer periodically about the progress of their work. Limited to students who have been accepted for a reading course by a member of the department and approved by the department chairperson before registration.

ENGL 261 Every other Spring 3 s.h.
The American Renaissance, 1820-1860
Studies of such writers as Cooper, Hawthorne, Melville, Emerson, Thoreau, Whitman.

ENGL 271A, 271B 271A: Every other Fall 3 s.h. each
271B: Every other Spring
Sources of the English Literary Tradition I, II: Studies in Chaucer, Spenser and Their Contemporaries
Preseventeenth-century English literature with emphasis on the traditions and conventions it makes use of, the parent forms of genres and modes, the history of philosophical and literary problems. First semester: Chaucer and his contemporaries; second semester: Spenser and his contemporaries.

ENGL 272 **Every other Fall** **3 s.h.**
Sources of the English Literary Tradition III: 17th- and 18th-Century English Literature
Major works of major authors including Donne, Marvell, Defoe, Swift, Pope, Johnson and Wordsworth with emphasis on changing historical concepts of wit, nature and literary form. Some attention to precedents for American as well as later English literature.

ENGL 274 **Every other year** **3 s.h.**
Sources of the American Literary Tradition
Investigation of the assimilation of various sources, extending back to earlier centuries, by a particular group or groups of 19th-century American writers.

ENGL 284 **Periodically** **2 s.h.**
Workshop: Poetry Writing*
Discussion includes contemporary poets.

ENGL 286 **Periodically** **2 s.h.**
Workshop: Short Fiction Writing*
Discussion includes matters relating to the manuscript as well as with general problems of the craft.

ENGL 287 **Periodically** **2 s.h.**
Workshop: Children's Fiction Writing*
Discussion includes techniques and themes in contemporary examples of children's fiction.

ENGL 288 **Periodically** **2 s.h.**
Workshop: Writing in Varieties of Nonfiction*
Discussion of techniques used in a wide range of nonfiction writing including journalistic columns, the familiar essay, interviews, magazine articles, drama and book reviews.

ENGL 289 **Periodically** **2 s.h.**
Workshop: Writing for Stage, Screen and Television*
Discussion includes techniques used in contemporary scripts for theater, film and television.

ENGL 291, 292, 293, 294, A-Z
Fall, Spring **3 s.h. each**
Special Studies
Studies in periods, major figures, literary genres or modes. Subjects to be announced yearly.

English 291U **Once a year** **3 s.h.**
Shakespeare
An examination of Shakespeare's achievements in a range of genres, such as lyric, narrative poetry, comedy, tragedy, history, and romance. Consideration of social, political, religious, and aesthetic developments reflected or addressed in Shakespeare's poetry and drama. Attention is given to conditions of textual and theatrical production.

English 291V **Once a year** **3 s.h.**
Milton
An examination of Milton's career as poet, revolutionary, and statesman. Attention given to Milton's considerable literary achievement in a range of poetic forms--among them the sonnet, ode, elegy, masque, epic, and tragedy--and to his formulations, in both poetry and prose, about social, political, and religious matters that are central to his period.

English 294U **Once a year** **3 s.h.**
Critical Theory
A study of the main concerns and practices in classical, modern, and contemporary critical theory. Readings include key works by classical, formalist, Marxist, feminist, psychoanalytical, structuralist, post-structuralist and gender theorists, including attention to foundational works by Plato, Aristotle, Marx, Nietzsche, Freud, de Saussure, etc.

ENGL 299 **Every other Fall** **3 s.h.**
Research Methods
Exercise in the finding and use of scholarly and critical materials. Open only to students enrolled in the M.A. program except by permission of the chairperson of the department.

ENGL 301 **Fall** **3 s.h.**
Master's Essay
Tutorial instruction leading to the completion of the essay, which is one of two optional requirements for the M.A. in English.
Prerequisites: ENGL 271A, 271B, 299.

ENGL 305 **Fall, Spring** **3 s.h.**
Qualifying Papers
Tutorial guidance in mastering a large area of specialization, chosen by the candidate, under advisement, for six qualifying papers in examination situations, one of two optional requirements for the M.A. in English.

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*Summer Writer's Conference designed to help developing writers sharpen their powers of expression including reading and discussion of student's work, and analysis of themes and techniques. *Prerequisite: ENGL 133 or permission of the Director of the Conference.*

FINE ARTS, ART HISTORY AND HUMANITIES (FA/AH/HUM)

Professor Infield, Chairperson, 118 Calkins Hall
Professor Cohen, Fendrich, Hilson, Masheck
Associate Professors Chaleff, Devine, Jaffe, Klinkowstein, Lindgren
Assistant Professor Naymark, Ocko, Roskin

HUMANITIES (HUM)

MASTER OF ARTS: HUMANITIES *(33 s.h.)*

Associate Professor Lekatsas, Graduate Program Director, (516) 463-6553, cllbpl@hofstra.edu

The Master of Arts in Humanities is a cooperative program offered by the Department of Fine Arts, Art History and Humanities and the Department of Comparative Literature and Languages, which also utilizes the faculty expertise and course offerings of the departments of English, including American Literature and Creative Writing; History; Music; Philosophy; Sociology and Anthropology; as well as other disciplines of interest to the student. The program offers a unique opportunity to students interested in interdisciplinary studies. It is particularly rich in courses—notably in HUM 231-234 Interdisciplinary Studies series—that explore the relationship between the arts and literature, as well as the philosophical and historical movements and theories that shaped them. A research resource available to students who want to embark on cutting-edge scholarship in this area is the internationally recognized Weingrow Collection of Avant-Garde Art and Literature (artists' books, foundation documents, first editions, periodicals, manuscripts, catalogues, objects, prints documenting the major art movements of the twentieth century). Students, as well as teachers, requiring an advanced degree in the liberal arts within a comparative context in the Humanities would be good candidates for this program.

Admission requirements appear on page 9. (Admission only with permission of the Graduate Program Director.) The candidate must complete 33 semester hours of courses numbered 200 or above, of which at least 27 semester hours must be completed at the University, as follows:

I Required Courses, 18 s.h.

HUM 203 Philosophy of Criticism, 3 s.h.
301 Master's Essay, 3 s.h.

6 s.h. chosen from HUM 231-234 series: Interdisciplinary Studies in the Humanities

6 additional s.h. of 200-level HUM courses

II Elective Courses, 15 s.h.

14 s.h. of additional 200-level courses from departments in the Hofstra College of Liberal Arts and Sciences, chosen under advisement, with at most 6 s.h. in Fine Arts and at most 6 s.h. in internships.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(HUM) COURSES

HUM 201 **Periodically** **3 s.h.**
Renaissance Art and Culture
Painting, sculpture and architecture from the late medieval to the Mannerist style, examined in the context of contemporary European culture during the passage from feudalism to capitalism. Religious, philosophical and literary elements in the formation of humanism; artistic diffusion and provincialism; the problem of Mannerism. (Formerly Arts of the Early Renaissance.)

HUM 202 **Periodically** **3 s.h.**
Baroque Art and Culture
Painting, sculpture and architecture from about 1600 to the later eighteenth century, in the context of contemporary European culture. Classical and anticlassical currents of the Baroque, the Rococo and the Enlightenment in religious, philosophical, literary and musical, as well as artistic manifestations. (Formerly Arts of the High Renaissance and Baroque.)

HUM 203 **Spring** **3 s.h.**
Philosophy of Criticism
Problems of significance and value in art and culture; aesthetic and critical inquiry in theory and analytical practice. The course, which takes varying interdisciplinary emphasis is conducted in the form of a colloquium in which significant texts bearing on some principal theme are read and discussed in common, with individual reports. Required of all candidates for the M.A. in Humanities (open to other qualified students with the permission of the humanities Graduate Program Director).

HUM 207 **Periodically** **3 s.h.**
Art of the 19th Century
A survey, mainly of painting, through the main period-styles of neoclassicism, romanticism, realism, naturalism, impressionism and postimpressionism, with attention to parallel developments in contemporary culture and society. Emphasis on French, Spanish, English, and German art, with some attention to graphics (drawing; early lithography and photography).

HUM 208 **Periodically** **3 s.h.**
Art of the 20th Century
A conceptual as well as stylistic overview of the major movements in painting, especially in Europe, since the avant-garde challenges to academic representation of the later 19th century. The formative role of French art and the emergence of rival centers; a crisis of abstraction and figuration between the World Wars; postwar rivalry with America; conceptualism; neo-expressionism; the lingering problem of modernism.

HUM 210 **Periodically** **3 s.h.**
Studies in American Art and Culture Since 1900
Interrelationships between literature and the visual arts in the United States. Representative works of major writers and artists are analyzed against the background of the attitudes, tastes and values of American society. (Formerly Art in America, 1900 to the Present.)

HUM 230 **Periodically** **3 s.h.**
Modern Photography
The development of photography with emphasis on style. Consideration is given to the interrelationships of photography with the visual arts, film and television—thus: aesthetic affiliations of photography with the other arts. Some direct scrutiny, as far as practicable, of original prints in the Hofstra Museum collection. (Formerly, 20th-Century Photography in America.)

HUM 231, 232 **Fall** **3 s.h. each**
233, 234 **Spring**
Interdisciplinary Studies in the Humanities
Analysis of style, significance and milieu in the various arts. While the program seeks to produce a cycle of related general themes, the content of these courses may vary from year to year. 231: antiquity and the classical tradition; 232: alternative traditions (e.g., Germanic expressionism); 233: Modernism and postmodernism; 234: modern architecture and design. May be repeated for credit when topics vary.

HUM 251 **Fall, Spring** **3 s.h.**
Readings
In consultation and under the guidance of a faculty member, students prepare a list of readings on themes in humanities. Students and faculty periodically review readings and research. Limited to those who have attended at least one semester as a matriculated student in the M.A. in Humanities program. Permission of the humanities Graduate Program Director required.

HUM 268 **Fall, Spring** **6 s.h.**
Internship
Open only to students in the M.A. in Humanities program able to arrange for supervision of work substantially relevant to their studies at a museum, library, art gallery, journal or other appropriate institutional site. Permission of the humanities Graduate Program Director as well as of the sponsoring supervisor is required. The student produces a written report (not a diary or notebook) on the academic significance of his or her activities for evaluation by the sponsor. Pass/Fail grade only.

HUM 301 **Fall, Spring** **3 s.h.**
Master's Essay
Each candidate for the M.A. in Humanities is required to write a substantial master's essay (in addition to course papers) under the supervision of an appropriate adviser. This may consist of a fresh approach to known material, provided the same thoroughness of scholarship and scholarly presentation obtain as for a more traditional research thesis.

MATHEMATICS (MATH)

Professor Weiss, Chairperson, 109 Adams Hall
Associate Professor Seabold, Graduate Program Director, (516) 463-5569, matdds@hofstra.edu

Professors Grassi, Greenwell, Ostling, Hastings, Waner, Wu
Associate Professors Akbik, Bhargava, Elston, Eswarathasan, Michaels, Seabold
Assistant Professors Cole, Ismailescu, Silberger, Warner

MASTER OF ARTS: MATHEMATICS

The Master of Arts program accommodates students interested in a broad spectrum of mathematics and its applications, as well as the natural sciences, mathematical components of the social sciences, and mathematics education. Many graduates of this program teach in high school and college or pursue doctoral degrees. Students may attend part-time or full-time.

ADMISSION REQUIREMENTS

Applicants must have a bachelor's degree with a strong background in mathematics, including Linear Algebra (MATH 135A), Advanced Calculus (MATH 171), and at least two additional courses in advanced mathematics. Motivated students who have taken fewer mathematics courses will be considered for provisional admission.

PROGRAM REQUIREMENTS *(30 s.h.)*

The M.A. in Mathematics requires 30 semester hours of graduate courses, of which at least 18 hours must be in mathematics. The remaining 12 hours may be taken in mathematics or, with the Graduate Program Director's permission, in biology, computer science, business, education, or other appropriate disciplines. Mathematics courses must include:

1. Linear Algebra (Math 211) and Analysis I (Math 221);
2. at least two courses chosen from Mathematical Logic (Math 202), Topology (Math 203), Complex Analysis (Math 223), Probability (Math 241), and Ordinary Differential Equations (Math 261); and
3. at least one course chosen from Applied Algebra (Math 212), Analysis II (Math 222), Statistics (Math 242), Partial Differential Equations (Math 262), and Optimal Control Theory (Math 267).

Students must also complete an oral comprehensive examination or a master's thesis, the latter requiring approval of two departmental readers and an oral defense.

MASTER OF SCIENCE: APPLIED MATHEMATICS

The Master of Science meets the needs of students seeking to initiate or enhance a career in applied mathematics in industry. This program also prepares students for Ph.D. study. Students may attend part-time or full-time.

ADMISSION REQUIREMENTS

Applicants must have a bachelor's degree with a strong background in mathematics, including Linear Algebra (MATH 135A), Advanced Calculus (MATH 171), and Differential Equations (Math 131). Motivated students who have taken fewer mathematics courses will be considered for provisional admission.

PROGRAM REQUIREMENTS *(33 s.h.)*

The M.S. in Applied Mathematics requires 33 semester hours of graduate courses, of which at least 24 hours must be in mathematics. The remaining 9 hours may be taken in mathematics or, with the Graduate Program Director's permission, in biology, computer science, economics, finance, or other appropriate disciplines. Mathematics courses taken must include:

1. Linear Algebra (Math 221), Analysis I (Math 221), Probability (Math 241), and Ordinary Differential Equations (Math 261);
2. at least one course chosen from Applied Algebra (Math 212), Analysis II (Math 222), and Statistics (Math 242); and
3. at least one course chosen from Complex Analysis (Math 223), Partial Differential Equations (Math 262), and Optimal Control Theory (Math 267).

Students must complete a master's thesis, which requires approval of two departmental readers and an oral defense. In addition, students must take a course in computer programming or demonstrate equivalent proficiency.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(MATH) COURSES

MATH 202 **Periodically** **3 s.h.**
Mathematical Logic
The propositional calculus: truth tables and axiomatizations. First order theories: completeness theorem, formal number theory, Gödel incompleteness theorem. Same as CSC 201A.
Prerequisite: MATH 145.

MATH 203 **Periodically** **3 s.h.**
Topology
Topological spaces, convergence and completeness, separation axioms, homeomorphisms, metric spaces, compactness.
Prerequisite: MATH 172 or permission of instructor.

MATH 211 **Every other year** **3 s.h.**
Linear Algebra
Review of matrices and linear equations, solution of linear equations, applications, vector spaces and linear transformations, eigenvalues and geometry, canonical forms, linear machines.
Prerequisites: MATH 131, 135A.

MATH 212 **Every other year** **3 s.h.**
Applied Algebra
Finite state machines, relations and graphs, rings and Boolean algebras with applications, semigroups, groups and coding theory, linear machines, finite fields and algebraic coding theory.
Prerequisite: MATH 211.

MATH 221, 222 **Every other year** **3 s.h. each**
Analysis I, II
Analysis of functions of one and several variables with an introduction to functional analysis. 221: Euclidean space, differentiation and integration, vectorvalued functions of several variables and applicable integration techniques. 222: Hilbert spaces, linear and convex programming, linear operators and semigroups, introduction to optimal control theory.
Prerequisites: MATH 131, 135A, 171.

MATH 223 **Periodically** **3 s.h.**
Complex Analysis
Formal power series, analytic functions, analytic continuation, complex integration and applications to evaluation of integrals, conformal mappings, flows and boundary conditions, polynomials and finding zeros.
Prerequisite: MATH 171 or permission of instructor.

MATH 241 **Every other year** **3 s.h.**
Probability
Graduate introduction to the basic concepts of probability theory aimed towards later applications. Review of needed set theory, counting principles, discrete and continuous probability, random variables, expectations, moment generating functions, distributions, central limit theorem.
Prerequisites: MATH 131, 135A, 171.

MATH 242 **Every other year** **3 s.h.**
Statistics
Applications of probability theory, inference, Bayesian techniques, hypothesis testing, regression, design of experiments, robustness, computer programs and packages, applications tailored to student interest.
Prerequisites: MATH 241, or 131, 135A, 137 & 138 and 171.

MATH 251 & 252 **251: Fall; 252: Spring** **1-4 s.h. each**
Independent Reading
Independent study course, under the guidance of a member of the department.

MATH 254 **Periodically** **3 s.h.**
Seminar
Introduction to the literature of mathematical research.
Prerequisite: consent of department.

MATH 261 **Every other year** **3 s.h.**
Ordinary Differential Equations
Solutions to first and second-order equations, linear differential equations, transforms, systems, stability. Emphasis on interplay between theory and numerical methods.
Prerequisites: MATH 131, 135A, 171.

MATH 262 **Every other year** **3 s.h.**
Partial Differential Equations
Existence of solutions, basic techniques, Hilbert space and transform techniques, classification of equations, the Cauchy and Dirichlet problems, properties of solutions.
Prerequisite: MATH 261 or permission of instructor.

MATH 265 **Periodically** **3 s.h.**
Numerical Methods I: Analysis
Floating-point arithmetic. Finite-difference calculus. Polynomial, inverse, spline interpolation. Approximation: least- squares, polynomial, Chebyshev, rational functions. Numerical integration and differentiation. Solution of nonlinear equations. Solution of ordinary differential equations. Same as CSC 265.
Prerequisite: CSC 102 or ENGG 101 or MATH 147.

MATH 267 **Every other year** **3 s.h.**
Optimal Control Theory
Discussion of the maximum principle, maximum principle for nonautonomous systems, fixed time problems, system of variational equations and adjoining systems, linear time optimal processes, maximum principle and calculus of variations. Problems of Lagrange, optimal processes with restricted phase coordinates.
Prerequisite: MATH 261.

MATH 271, 272 **Every other year** **3 s.h. each**
Mathematical Models in the Natural Sciences
271: types of models, differential and difference equations as models: population growth models, linear systems and matrix models, Markov models. 272: random-walk and diffusion models, analytic versus simulation models; statistical hypothesis testing; selected topics from the literature.
Prerequisites: MATH 131, 171 and ability to program in BASIC, FORTRAN or PL/1.

Note: courses numbered 280-288 carry no credit toward the M.A. in Mathematics.

MATH 280, A-Z **Once a year** **1-3 s.h. each**
Workshop: Pre-College Mathematics
Intended for middle and secondary school teachers with a desire to strengthen their command of current and emerging mathematics curricula, for example, as put forward in the National Council of Teachers of Mathematics Standards. Topics taken from probability and statistics, number theory, geometry and graph theory, discrete mathematics, problem solving, the human dimension in mathematics, mathematics through computers, mathematical systems and the mathematics of change.
Prerequisite: permission of department. No credit toward M.A. in Mathematics or M.S. in Applied Mathematics. As individual subjects are selected, each is assigned a letter (A-Z) and added to the course number. Any course may be taken a number of times so long as there is a different letter designation each time it is taken. (Formerly 280, Workshop: Integrated Mathematics Sequence.)

MATH 285 **Once a year** **1 s.h.**
History of Ancient and Medieval Mathematics
Mathematics from the dawning of human intelligence through the discoveries of the Renaissance. Designed for participants in a Hofstra teacher enhancement program or by permission of department. No credit toward M.A. in Mathematics or M.S. in Applied Mathematics.

MATH 286 **Once a year** **2 s.h.**
Development of Modern Mathematics
Mathematics from the 17th century to modern times. Applications to the classroom. Designed for participants in a Hofstra teacher enhancement program or by permission of department. No credit toward M.A. in Mathematics or M.S. in Applied Mathematics.

MATH 287 **Once a year** **3 s.h.**
Problem Solving Through Computers and Calculators
Problem-solving heuristics, estimation, discovery and pattern recognition via programming languages (e.g., BASIC, Pascal and Logo), spreadsheets, interactive software and hand-held calculators. Applications to the classroom. Designed for participants in a Hofstra teacher enhancement program or by permission of department. No credit toward M.A. in Mathematics or M.S. in Applied Mathematics. (Formerly Problem Solving Through Pascal.)

MATH 288 **Once a year** **3 s.h.**
Finite Mathematics and the Computer
Finite mathematical bases of computing including binary arithmetic, elementary combinatorics, etc. A calculus based probability and statistics segment in which students write programs in Pascal and are introduced to statistics software. Monte Carlo methods random number generating algorithms, regression. Applications to the secondary school classroom. Open only to participants of the Teacher Training Institute or by permission of department chairperson. No credit toward M.A. in Mathematics.
Prerequisites: MATH 287 or knowledge of Pascal and departmental permission.

MATH 298, 299, A-Z **Periodically** **2 or 3 s.h. each**
Advanced Topics
Subjects to be announced. Prerequisite: MATH 172 or permission of instructor. As individual subjects are selected, each is assigned a letter (A-Z) and added to the course number. Any course may be taken a number of times so long as there is a different letter designation each time it is taken.

MATH 301 **3 s.h**
Master's Thesis

PSYCHOLOGY (PSY)

Professor Kassinove, Chairperson, 202 Hauser Hall
Professors Kaplan, Levinthal, Metlay, Motta, O'Brien, Paul, Sanderson, Schare, Valenti
Associate Professors Barnes, Blaine, Cox, Dill, Guarnaccia, Johnson, Meller, Ohr, Serper, Shahani-Denning, Tsytsarev
Assistant Professors, Brown, Carter, Chaiken, Shapiro, Theodore

MASTER OF ARTS: INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

Professor Metlay, Graduate Program Co-Director, (516) 463-6344, psywzm@hofstra.edu
Associate Professor Shahani-Denning, Graduate Program Co-Director, (516) 463-6343, psyczs@hofstra.edu

This program prepares students for careers in such areas as human resources, training, management, and organizational development, in which they can apply psychological principles to problems that arise in a wide variety of organizational settings. It is also designed to enhance the careers of professionals who work in these areas by teaching them to apply psychology to issues that develop in their organizations. Research design, statistics, and psychology provide the foundation for advanced study in selection, training, performance appraisal, worker motivation, and organization development. The curriculum is strengthened by an internship sequence which provides on-site supervised experience working on applied projects in business and public agencies. The 44-credit program can be completed in two years by full-time students, and in three years by part-time students. Courses are offered in the late afternoon and evening to accommodate part-time students. Hofstra University's master's program in Industrial/Organizational Psychology is the only such graduate program on Long Island.

The types of work that holders of applied master's degrees in industrial/organizational psychology perform include employee selection, management development, survey research, training, organizational development, performance appraisal, career development and program evaluation. They are employed in industry, government, hospitals, social service and mental health agencies, advertising, and marketing research. Their titles include specialist, manager, director, and consultant, as in Training and Evaluation Specialist, Industrial Relations Manager, Director of Human Resources, and Organizational Development Consultant.

The program is designed to serve students and organizations in the geographic area centering on Long Island, New York. This region is endowed with many businesses, industries, public agencies, and nonprofit organizations which are undergoing complex change. Facilitating such change requires the services of professionals who are trained in the application of psychological principles to organizational problems. The M.A. program invites students from diverse backgrounds and those with work experience after graduation from college.

ADMISSION REQUIREMENTS

1. Bachelor's degree (or equivalent) in psychology, business, or a related field with a GPA of B or better.
2. Completion of courses in introductory psychology and elementary statistics with a grade of B or better.
3. Scores of no less than 500 on the Verbal and 500 on the Quantitative sections of the GRE .
4. Written statement of professional goals.
5. All prospective candidates will be personally interviewed.

PROGRAM REQUIREMENTS *(44 s.h.)*

The M.A. in Industrial/Organizational Psychology comprises 15 courses totaling 44 semester hours. It is designed to be completed in four semesters by full-time students. Part-time students would be expected to complete the program in three years. No more than six transfer credits are accepted toward the degree.

Required courses: 17 semester hours

PSY	201	Graduate Statistics I, 3 s.h.
	203	Research Design I, 4 s.h.
	283A	Foundations of Industrial/Organizational Psychology I: Industrial Psychology, 3 s.h.
	283B	Foundations of Industrial/Organizational Psychology II: Organizational Psychology, 3 s.h.
	290	Internship in Industrial/Organizational Psychology, 3 s.h.
	341	Ethics & Professional Practices in Psychology, 1 s.h.

At least six semester hours of general psychology electives must be chosen from the following:

PSY	207	Cognition & Perception, 3 s.h.
	208	Learning Theory, 3 s.h.
	249	Current Theory & Research in Social Psychology, 3 s.h.
	288	Motivation, 3 s.h.
	289	Small Group Behavior, 3 s.h.

At least six semester hours of industrial/organizational psychology electives must be chosen from the following:

PSY	217	Organizational Development, 3 s.h.
	218	Applied Behavior Analysis in Industry, 3 s.h.
	219	Organizational Psychology: Leadership, 3 s.h.
	284	Personnel Selection, 3 s.h.
	286	Measurement of Work Performance, 3 s.h.
	287	Training & Development, 3 s.h.

Twelve additional semester hours of electives must be taken from the psychology courses listed above or from other graduate programs with written approval. The remaining three semester hours are earned either by completing an additional internship course, PSY 291, or by the completion of a Master's Essay, PSY 301. All electives must be selected under advisement.

A qualifying examination must be taken and passed upon completion of 25 semester hours in the program. This examination is given in June and August of each year. Students may have two opportunities to pass the qualifying examination. In addition, students must maintain a B average with no more than one C per semester, or more than two C's toward the M.A. Students who do not meet these requirements will be placed on probation.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

DOCTORAL PROGRAMS

The Psychology Department offers two doctoral programs: one leading to the degree of Doctor of Philosophy in Combined Clinical and School Psychology, and a Doctor of Psychology degree in School-Community Psychology.

The programs are designed to develop psychologists who have a strong background in psychological theory and empirically based knowledge, competence in the skill sets needed for professional practice, and the ability to evaluate and conduct research.

The first two years of the programs provide a foundation of knowledge in psychology so that students may grow, through study and experience, to think scientifically and to develop professional competence. The theoretical course material and the practicum and internship experiences are designed to enhance awareness of the needs and problems encountered in a variety of settings and to stimulate students to originate research in these areas.

The programs have been carefully designed to provide basic knowledge and practicum experience as a foundation for more advanced knowledge and practice. For this reason, courses must be taken in sequence.

At the end of the third year, students in the Clinical and School, and School-Community programs who are U.S. citizens are eligible to apply for the certificate of qualification in school psychology through the New York State Education Department.

Each student is evaluated at the end of the first, second and third year based upon the following criteria:

1. Mastery of knowledge in psychology;
2. Competence in the skill sets needed to function as professionals;
3. Development of skills to evaluate and conduct research;
4. Ethical behavior and personal adjustment.

The evaluation is based on grades and recommendations of the faculty of the program and field supervisors. The results of the evaluation are presented to each student. Students must obtain satisfactory ratings on all of these criteria to continue in the program. To proceed beyond the first year, students must pass the qualifying examination and obtain the master's degree. During the second semester of the third year (Psy.D.) or first semester of the fourth year (Ph.D.), the student is expected to present an acceptable outline of a dissertation proposal to the faculty for approval in order to continue in the program.

An integral part of the programs involves field internships and practica at a variety of locations under professional supervision. The importance of other educational experiences, including both theoretical and applied course work, and the dissertation are kept in balance by permitting no more than 15 s.h. of credit to be accumulated through internship courses. All students in the doctoral programs are expected to abide by the APA Code of Ethics.

Note: Professional Liability Insurance for doctoral candidates: all doctoral candidates in professional psychology are strongly recommended to purchase American Psychological Association sponsored Professional Liability Insurance. This provides coverage while performing professional duties as a psychologist in training. Such coverage should be obtained at the very beginning of training. For information, contact the Director of the doctoral program in which you are enrolled, or apply directly through the American Psychological Association.

PH.D.: COMBINED CLINICAL AND SCHOOL PSYCHOLOGY

Professor Schare, Graduate Program Director, (516) 463-5009, psymls@hofstra.edu

This program prepares professional psychologists for work in mental health centers, hospitals and independent private practice, public schools and special educational facilities, and for university based research careers. Focus is placed on developing skills in psychological testing and assessment, psychotherapy, and research methods.

The program is based upon cognitive-behavioral theory and practice. This represents the full spectrum of thought, from operant and classically based models through social learning and cognitive-emotive models. It includes training in cognitive and behavior therapy. A program of colloquia adds to knowledge received through lecture, readings and classroom discussion. Students receive experience and supervision in psychodiagnostic methods, in interviewing and relationship skills, and in psychotherapy with children and adults, both individually and in groups. In practica and internship experiences students are exposed to a wide range of clinical, community and educational problems so that they will be prepared to function and offer services in a variety of settings.

The program maintains affiliations with numerous agencies such as Brunswick Hospital, the Institute for Bio-behavioral Therapy and Research, the Institute for Behavior Therapy, the Institute for Rational Emotive Therapy, Long Island Jewish Hospital, the Nassau County Medical Center, St. John's Episcopal Hospital, the Southeast Nassau Guidance Center, Student Counseling Center at SUNY Farmingdale, J.F.K. Medical Center, Pilgrim Psychiatric Center, and over 50 other public and private schools and community mental health service facilities.

APPLICATION FOR ADMISSION

Applications completed by January 15 will be screened for regular acceptance. Applications completed after April 1 will be considered only if there are openings in the program. Information about the program and application material can be obtained from the Graduate Admissions Office. Students are accepted only for the fall of each year.

ADMISSION REQUIREMENTS

1. Successful completion of the baccalaureate degree at an accredited institution.
2. Score on the Verbal Section of the GRE of no less than 500 and the Quantitative Section of no less than 500.
3. Score on the GRE, Psychology Section, of no less than the 65th percentile.
4. Candidates are expected to have preparation in:
   Elementary Statistics
   Research Design/Experimental Psychology
   Child, Adolescent, or Developmental Psychology
   Tests and Measurement
5. A personal interview.

GRADUATION REQUIREMENTS

1. Completion of the 105 credit program with a cumulative grade-point average of B or better.
2. Successful completion of a Qualifying Examination which must be taken and passed immediately following the first two semesters of the program. This examination is given in May and July of each year. Students who fail the qualifying examination twice will be dropped from the program.
3. Students must maintain a B average each semester, receive no more than one C per semester and no more than three C's in total toward the Ph.D. or the student will be dropped from the program.
4. If A student earns a grade of D in a course, the instructor of that course will inform the Program Director who will then convene a meeting of the Core Program Faculty to discuss the circumstances under which the D was earned. If this is the first D earned during his or her course of study, the student will be immediately placed on probation and a remedial plan for the student will be developed by the faculty. In the case of a D, course credit will not count toward the degree being sought but the grade is included in determining the cumulative grade-point average. The course or its equivalent, must be repeated. A second grade of D received in any course while enrolled in the program is grounds for immediate dismissal. The Core Program Faculty will decide if the dismissal is warranted. A letter which reviews the discussion and outcome of the meeting will be generated by the Program Director with a copy sent to the student.
5. A grade of F in any class is grounds for immediate dismissal from the program. If a student earns an F, the instructor of that course will inform the Program Director who will then convene a meeting of the Core Program Faculty to discuss the circumstances under which the F has been earned. A letter which reviews the deliberations of the Core Program Faculty will be generated by the Program Director with a copy sent to the student.
6. Students are expected to behave in an ethical and professional manner according to the guidelines for student conduct and academic honesty at Hofstra University, and the Ethical Standards for Psychologists published by the American Psychological Association. Satisfactory interpersonal behavior and professional performance in classes and meetings, on practica and internships, etc. is expected. If a report of an ethics violation or an interpersonal problem which may be impeding professional growth is received, the Program Director will convene a meeting of the Core Program Faculty to discuss the circumstances under which the violation or problem arose. After a faculty investigation, a report will be issued that may clear the student of any wrongdoing, place the student on probation with a plan for remediation or dismiss the student from the program. A letter which reviews the deliberations of the Core Program Faculty will be generated by the Program Director with a copy sent to the student.
7. Completion of a satisfactory research dissertation.
8. Satisfactory performance in an oral examination, to be given subsequent to the completion of the dissertation.

PROGRAM REQUIREMENTS *(105 s.h.)*

The following courses are required unless transfer credit or a waiver is granted. No more than 15 transfer credits are accepted toward the degree.

PSY	201	Graduate Statistics I, 3 s.h.
	202	Graduate Statistics II, 3 s.h.
	204	Multivariate Statistics in Psychological Research I, 3 s.h.
	207	Cognition & Perception, 3 s.h.
	209A	Basic Concepts & Issues in Psychology, 3 s.h.
	210	Current Literature in Psychology, 2 s.h.
	214	Neural Bases of Behavior, 3 s.h.
	216	Behavior & Personality—Normal & Abnormal, 3 s.h.
	222	Research Methods I: Designs for Professional Psychology, 3 s.h.
	223	Research Design II, 4 s.h.
	227	Interviewing & Counseling in Professional Psychology, 3 s.h.
	228	Behavior Deviations I: Clinical Psychopathology, 3 s.h.
	229	Behavioral Counseling and Psychotherapy, 3 s.h.
	231	Theory & Practice of Intellectual Evaluation, 3 s.h.
	232.	Intellectual, Academic & Vocational Evaluation, 3 s.h.
	234A	Personality Assessment by Projective Methods, 3 s.h.
	240	Personality Assessment for Research, 3 s.h.
	249	Current Theory & Research in Social Psychology, 3 s.h.
	254	Psychology of the Exceptional Child, 3 s.h.
	255	Psychology of Learning, 3 s.h.
	261	Applied Behavior Analysis, 3 s.h.
FDED	248	Multicultural Education in the Metropolitan Area,3 s.h. or
PSY	275	Cross-Cultural and Ethnic Issues in Professional Psychology, 3 s.h.
	329	Marital & Family Therapies, 3 s.h.
	330	School Psychological Services Internship I: Client-Directed Methods, 3 s.h.
	331	School Psychological Services Internship II: Behavioral Counseling of Children & Adolescents, 3 s.h.
	332	Clinical Psychological Services Internship I: Behavior Therapy Methods, 3 s.h.
	333	Clinical Psychological Services Internship II: Cognitive-Behavior Therapy, 3 s.h.
	341	Ethics & Professional Practices in Psychology, 1 s.h.
	353	Theoretical Orientations to Human Development,3 s.h.
	601	Dissertation Seminar, 3 s.h.
	602*	Dissertation Proposal Preparation, 3 s.h.
	603A*/**	Extended Dissertation Advisement, 3 s.h.
	604**	Dissertation Advisement, 3 s.h.
	605A**	Dissertation Extension, 3 s.h.

In addition, 12-15 s.h. of electives chosen from the following, under advisement with Program Director.

PSY	213	Psychology of Addictions, 3 s.h.
	230	Group Counseling & Group Leadership, 3 s.h.
	235	Personality Evaluation I, 3 s.h.
	250	Health Psychology, 3 s.h.
	263	Current Theory & Research in Psychology of Aging, 3 s.h.
	280	Community Intervention Programs, 3 s.h.

ELED	227	Elementary School Curriculum, 3 s.h.
SED	205	Perspectives on Educational Practice, 3 s.h.
FDED	210	Contemporary Educational Movements, 3 s.h.
	220	Aesthetic Education, 3 s.h.
	222	Qualitative Research Methods, 3 s.h.
	244	Seminar: Alternative Education, 3 s.h.
SPED	200	Administration & Supervision of Special Education, 3 s.h.
	250	Education of the Gifted, 3 s.h.
READ	266	The Administrator & the Reading Program, 3 s.h.
REHB	230	Philosophy & Principles of Vocational Rehabilitation,3 s.h.
	232	Medical Information in Rehabilitation, 3 s.h.
EADM	214	Theories & Practices of Supervision, 3 s.h.
	241	Supervision of Instruction & Curriculum Development, 3 s.h.
	243	School Finance, 3 s.h.
	244	School Law, 3 s.h.
	245	Selected Issues in School Administration, 3 s.h.
	249	Management Technology, 3 s.h.
SPCH	242	Aphasia & Related Disorders, 3 s.h.
	243	Language Disorders & Learning Disabilities: Kindergarten Through Adulthood, 3 s.h.
ANTH	200	Fundamentals of Anthropology, 3 s.h.
SOC	272	Sociology of Juvenile Correction, 3 s.h.

*A student who has not made sufficient progress on the dissertation to gain permission of the members of the committee to begin collecting data, will have to repeat the course, paying full fee. A student must maintain continuous enrollment in this course, registering for it during the fall and spring semesters. A student must complete the work for this course within two semesters. If sufficient progress has not been made by the end of this period, the student will have to enroll in 603A, Extended Dissertation Advisement. This course may be taken only once. If the student does not complete the work for this course by the end of the semester, the student will be dropped from the program.

**A student who does not complete the dissertation during the semester of enrollment in 604, Dissertation Advisement, will have to repeat the course, paying full fee. Once 602, Dissertation Proposal Preparation or 603A, Extended Dissertation Advisement has been completed, a student must enroll in 604, Dissertation Advisement, the following semester and maintain continuous enrollment in this course during the fall and spring semesters. A student must complete the work for this course within three semesters. If the dissertation is not completed by the end of this period, the student must immediately enroll in 605A, Dissertation Extension. The student will be dropped from the program if all requirements for the dissertation are not fulfilled by the end of 605A. Once a candidate has begun work on the dissertation, a leave of absence from the program will not be granted, except in highly unusual circumstances.

PSY.D.: SCHOOL-COMMUNITY PSYCHOLOGY

Professor Motta, Graduate Program Director, (516) 463-5029, psyrwm@hofstra.edu

This program prepares students to become psychology practitioners who provide services to schools and community health service settings. Emphasis is placed upon training the psychologist as a consultant who brings about change within school and community settings, and who is also a provider of psychological services for individuals and families. The practice of school-community psychology is viewed as involving assessment, intervention, planning and prevention in public schools, special education facilities, geriatric facilities, veterans centers, centers for the homeless, police departments, facilities for the disabled, facilities for the drug addicted, etc.

The program is designed to accommodate beginning level students who enter with a bachelor's degree, and advanced level students who enter with the master's degree in psychology. Students who are accepted directly upon completion of the bachelor's degree will attend a full-time, 94 credit program. Advanced students who have already completed a master's degree in psychology may attend full time or part time. Course and credit requirements for advanced students will be determined on an individual basis, following review of official graduate transcripts.

All students are required to complete a one year internship and practicum experiences as part of their training. A wide range of school and community settings are available for student training. In addition, completion of a doctoral dissertation project, in an area within the broad field of school-community psychology, is also required. The program faculty have varied areas of special expertise and are able to provide specific training in childhood and adult behavior disorders, posttraumatic stress disorders, alcoholism, forensic (police) psychology, homelessness, education and issues related to gifted and talented children, immigration and cultural adaptation, etc.

Applications completed by January 15 will be screened for regular acceptance. Applications completed after April 1 will be considered only if there are openings in the program. Information about the program and application material can be obtained from the Graduate Admissions Office. Students are accepted only for the fall of each year.

ADMISSION REQUIREMENTS

Beginning level: Students admitted with a bachelor's degree will be required to meet the following admission criteria:

1. Successful completion of the baccalaureate degree from an accredited institution.
2. Scores on the Verbal Section of the GRE of no less than 500 and on the Quantitative Section of no less than 500.
3. Score on the GRE, Psychology Section, of no less than the 65th percentile.
4. A cumulative grade-point average of 3.0 or better in the following psychology courses which were completed prior to admission:
   Human Development
   Elementary Statistics
   Experimental Design

   In addition, the following courses are recommended:
   History and Systems of Psychology
   Physiological Psychology
   Psychometric Theory
5. Three letters of recommendation.
6. A personal statement.
7. A personal interview.

Advanced Level: Students admitted at the advanced level, who already possess a master's degree in psychology, will be required to meet the following admission criteria:

1. Successful completion of a master's degree in psychology from an accredited institution.
2. Scores on the Verbal Section of the GRE of no less than 500 and on the Quantitative Section of no less than 500.
3. Score on the GRE, Psychology Section, of no less than the 65th percentile.
4. Three letters of recommendation.
5. A personal statement.
6. A personal interview.

GRADUATION REQUIREMENTS

1. Completion of the 94 credit program with a cumulative grade-point average of B or better. Advanced students will be given transfer credit based on an individual analysis of their prior graduate academic record.
2. Successful completion of a Qualifying Examination which must be taken and passed following the first year in the program. This examination is given in May of each year. Students who fail the qualifying examination twice will be dropped from the program.
3. Students must maintain a B average each semester, receive no more than one C per semester and no more than three C's in total toward the Psy.D. or the student will be dropped from the program.
4. If A student earns a grade of D in a course, the instructor of that course will inform the Program Director who will then convene a meeting of the Core Program Faculty to discuss the circumstances under which the D was earned. If this is the first D earned during his or her course of study, the student will be immediately placed on probation and a remedial plan for the student will be developed by the faculty. In the case of a D, course credit will not count toward the degree being sought but the grade is included in determining the cumulative grade-point average. The course or its equivalent, must be repeated. A second grade of D received in any course while enrolled in the program is grounds for immediate dismissal. The Core Program Faculty will decide if the dismissal is warranted. A letter which reviews the discussion and outcome of the meeting will be generated by the Program Director with a copy sent to the student.
5. A grade of F in any class is grounds for immediate dismissal from the program. If a student earns an F, the instructor of that course will inform the Program Director who will then convene a meeting of the Core Program Faculty to discuss the circumstances under which the F has been earned. A letter which reviews the deliberations of the Core Program Faculty will be generated by the Program Director with a copy sent to the student.
6. Students are expected to behave in an ethical and professional manner according to the guidelines for student conduct and academic honesty at Hofstra University, and the Ethical Standards for Psychologists published by the American Psychological Association. Satisfactory interpersonal behavior and professional performance in classes and meetings, on practica and internships, etc. is expected. If a report of an ethics violation or an interpersonal problem which may be impeding professional growth is received, the Program Director will convene a meeting of the Core Program Faculty to discuss the circumstances under which the violation or problem arose. After a faculty investigation, a report will be issued that may clear the student of any wrong-doing, place the student on probation with a plan for remediation or dismiss the student from the program. A letter which reviews the deliberations of the Core Program Faculty will be generated by the Program Director with a copy sent to the student.
7. Students must maintain a B average each semester, receive no more than one C per semester and no more than three C's in total toward the Psy.D. or the student will be dropped from the program.
8. Successful completion of an approved doctoral dissertation project.
9. Satisfactory performance at an oral defense of the doctoral dissertation project.

PROGRAM REQUIREMENTS *(94 s.h.)*

The following courses are required unless transfer credit is obtained. For students who enter at the advanced level, transfer credit is determined on an individual basis.

PSY	201	Graduate Statistics I, 3 s.h.
	202	Graduate Statistics II, 3 s.h.
	207	Cognition & Perception, 3 s.h.
	209	Classical Concepts in Psychology, 2 s.h.
	210	Current Literature in Psychology, 2 s.h.
	214	Neural Bases of Behavior, 3 s.h.
	220	Consultation in Schools & Health Service Settings, 3 s.h.
	223	Research Design II, 4 s.h.

	224	Research Designs for Health Service Programs, 3 s.h.
	227	Interviewing & Counseling in Professional Psychology, 3 s.h.
	231	Theory & Practice of Intellectual Evaluation, 3 s.h.
	232	Intellectual, Academic & Vocational Evaluation, 3 s.h.
	234	Theory & Application of Personality Evaluation, 4 s.h.
	240	Personality Assessment for Research, 3 s.h.
	253	Advanced Developmental Psychology, 3 s.h.
	254	Psychology of the Exceptional Child, 3 s.h.
	257	Psychology of the Emotionally Disturbed Child, 3 s.h.
	258A	Social Psychology & the School System, 3 s.h.
	269	Psychology & the Criminal Justice System, 3 s.h.
	275	Cross-Cultural & Ethnic Issues in Professional Psychology, 3 s.h.
	280	Community Intervention Programs, 3 s.h.
	303	School & Community Psychological Services: Development & Administration, 3 s.h.
	330	School Psychological Services Internship I: Client-Directed Methods, 3 s.h.
	331	School Psychological Services Internship II: Behavioral Counseling of Children & Adolescents, 3 s.h.
	341	Ethics & Professional Practices in Psychology, 1 s.h.
	349	School-Community Internship I, 3 s.h.
	350	School-Community Internship II, 3 s.h.
	601	Dissertation Seminar, 3 s.h.
	602*	Dissertation Proposal Preparation, 3 s.h.
	603A*/**	Extended Dissertation Advisement, 3 s.h.
	604*	Dissertation Advisement, 3 s.h.
	605A**	Dissertation Extension, 3 s.h.

Students are permitted to take six semester hours of electives chosen from the following, under advisement of the Program Director.

PSY	213	Psychology of Addictions, 3 s.h.
	215	Clinical Neuropsychology, 3 s.h.
	230	Group Counseling & Group Leadership, 3 s.h.
	235,236	Personality Evaluation I & II, 3 s.h. each
	250	Health Psychology, 3 s.h.
	251,252	Special Topics Seminar, 1-4 s.h. each
	256	Theories of Psychological Counseling, 3 s.h.
	260	Behavior Deviations II: Major Mental Disorders, 3 s.h.
	263	Current Theory & Research in Psychology of Aging, 3 s.h.
	268	Advanced Workshop for Training of Professional Group Leaders, 3 s.h.
	281	Current Theory & Research in Rehabilitation, 3 s.h.
	353	Theoretical Orientations to Human Development, 3 s.h.
	399	Psychotherapy with the Deaf via Total Communication, 3 s.h.
SPED	200	Administration & Supervision of Special Education, 3 s.h.
	250	Education of the Gifted, 3 s.h.
REHB	230	Philosophy & Principles of Vocational Rehabilitation, 3 s.h.
	232	Medical Information in Rehabilitation, 3 s.h.
EADM	214	Theories & Practices of Supervision, 3 s.h.
	241	Supervision of Instruction & Curriculum Development, 3 s.h.
	243	School Finance, 3 s.h.

	245	Selected Issues in School Administration, 3 s.h.
	249	Management Technology, 3 s.h.
ELED	227	Elementary School Curriculum, 3 s.h.
SED	205	Perspectives on Educational Practice, 3 s.h.
FDED	210	Contemporary Educational Movements, 3 s.h.
	220	Aesthetic Education, 3 s.h.
	244	Seminar: Alternative Education, 3 s.h.
	248	Multicultural Education in the Metropolitan Area, 3 s.h.
SPCH	242	Aphasia & Related Disorders, 3 s.h.
	243	Language Disorders & Learning Disabilities: Kindergarten Through Adulthood, 3 s.h.
ANTH	200	Fundamentals of Anthropology, 3 s.h.
SOC	272	Sociology of Juvenile Corrections, 3 s.h.

*A student who has not made sufficient progress on the dissertation to gain permission of the members of the committee to begin collecting data, will have to repeat the course, paying full fee. A student must maintain continuous enrollment in this course, registering for it during the fall and spring semesters. A student must complete the work for this course within two semesters. If sufficient progress has not been made by the end of this period, the student will have to enroll in 603A, Extended Dissertation Advisement. This course may be taken only once. If the student does not complete the work for this course by the end of the semester, the student will be dropped from the program.

**A student who does not complete the dissertation during the semester of enrollment in 604, Dissertation Advisement, will have to repeat the course, paying full fee. Once 602, Dissertation Proposal Preparation or 603A, Extended Dissertation Advisement has been completed, a student must enroll in 604, Dissertation Advisement, the following semester and maintain continuous enrollment in this course during the fall and spring semesters. A student must complete the work for this course within three semesters. If the dissertation is not completed by the end of this period, the student must immediately enroll in 605A, Dissertation Extension. The student will be dropped from the program if all requirements for the dissertation are not fulfilled by the end of 605A. Once a candidate has begun work on the dissertation, a leave of absence from the program will not be granted, except in highly unusual circumstances.

POSTDOCTORAL RESPECIALIZATION: CLINICAL AND/OR SCHOOL PSYCHOLOGY

Professor O'Brien, Director, (516) 463-5634, psyrmo@hofstra.edu

This Program offers psychologists with doctoral degrees in areas other than Clinical and School Psychology the opportunity to respecialize in Clinical and School Psychology so that they may ethically practice in these areas. Respecialization candidates are given programs that meet the APA guidelines which require that psychologists who wish to change their service specialty, or add an additional area of applied specialization must meet the same requirements with respect to subject matter and professional skills that apply to doctoral retraining in the new specialty. The program of each candidate is individualized and all credit is given for relevant course work and requirements that have been satisfied previously.

ADMISSION REQUIREMENTS

1. A doctorate in psychology in an area other than clinical, counseling or school psychology from an accredited university.
2. Evidence of academic excellence.
3. A personal interview to determine that the program and the applicant's professional goals are congruent.
4. Evidence that the state recognizes the doctorate as psychology for licensure purposes.

GRADUATION REQUIREMENTS

Successful completion of the same requirements as those required of the students in the Ph.D. Program in Clinical and School Psychology. Credit is given for relevant course work and requirements that have been satisfied previously.
See complete doctoral information, page 14.

(PSY) COURSES

PSY 201 Fall 3 s.h.
Graduate Statistics I*
A first-level graduate course designed to cover such topics as exploratory data analysis, sampling and probability theory, statistical inference (hypothesis testing and confidence intervals) for one- and two-samples, correlation, partial correlation, and multiple regression, and issues in power and robustness.

PSY 202 Spring 3 s.h.
Graduate Statistics II**
Designed to provide in-depth coverage of analysis of variance (ANOVA). Topics covered are: one-way and two-way ANOVA, multivariate approach to the repeated measures and split-plot designs, multiple comparison and trend analysis, issues in probing an interaction (partial interaction and interaction contrasts vs. simple main effects tests), and issues in power and robustness.

PSY 203 Fall, Spring 4 s.h.
Research Design I*
Emphasis is on true and quasi-experimental designs for psychological research and evaluation. Illustrative designs are presented with discussion concerning the internal and external validity questions. Students are expected to defend the design of an original research project.
Prerequisites: PSY 140 and 141 or equivalent.

PSY 204 Once a year 3 s.h.
Multivariate Statistics in Psychological Research I*
Introduces students to multivariate statistics. Topics covered are: path analysis with manifest and latent variables, confirmatory factor analysis, test theory modes, multitrait/multimethod analysis, multiple-group factor analysis.

PSY 205 Once a year 3 s.h.
Multivariate Statistics in Psychological Research II*
Second course in multivariate statistical techniques that have direct application in experimental and industrial/organizational settings. Focus is on multivariate descriptive statistical techniques including factor analysis, cluster analysis and multidimensional scaling.
Prerequisite: PSY 204 or permission of instructor. (Formerly Multivariate Statistics in Psychological Research I.)

PSY 206 Spring, Summer 3 s.h.
Theories of Personality
Comparison of current psychological theories of personality as they relate to general psychological theory.

PSY 207 Spring 3 s.h.
Cognition and Perception**
Readings and discussion of psychological and physiological aspects of sensation, perception, cognition and emotion.
Prerequisite: PSY 190 or permission of instructor.

PSY 208 Periodically 3 s.h.
Learning Theory*
Basic theories of behavioral motivation and change.
Prerequisites: PSY 171, 190.

PSY 209 Fall, Spring 2 s.h.
Classical Concepts in Psychology**
Examination of concepts relating to theory and research in learning, motivation, perception, measurement, prediction and behavior change through examination of articles published in major journals during the past 30 years.
Prerequisite: permission of instructor.

PSY 209A Fall, Spring 3 s.h.
Basic Concepts and Issues in Psychology**
Classical issues and basic concepts in psychology, with an analysis of the current perspectives that psychologists take on these issues. These include topics such as the roles given to behavioral, cognitive, genetic, and physiological processes in basic and applied psychology, memory, social issues, methodological and radical behaviorism, private events in scientific and professional psychology, trends in data analysis and publication, assessment and measurement, etc. Examination of these topics by analyses of articles, published primarily in major journals, which span the entire history of psychology. Credit given for this course or PSY 209, not both.

PSY 210 Fall, Spring 2 s.h.
Current Literature in Psychology**
Examination of concepts relating to theory and research in learning, motivation, perception, measurement, prediction and behavior change through examination of articles published in major journals during the past five years.
Prerequisite: PSY 209.

PSY 211 Spring, Summer 3 s.h.
Intellectual Assessment
Different methods for individual assessment of the intellectual ability of children, adolescents and adults. May not be taken on a Pass/Fail basis.

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*Open only to matriculated students in a graduate psychology program.
**Open only to matriculated students in a doctoral program in psychology.

HCLAS

PSY 213 **Periodically** **3 s.h.**
Psychology of Addictions
Research, theories and methods of treatment with respect to alcoholism, drug addiction, smoking and overeating.

PSY 214 **Spring** **3 s.h.**
Neural Bases of Behavior*
Current research and theory relating to the physiological bases of human behavior.
Prerequisite: PSY 177.

PSY 215 **Periodically** **3 s.h.**
Clinical Neuropsychology*
An overview of neuropsychology with emphasis upon diagnosis assessment for both clinical and research.
Prerequisite: PSY 214.

PSY 216 **Fall** **3 s.h.**
Behavior and Personality—Normal and Abnormal*†
Evaluation and comparison of the dynamic and behavioral approaches with regard to the study of normal and abnormal personality syndromes. Emphasis on the ability of these two approaches to explain, predict and control behavior. Review of current research.

PSY 217 **Fall, Spring** **3 s.h.**
Organizational Development*
Foundations of organizational development. Discussion of topics dealing with the need for change in organizations, how to initiate procedures for organizational change and measure the effect of the change agents, the influence of change at both a formal and informal level and how to overcome resistance to change.

PSY 218 **Once a year** **3 s.h.**
Applied Behavior Analysis in Industry*
Operant approaches to industrial behavior with emphasis on practical applications to management. Use of response contingent reinforcement, behavioral assessment and stimulus control to improve industrial productivity is taught from a foundation in behavioral learning theory.
Prerequisite: PSY 208.

PSY 219 **Once a year** **3 s.h.**
Organizational Psychology: Leadership*
The course examines both classic and contemporary perspectives on leadership. The course also reviews research evidence related to each approach. A theoretical foundation enables the student to deal with leadership-related problems encountered in organizational settings. In addition, the course considers strategies used to measure and assess leadership potential.

PSY 220 **Once a year** **3 s.h.**
Consultation in Schools and Health Service Settings**
This course covers the methods and processes by which psychologists function as consultants within schools and health service settings. Emphasis is placed upon indirect service models, methods of identifying specific needs and problems within school and other organizations, implementation of solutions which are then enacted by the organizations, and on methods of evaluation of outcomes.

PSY 222 **Once a year** **3 s.h.**
Research Methods I: Designs for Professional Psychology*
Emphasizes group and single subject designs as commonly used in clinical, school and community psychology. Attention is paid to research epistemology and to research design. Illustrative designs from professional psychology journals are reviewed.

PSY 223 **Fall, Spring** **4 s.h.**
Research Design II**
Under supervision, students carry out their research project initiated in PSY 222 or PSY 224 culminating in a written paper and defense of the data and its interpretation.
Prerequisite: PSY 222 or PSY 224.

PSY 224 **Once a year** **3 s.h.**
Research Designs for Health Service Programs**
Experimental and quasi-experimental designs for the analysis of physical and mental health service delivery programs in the school and community. Procedures and research designs to assess community needs and to translate research findings into social policy. Focus on time series and small n studies, as well as classic between and within subject models. (Formerly Evaluation Research; Evaluation of Health Service Programs.)

PSY 225 **Once a year** **3 s.h.**
Multivariate Statistics in Psychological Research III*
Course trains students to perform multivariate statistical analyses of time series, spatial distributions, causal models of behavior and complex contingency tables as they apply to psychological research. Computer analyses for these problems are emphasized.
Prerequisites: PSY 204, 205 or permission of the instructor.

PSY 227 **Fall, Spring** **3 s.h.**
Interviewing and Counseling in Professional Psychology**
Clinical and school psychology techniques with emphasis on the initial interview and on adult and child diagnostic interviewing. Use of rational-emotive and behavioral methods for counseling persons with emotional, behavioral, educational and marital/familial problems. Practicum placements arranged.

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*Open only to matriculated students in a graduate psychology program.
**Open only to matriculated students in a doctoral program in psychology.
†Permission of Program Director.

PSY 228 Fall, Spring 3 s.h.
Behavior Deviations I: Clinical Psychopathology**
Biological, ecological and psychological factors leading to emotional and mental disorders. Feeling, thinking and behavioral aspects of neuroses, psychoses and personality disorders in childhood, adolescence, maturity and later maturity. Practicum observation and interaction arranged.
Prerequisite: permission of instructor.

PSY 229 Periodically 3 s.h.
Behavioral Counseling and Psychotherapy**
A comparative study of the theories and practices in the treatment of mental and emotional disorders. Included are the most commonly employed cognitive-behavioral techniques of counseling and psychotherapy. (Formerly Individual Counseling and Psychotherapy.)

PSY 230 Fall, Spring 3 s.h.
Group Counseling and Group Leadership**
Techniques and rationale of group treatment procedures with children, adolescents and adults. Practicum: students will conduct an ongoing group.

PSY 231 Fall 3 s.h.
Theory and Practice of Intellectual Evaluation**
Basic theory of intelligence. Psychometric elements of intellectual assessment including item selection sampling, reliability, validity, measurement error and norm development. Administration, scoring and interpretation of the Wechsler Adult Intelligence Scale, Stanford Binet Intelligence Scale, and tests of achievement. Practicum hours and testing materials are required.
Prerequisite: permission of instructor.

PSY 232 Fall, Spring 3 s.h.
Intellectual, Academic and Vocational Evaluation**
Continued consideration of psychometric elements of test construction. Administration, scoring, and interpretation of the Differential Abilities Scale, Wechsler Intelligence Scale for Children, and other tests of achievement and vocational skills. Practicum hours and testing materials are required.
Prerequisites: PSY 231 and permission of instructor. (Formerly Intellectual and Vocational Evaluation; Intellectual, Achievement, and Vocational Evaluation.)

PSY 234 Fall 4 s.h.
Theory and Application of Personality Evaluation**
General orientation to personality testing. Theories of personality. Administration, scoring, and interpretation of the Thematic Apperception Test, Children's Apperception Test, Bender Gestalt, Sentence Completion and Draw-a-Person Tests. Laboratory hours to be arranged. (Formerly Theory and Research in Personality Evaluation.)

PSY 234A Fall, Spring 3 s.h.
Personality Assessment by Projective Methods**
Provides students with a general orientation to personality assessment through the use of unstructured techniques. Major emphasis is placed on the clinical use of the Thematic Apperception Test and the Rorschach Test, although other methods are also discussed. Focus is placed on theory and empirical findings. Credit given for this course or 234, not both.

PSY 234B Fall, Spring 1 s.h.
Laboratory in Projective Personality Assessment**
Provides students with experience in the administration and interpretation of unstructured personality assessment techniques, and the relationship of test findings to therapeutic interventions. Primary emphasis is placed on the Thematic Apperception Test and the Rorschach Test. Illustrative protocols are used to present and discuss normative responses, and to compare them with responses given by persons with various Axis 1 and Axis 2 disorders. Focus is placed on the relationship of formal response categories to diagnoses from the Diagnostic and Statistical Manual and/or the International Classification of Diseases.

PSY 235, 236 Periodically 3 s.h. each
Personality Evaluation I and II**
The administration, scoring and basic interpretation of the Rorschach. The second semester is a practicum in advanced Rorschach interpretation. Special consideration will be given to developmental concepts from childhood to late maturity.
Prerequisites: PSY 228, 231, 234 and permission of instructor.

PSY 239 Periodically 3 s.h.
Psychological Assessment for Research*
Special aspects, techniques and theoretical issues related to individual assessment.
Prerequisite: permission of instructor.

PSY 240 Fall, Spring 3 s.h.
Personality Assessment for Research**
A review of personality measurements and theories as used in applied research: actual tests, scoring and interpretation required.
Prerequisite: permission of instructor.

PSY 249 Fall, Spring 3 s.h.
Current Theory and Research in Social Psychology
Review of theory and research in areas of group dynamics, attitude change, integration, asocial behavior and community health.

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**Open only to matriculated students in a doctoral program in psychology.

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PSY 250 **Once a year** **3 s.h.**
Health Psychology
In preparation for research and practice in the field of health psychology, this course examines the relationship of psychosocial and cognitive variables to physical health and disease. Areas to be covered include conditioned illness behaviors, stress and coping, addictions, pain management, and health promotion and disease prevention. Review of the current research in the field.

PSY 251, 252 **Fall, Spring, Summer** **1-4 s.h. each**
Special Topics Seminar*
Individual investigation and reports on advanced psychology topics. Prerequisite: permission of director of the graduate program.

PSY 253 **Fall** **3 s.h.**
Advanced Developmental Psychology**
Principles and theories in infrahuman and human development. Field studies and developmental testing are included.

PSY 254 **Spring** **3 s.h.**
Psychology of the Exceptional Child**
Psychological principles and theories relating to the diagnosis and remediation of specific learning disabilities. (2 hours lecture; field placements arranged.)
Prerequisite: permission of instructor.

PSY 255 **Fall, Summer** **3 s.h.**
Psychology of Learning*
Analysis of basic concepts with emphasis on the application of social and behavioral theory to the effective solution of practical problems. An advanced course.

PSY 256 **Periodically** **3 s.h.**
Theories of Psychological Counseling**
Intensive survey of the psychological theories and practices of individual and group counseling in non-psychotherapeutic settings.

PSY 257 **Periodically** **3 s.h.**
Psychology of the Emotionally Disturbed Child**
Theoretical foundations in the study of emotional disturbance in childhood. Study of the nature and needs of the emotionally disturbed child with specific reference to extreme states of anxiety and withdrawal, and to severely aggressive acting out of behavior. Motivation, ego structure, limit setting, frustration tolerance, need-acceptance theory, therapeutic approaches and other concepts and practices will be examined.

PSY 258A **Once a year** **3 s.h.**
Social Psychology and the School System**
This course explores the roles of school and community psychologists as consultants, direct service providers and change agents within educational settings. Organizational structures (such as school boards, parent-teacher organizations, administrator and faculty committees, etc.) that pertain to the school system are examined and evaluated as contexts for service delivery by psychologists.

PSY 259 **Periodically** **3 s.h.**
Human Relations Workshop for Educators and Community Leaders*
Lectures, discussions and readings in group dynamics and human relations. Exploration of ways to resolve specific human relations problems of interest to participants.
Prerequisite: permission of instructor. Credit given for this course or New College SP 259, not both.

PSY 260 **Fall, Spring** **3 s.h.**
Behavior Deviations II: Major Mental Disorders**
Explores learning and biological factors that account for the development and maintenance of schizophrenia and other major mental and behavioral disorders. Practicum at an inpatient facility where behavioral strategies are implemented to develop and enhance prosocial behaviors, and to decrease maladaptive behaviors.
Prerequisite: PSY 208 or 255.

PSY 261 **Fall, Spring** **3 s.h.**
Applied Behavior Analysis of Professional Psychology**
This course examines the methods of applied behavior analysis in relation to various forms of psychopathology (including minor and major mental disorders). It shows how application of these methods can change dysfunctional behaviors, including dysfunctional nonverbal behavior, speaking, listening, and thinking. It requires students to participate in a practicum in which analysis and modification techniques are implemented.
Prerequisite: PSY 208 or 255. Credit given for this course or 260, not both.

PSY 263 **Once a year** **3 s.h.**
Current Theory and Research in Psychology of Aging
Review of theory and research.

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**Open only to matriculated students in a doctoral program in psychology.

PSY 264 **Once a year** **3 s.h.**
Aging and Human Behavior
Provides an understanding of old age and the vital processes affecting behavior. Exploration of the biological, social and psychological factors affecting the aging process centering around such areas as personality, intelligence, learning and memory, sexuality, longevity and pathological aging. A comprehensive integration of research findings reflecting behavioral stability and change are also examined.

PSY 265 **Once a year** **3 s.h.**
Aging and Personality
Explores the aspects of personality as they relate to the aging process. Theoretical notions and issues, intra-psychic phenomena and personality dynamics are examined. Attention is given to continuity and change in the aging personality. Psychological, sociological and cultural implications affecting the aging personality are also examined.

PSY 268 **Periodically** **3 s.h.**
Advanced Workshop for Training of Professional Group Leaders*
Participants will develop techniques for working with groups. Co-trainer opportunities, lectures, discussions, readings in group dynamics, human relations and related fields. Intensive t-group experience.
Prerequisite: PSY 259 or equivalent. Limited enrollment. Admission only upon application to and acceptance by workshop director.

PSY 269 **Once a year** **3 s.h.**
Psychology and the Criminal Justice System**
Examination of the individual, social, and cultural factors that contribute to criminal behavior. Theories of criminality are reviewed as are a number of specific criminal acts. A required practicum experience within the criminal justice system clarifies the role of the psychologist in dealing with criminal behavior.

PSY 275 **Fall** **3 s.h.**
Cross-Cultural and Ethnic Issues in Professional Psychology**
Implications of theory and research on minority and ethnic issues for the practice of psychology in schools, mental health settings and industry. May not be taken on a Pass/Fail basis.
Prerequisite: permission of instructor.

PSY 276 **Periodically** **3 s.h.**
Psychology of Hypnosis**
Course in theory, technique, management and phenomena of hypnosis. Course will combine lectures, discussion, demonstrations and practicum.
Prerequisite: permission of instructor.

PSY 278 **Once a year** **3 s.h.**
Psychometric Theory*
Measurement theory, scaling models, test construction, fundamentals of factor analysis as a psychometric method and applications to content areas in psychology.
Prerequisite: PSY 201.

PSY 279 **Once a year** **3 s.h.**
Surveying, Sampling and Scaling*
Designed to teach students the basic concepts in survey construction, sampling theory, and practice and univariate techniques of scaling. Emphasis is on the design and use of evaluation instruments in various applied settings.
Prerequisite: PSY 278 or permission of instructor.

PSY 280 **Once a year** **3 s.h.**
Community Intervention Programs**
Principles and methods of initiating, developing and evaluating community service programs.
Prerequisite: permission of instructor. (Formerly Community Program Development and Research; Community Program Development and Evaluation.)

PSY 281 **Once a year** **3 s.h.**
Current Theory and Research in Rehabilitation*
Review of current theory with a view toward the development of programmatic research, which will facilitate the solution of the problems of the physically and emotionally disabled.

PSY 283A **Fall** **3 s.h.**
Foundations of Industrial/Organizational Psychology I: Industrial Psychology*
Extensive review of theoretical, research and applied issues in the field of industrial psychology. A combination of lecture and discussion strategies is utilized to cover the topics of legal issues, psychological measurement, job and task analysis, selection and recruitment, performance appraisal, training, compensation and job evaluation.

PSY 283B **Spring** **3 s.h.**
Foundations of Industrial/Organizational Psychology II: Organizational Psychology*
Survey of the major topics in organizational psychology including work motivation, job satisfaction, stress, leadership, communication, job design, organizational development and organizational theories.
Prerequisite: PSY 283A.

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PSY 284 **Fall, Spring** **3 s.h.**
Personnel Selection*
General overview of personnel selection. Lectures and discussions relating to the following topics: legal issues and EEOC, job analysis, selection techniques (e.g., interviews, assessment centers, biographical data banks, psychological tests, honesty testing, drug and genetic screening) and measurement of work performance.

PSY 285 **Periodically** **3 s.h.**
Sexual Behavior and the Treatment of Sexual Disorders
A discussion of the principal forms of sexual function and etiology, diagnosis and treatment of sexual dysfunction.
Prerequisite: permission of instructor.

PSY 286 **Fall, Spring** **3 s.h.**
Measurement of Work Performance*
Review of current research, methods and applications of performance appraisal. Appraisal methods and rating formats are discussed in relation to issues of criteria relevance, legal considerations, and the distinction between subjective ratings and objective measures of performance.

PSY 287 **Fall, Spring** **3 s.h.**
Training and Development*
Review of research and theory related to training models, needs analysis, learning principles and transfer of training, instructional methodology, career development and the evaluation of training programs. Students are expected to develop and deliver a training program related to performance in the work environment.

PSY 288 **Fall, Spring** **3 s.h.**
Motivation*
Cognitive and behavioral theories of motivation and their application to employee satisfaction and performance, with emphasis on the concepts of intrinsic and extrinsic motivation, equity, goals and incentives, values, needs and expectancies. (Formerly Work Motivation)

PSY 289 **Fall, Spring** **3 s.h.**
Small Group Behavior*
The study of formal and informal groups, their structure and development. Topics covered include interaction and influence processes, problem solving, decision making, conflict and interpersonal relations.

PSY 290, 291 **Fall, Spring** **3 s.h. each**
Internship in Industrial/Organizational Psychology*
Supervised placement in industrial, business, or other organizational setting, typically a two-day-per-week internship. Weekly exploration and discussion of professional and ethical issues pertaining to the internship experience.

PSY 293B **Once a year** **3 s.h.**
Psychology of Human Resources Management
Lectures and discussions relating to the following components of human resources: role of human resources in organizations; human resources planning; staffing (recruitment, selection, diversity, EEOC guidelines, career planning, training and development, terminations); benefits (health care, income protection, retirement); performance management (job evaluation, compensation programs, pay issues, performance commitment process); employee and labor relations (union representation, collective bargaining, alternative dispute resolution, creating a pro-employee environment); international human resources management (culture, expatriation and repatriation). May not be taken on a Pass/Fail basis
Prerequisite: PSY 283 A.

PSY 299 **Once a year** **3 s.h.**
Seminar: Organizational Psychology*
Faculty and guest lectures on contemporary issues in industrial/organizational psychology.
Prerequisite: PSY 293A.

PSY 301 **Periodically** **3 s.h.**
Master's Essay*
Supervision and instruction leading to the completion of the master's essay. Binding fee payable upon registration.
Prerequisite: completion of comprehensives.

PSY 302 **Once a year** **1 s.h.**
Practicum: Advanced Research Methodology*
Concern with current developments and contemporary issues in industrial/organizational research methodology. A major emphasis is to give the student practical experience involving an experiment in an industrial/organizational setting.
Prerequisites: PSY 203 and 223, or permission of the instructor.

PSY 303 **Spring** **3 s.h.**
School and Community Psychological Services: Development and Administration**
Goals and effective practices with attention to interaction with school staff, supervision of entering school psychologists, development of internship programs. (Formerly School Psychological Services: Development and Administration.)

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PSY 329 Fall, Spring 3 s.h.
Marital and Family Therapies**
This course introduces advanced doctoral candidates in the Clinical and School Psychology Programs to the concepts, principles and issues associated with marital and family therapy. Both communication disorders and behavioral problems in the context of marriage and the family will be emphasized. The lecture will be accompanied by supervised assignment to therapist team pairs to work with families in which one or more members have been identified as dysfunctional.

PSY 330 Fall 3 s.h.
School Psychological Services Internship I: Client-Directed Methods**
Lectures cover methods of client-directed counseling and therapy with children and adults. Discussions center on lecture material and experiences students are having at their internship placements, including adjustment to the demands of different institutions and supervisors. Practicum: taped presentations, observations, role playing and independent counseling with clients at the Hofstra Psychological Evaluation Research and Counseling Clinic. Internship: two days per week in a public or special school setting.
Prerequisites: completion of M.A. in Psychology and permission of instructor.

PSY 331 Spring 3 s.h.
School Psychological Services Internship II: Behavioral Counseling of Children and Adolescents**
Methods of directive counseling and therapy and educational interventions. Discussion of lecture materials and internship placement experiences. Practicum: role playing, videotaped presentations and independent counseling with clients. Internship: two days per week in a public or special school setting and one day per week at the Hofstra Psychological Evaluation Research and Counseling Clinic.
Prerequisite: PSY 330.

PSY 332 Fall 3 s.h.
Clinical Psychological Services Internship I: Behavior Therapy Methods**
Theories, techniques and empirical findings related to various procedures used in behavior therapy. Emphasis on in-vivo, imaginal and contingency management techniques. Practicum: practice of assertion training, deep muscle relaxation, systematic desensitization and covert conditioning during individual and group-student meetings. Individual behavior therapy with child and adult clients. Internship: three days per week in an approved clinical psychology placement including mental health clinics, hospitals, behavioral medicine and rehabilitation facilities, or drug and alcohol treatment programs. One day per week at the Hofstra Psychological Evaluation Research and Counseling Clinic.
Prerequisite: PSY 331.

PSY 333 Spring 3 s.h.
Clinical Psychological Services Internship II: Cognitive-Behavior Therapy**
Theories, techniques and empirical findings related to various forms of cognitive behavior therapy emphasizing rational-emotive psychotherapy. Practicum: independent cognitive and behavior therapy with child and adult clients at the Hofstra Psychological Evaluation Research and Counseling Clinic. Role playing and review of therapy tapes. Internship: three days per week in an approved clinical psychology placement including mental health clinics, hospitals, behavioral medicine and rehabilitation facilities, or drug and alcohol treatment programs.
Prerequisite: PSY 332.

PSY 334 Fall 3 s.h.
Internship: Applied Research*
On-site experience in applied research, evaluation research, and/or program evaluation through supervised projects in the following areas of research: physical health, mental health, social services and industrial/organizational settings. This practicum course and its continuation courses include lectures, conferences and project discussions in addition to a two day per week internship.
Prerequisite: permission of instructor.

PSY 335, 336, 337 Once a year 3 s.h. each
Internship: Applied Research*
Continuation of 334.
Prerequisite: permission of instructor.

PSY 338 Fall 3 s.h.
Internship: Applied Research*
Continuation of 334, 335, 336, 337.
Prerequisite: PSY 337.

PSY 339 Periodically 3 s.h.
Internship: Professional Psychological Services*
Intended for students specializing in clinical and school psychology. Field placements in community agencies to provide continued experience in psychotherapy, counseling and psychological assessment.
Prerequisite: PSY 333.

PSY 341 Once a year 1 s.h.
Ethics and Professional Practices in Psychology*
A review course in all areas such as schools, universities, mental health centers, mental hospitals, community centers, private practice, government service and in the area of research.

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PSY 342 **Once a year** **1 s.h.**
Grant Support for Psychological Research and Programs
Identify sources of government and foundation funding for pre and post-doctoral research, postdoctoral study, and the development of psychological training programs and services. Develop skills in proposal writing to obtain such funds. Gain knowledge of the structure of relevant government agencies and how to make contacts within them.

PSY 349 **Once a year** **3 s.h.**
School-Community Internship I**
Students are exposed to administrative and consulting roles of psychologists who work in school and community settings. Emphasis is placed upon program development, administration, evaluation, and upon issues relevant to the supervision and overseeing of personnel within health service settings. Internship placement in a school system or a community agency is required.

PSY 350 **Once a year** **3 s.h.**
School-Community Internship II**
Continuation of School-Community Internship I.

PSY 353 **Fall, Spring** **3 s.h.**
Theoretical Orientations to Human Development**
The critical evaluation of current theories of human development in terms of scientific adequacy. Techniques of theory construction and evaluation are emphasized. Field placements arranged.

PSY 360 **Once a year** **3 s.h.**
Internship: Motivational Theory, Worker Morale and Productivity*
Examination of psychological theories and research to understand and predict individual levels of motivation. Particular attention is given to the contribution of this literature in the areas of job satisfaction, morale and worker productivity. Practicum: on-site experiences in the application and/or research in job satisfaction and worker productivity. Internship: two days per week in public or private organizations under supervision.
Prerequisite: permission of instructor.

PSY 361 **Once a year** **3 s.h.**
Internship: Group Interaction Processes*
Lectures and discussions relating to effective and ineffective communication and problem-solving procedures in task groups. Practicum: on-site experience in application and/or research in the analysis of group interaction processes. Internship: two days per week in public or private organizations under supervision.
Prerequisite: permission of instructor.

PSY 362 **Once a year** **3 s.h.**
Internship: Consumer Psychology*
Lectures and discussions relating to influences, group effects, communication, attitude change, decision making and purchasing processes, research methodology, the law and psychology, and the role of psychology in the judicial system. Practicum: on-site experience in the application and/or research in consumer psychology. Internship: two days per week in public or private organizations under supervision.
Prerequisite: permission of instructor.

PSY 363 **Once a year** **3 s.h.**
Internship: Research Design III*
Lectures and discussions relating to formative and summative program evaluation, cost effectiveness, cost benefit analysis, etc. Practicum: on-site experience in the application of evaluation, methodology and cost analysis. Internship: two days per week in public or private organizations under supervision. Prerequisite: permission of instructor.

PSY 364 **Once a year** **3 s.h.**
Internship: Consulting and Communications*
Lectures and discussions relating to concepts of information processing, verbal and nonverbal communications, group and organizational communication, audits and effective consulting behaviors. Practicum: on-site experience in the application and/or research in communication measurement and training. Internship: two days per week in public or private organizations under supervision.
Prerequisite: permission of instructor.

PSY 382 **Fall, Spring** **3 s.h.**
Research in Industrial/Organizational Psychology*
Participation in ongoing laboratory or field research in industrial/organizational psychology, individually supervised by members of the program faculty. May be taken a maximum of four times.
Prerequisite: PSY 302 or permission of the instructor.

PSY 399 **Periodically** **3 s.h.**
Psychotherapy with the Deaf Via Total Communication
Readings, discussion and practicum related to the specific psychological problems of the hearing impaired; modes and methods of communication, verbal and nonverbal; appropriate psychotherapeutic techniques, client-centered, behavioral, rational-emotive, etc.; instruction in total communication and practice in small group and individual therapy sessions under supervision.

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PSY 601 Fall 3 s.h.
Dissertation Seminar**
Exploration of dissertation topics and examination of related research. Credit for the course requires the development and design of a specific dissertation outline and the written agreement by a faculty member to sponsor the dissertation.

PSY 602 Fall, Spring 3 s.h.
Dissertation Proposal Preparation **
Through individual consultation with a sponsor, students fully develop their doctoral research proposal and present it for approval to their three-person dissertation committee. May be taken twice. Three credits are applied towards the doctoral degree when Form II is approved and filed with the chairperson in psychology.

PSY 603A Fall, Spring 3 s.h.
Extended Dissertation Advisement*
For students who have not completed a satisfactory dissertation proposal and who have not had Form II signed by a sponsor and two additional committee members after enrolling in PSY 602 twice. If, after completing PSY 603A, the student still has not a signed Form II, he/she will be dropped from the program. This course may be taken only once. May not be taken on a Pass/Fail basis. No credit toward degree.

PSY 604 Fall, Spring 3 s.h.
Dissertation Advisement**
In consultation with a sponsor, students execute their approved research study, analyze their data, write up the results, and defend the project in a final oral examination. May be taken three times. Three credits are applied towards the doctoral degree when the approved dissertation has been placed in the Hofstra University Axinn Library.

PSY 605A Fall, Spring 3 s.h.
Dissertation Extension**
For students who have not completed the dissertation and passed their oral examination after enrolling in PSY 604 three times. If, at the end of this course, the student still has not completed the dissertation, he/she will be dropped from the program. This course may be taken only once. May not be taken on a Pass/Fail basis. No credit toward degree.

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**Open only to matriculated students in a doctoral program in psychology.

ROMANCE LANGUAGES AND LITERATURES (RLL)

Professor Bussell-Thompson, Chairperson, 338 Calkins Hall
Professors DaSilva, McNair, Powell, Schwab
Associate Professors Cao, Jean
Assistant Professors Anastasio, Dini, Janer, Loucif, Sampedro, Ultsch, Zapata
Special Assistant Professor Wallis

SPANISH (SPAN)

MASTER OF ARTS: SPANISH

Assistant Professor Sampedro, Graduate Program Director, (516) 463-4521, rllbzs@hofstra.edu

The M.A. in Spanish is designed to provide students with an intensive course of study in the language, cultures, and literatures of Spain and Latin America from a wide range of critical, historical, and interdisciplinary perspectives. The program prepares students for pursuing doctoral work in either Penninsular or Latin American studies. At the end of the program, the Master's thesis offers students the opportunity to do original research in an approved topic in the cultures and literatures of Spain and Latin America.

Applicant must have completed the requirements for the B.A. in Spanish or equivalent. Only nine semester hours of graduate transfer credits with a grade of B or better may be applied to the M.A. program.

PROGRAM REQUIREMENTS *(36 s.h.)*

A student will be considered matriculated and a candidate for the Master's degree as long as he/she maintains at least a B level average throughout the program. The candidate must complete a total of 36 semester hours. Of these, 33 s.h. must be chosen from 200-level courses, and 3 will be given for the Master's essay (see course number SPAN 301). The distribution requirement follows:

a) 6 credits in culture courses: SPAN 205: Studies in the Culture of Spain; and SPAN 206: Studies in the Cultures of Latin America, or SPAN 218: Contemporary Cultures of Latin America; or equivalent.
b) 6 credits in courses related to literature and criticism: SPAN 203: Literary Criticism of 20th Century Spain; and SPAN 204: Literary Criticism of 20th Century Latin America; or equivalent.

c) 6 credits in language grammar or linguistics courses.
d) 3 credits in a course on major authors or literary movements: SPAN 221 through SPAN 226.
e) 3 credits for the Master's essay (before registering for SPAN 301, the candidate must consult with the Graduate Program Director and make necessary arrangements with the department faculty member who will supervise the essay).

MASTER OF ARTS: BILINGUALISM

A bilingual and bicultural understanding of the Hispanic and American ways of life. This specialization is designed for persons holding a baccalaureate degree and for Spanish speaking professionals who have the necessary linguistic skills to perform their course work in Spanish and in English.

The candidate will take a placement examination, which will be used to purposes of advisement only, and must complete 36 hours of interdisciplinary courses as follows: SPAN 212, 213, 214, 215, 216; one 200-level course in each of the following areas: literature, linguistics, history, cross-cultural materials and pedagogical orientation. A master's comprehensive examination is required.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

(SPAN) COURSES

SPAN 201 **Periodically** **3 s.h.**
Advanced Structure of Present Day Spanish
Detailed study of Spanish syntax with a comparative analysis of Spanish and English linguistic structures.

SPAN 202 **Periodically** **3 s.h.**
History of the Spanish Language
Historical development of the Spanish language, stemming from its Latin roots into its present-day morphology.(Formerly The Spanish Language)

SPAN 203 **Periodically** **3 s.h.**
Literary Criticism of 20th Century Spain
Critical analysis of Spanish literature of the 20th Century within the background of different movements from modernism to post-modernity. (Formerly Literary Criticism of Spanish -Prose of the 20th Century)

SPAN 204 **Periodically** **3 s.h.**
Literary Criticism of 20th Century Latin America
Analysis of literature in the major categories that organize Latin American criticism: modernismo. Afro-Caribbean poetry, the avant-garde, regionalism, Indianist writing, testimonio. the real maravilloso, dictatorship and post-dictatorship literature. (Formerly Literary Criticism of Spanish-American Prose of the 20th Century)

SPAN 205 **Periodically** **3 s.h.**
Studies in the Culture of Spain
A critical study of cultural manifestations of contemporary Spain, from the Post-civil war period to the present day through different forms of artistic expression. (Formerly Studies in the Culture of Spain)

SPAN 206 **Fall, Spring, Summer** **3 s.h.**
Studies in Cultures of Latin America
An integrated study of Latin American cultures from the pre-Columbian period to Independence. Particular attention will be paid to the construction of gender, class, ethnicity, race, and relationships of power, focusing on the interaction of indigenous peoples with European colonists and imperial structures. (Formerly Studies in the Cultures of Spanish America)

SPAN 207 **Periodically** **3 s.h.**
Secret Lives: Nuns, Convents, Missions, and Saints in Colonial Spanish America
This course revisits the history, literature, and culture of colonial Latin America through the eyes of the Catholic Church and the clergy. Nuns and friars, convents and missions played a vital part in the cultural, social and economic conquest of the indigenous peoples of the Americas. Equally, they shaped the spiritual lives, rites and religious practices of their respective societies. The course adopts an interdisciplinary approach, drawing on gender studies and cultural studies; sources will encompass architecture, daily life, clothing, portraits, public and private letters, as well as canonical literary genres.

SPAN 208 **Periodically** **3 s.h.**
Spanish Phonetics
The phonology of Spanish language. (Formerly Foreign Language Workshop)

SPAN 209, 210, 211 Summer 3 s.h. each
Summer Language Institute
Designed for foreign language and prospective language teachers. Stress on listening comprehension and speaking; application of latest methods, techniques and materials; applied linguistics, culture and civilization.

SPAN 212 Fall 3 s.h.
Contrastive Bilingualism
A contrastive analysis of Spanish and English in terms of various linguistic principles. The course will focus especially on the pedagogical implications of linguistic problems.

SPAN 213 Periodically 3 s.h.
Development of Social and Psychological Bilingual Trends in the United States
Diachronic and synchronic approaches to language. English and Spanish are studied in their variants vis-a-vis principles of language. The discussion of general topics will encompass problems of Hispanics in the United States.

SPAN 214 Once a year 3 s.h.
Bilingualism in Perspective
Historical examination of bilingual cultures of Europe (especially of Spain) and of the Americas. Analysis is made of similar developments and trends in contemporary societies.

SPAN 215 Fall 3 s.h.
Bilingual Workshop
Theoretical and practical consideration of language in action in a mixed cultural group. The course will take advantage of live situations and community resources. The behavioral motivation and degree of acculturation desired will be analyzed. Existing materials and principles for creating and adapting materials will be treated as well.

SPAN 216 Periodically 3 s.h.
Literature, Revolutions, and Nationalisms
Latin American literature related to the wars of independence, nation building, and revolutionary processes of the 20th century in Mexico, Argentina, Cuba, and Nicaragua among others. (Formerly Literature of Protest and Nationalism)

SPAN 218 Periodically 3 s.h.
Contemporary Cultures of Latin America
A critical engagement with the most recent debates in Latin American cultural studies, from the challenges of re-democratization to post-modernity, globalization and the impact of cultural industries. Special attention is paid to music, art, film and the internet. (Formerly People and Culture of Latin America)

SPAN 219 Periodically 3 s.h.
Contemporary Latin American Literature
A study of Latin American literature from the 1950's to the present. Analysis of literary works with special emphasis on the radical changes of the post-avant-garde: narrativity. colloquialism, and literature of the fantastic. (Formerly Interdisciplinary Seminar: Contemporary Hispanic Literature and Society)

SPAN 220 Periodically 3 s.h.
Teaching English in a Bilingual Program
Material, method and curriculum for the teaching of English in a bilingual, bicultural program.

SPAN 221 through 226 Periodically 3 s.h. each
Major Authors and Literary Movements
Intensive study of an author, movement, or literary genre of Spain or Latin America. Topics to be announced. (Formerly Major Authors, Literary Movements and Genres)

SPAN 251, 252 Fall, Spring, Summer 3 s.h. each
Readings in Spanish and Spanish American Literature
Literary works and current literary criticism in selected fields. Topics to be announced. (Formerly Readings in Spanish)

SPAN 301 Periodically 3 s.h.
Master's Essay
In the course of their last semester candidates must write a master's thesis of substantial research under the supervision of a graduate adviser. The thesis may be written in Spanish or English. If the English option is chosen the candidate must pass a language proficiency test, administered by the department, in his/her last semester of studies.

SPAN 305 Periodically 3 s.h.
Comprehensive Studies
Designed to analyze the movements of all Spanish and Spanish-American literature from its beginning to the 17th century. Each literary movement is studied in depth, after which an examination is given. No credit for a grade of less than B. This course will serve as part of the option for the comprehensive examination. *Prerequisites: 21 s.h. of graduate work in Spanish and permission of the Graduate Program Director. This course may not be used to satisfy the basic 33 s.h. requirement for the M.A. in Spanish.*

SPAN 306 Periodically 3 s.h.
Comprehensive Studies
Designed to study all Spanish and Spanish-American literature from the 18th to the 20th century. Each literary movement is studied in depth, after which an examination is given. No credit for a grade of less than B. Both 305 and 306 must be taken in order to satisfy the option for the comprehensive examination. *Prerequisites: 21 s.h. of graduate work in Spanish and permission of the Graduate Program Director. This course may not be used to satisfy the basic 33 s.h. requirement for the M.A. in Spanish.*

SPAN 307 Spring 3 s.h.
Bilingual Doctoral Seminar
An exploration of related research topics in bilingual/bicultural education. Development and design of specific research proposals, which will be submitted to the department's bilingual faculty and graduate students as the first step in fulfillment of the doctoral course requirements intended for all doctoral candidates in Reading Bilingual/Bicultural programs.

SPAN 308 Spring 3 s.h.
Bilingual Doctoral Seminar
This course is a continuation of 307.
Prerequisite: SPAN 307.

SPAN 309 Spring 3 s.h.
Bilingual Doctoral Seminar
This course is the last sequential course of the required 9 hours for the doctoral seminar for all Ph.D. candidates in the bilingual programs.
Prerequisites: SPAN 307, 308.

SPEECH-LANGUAGE-HEARING SCIENCES (SPCH)

Associate Professor Bloom, Chairperson, 106 Davison Hall
Associate Professor Eisen, Graduate Program Director, (516) 463-5508, sphahe@hofstra.edu

Professors Ferrand, Reiter, White
Associate Professors Altenberg, Eisen
Special Assistant Professor Milstein
Instructor Fabus

The Speech-Language-Hearing Clinic is fully accredited by the Professional Services Board of the American Speech-Language-Hearing Association.

MASTER OF ARTS: AUDIOLOGY AND SPEECH-LANGUAGE-PATHOLOGY

These programs are intended for students who plan to be audiologists or speech-language pathologists in clinical and hospital environments, private practice, early intervention programs, and primary and secondary educational settings. The academic and clinical programs are accredited by the Committee on Academic Accreditation (CAA), and the Professional Services Board (PSB), of the American Speech-Language-Hearing Association (ASHA). Our M.A. Programs are also approved by the New York State Department of Education for licensure eligibility of Speech-Language Pathologists (SLP) and Audiologists.

Speech-Language Pathology students may also complete coursework for eligibility toward certification and licensure as Teacher of Students With Speech and Language Disabilities. Qualified students may elect to complete the Bilingual Extension in SLP. (See below for additional information.)

ADMISSION PROCEDURES

The applicant for these degrees should have completed an undergraduate concentration in communication sciences and disorders or equivalent. Applicants who have not done so, must complete prerequisite coursework as per advisement by the Graduate Program Director. Successful completion of prerequisites, even if taken at Hofstra, does not guarantee admission to the M.A. programs. In certain situations, students who meet the programs' admissions criteria, may be considered for conditional admission to the M.A. programs while completing prerequisite course work.

The application must include a personal essay, GRE scores, including the writing subtest (obtained no more than 5 years prior to application). Current letters of recommendation from the institution from which the candidate received the baccalaureate degree, are also required. These 3 letters should be from faculty members or university administrators who are familiar with the candidate's academic work. An interview, the final step in the admissions process, may be required. Approval of admission

by the Graduate Admissions Office at Hofstra and the Graduate Program Director of the department are also required.

Admission to the M.A. Programs in Audiology and Speech Language Pathology occurs only in the fall semester. Applications received by January 15 will be given priority. Applicants are advised to contact the Office of Graduate Admissions at least 2 weeks prior to January 15th, to confirm that their applications are complete. Applications received after January 15 will be reviewed if space becomes available.

Upon acceptance, a nonrefundable tuition deposit of $250 is required of all part-time and full-time matriculated students. When registering for the semester for which the student has been admitted, the deposit will be credited toward tuition.

SCHOLARSHIPS AND ASSISTANTSHIPS

Scholarships and Assistantships are available for qualified students. Awards are made annually based on merit. Prospective students must file scholarship applications with their Graduate Application. Matriculated students must file their applications with the Graduate Program Director. Scholarship and Assistantship Applications must be filed no later than January 15.

No more than nine semester hours of graduate courses from another university will be accepted toward Hofstra's M.A. degree. These semester hours must have been completed prior to acceptance into the graduate program. Course work which was completed more than five years prior to admission into the graduate program will not be accepted toward the M.A. degree in Audiology or Speech-Language Pathology.

PROGRAM POLICIES

All semester hours after acceptance must be completed in residence. The M.A. degree must be completed within a five-year period from the date of completion of the student's first M.A. level course, excluding SPCH 235 and 235L.

All programs of study in audiology and/or speech-language pathology must be designed under advisement by a faculty member and approved by the Graduate Program Director. All part-time students are strongly encouraged to complete at least 6 semester hours per semester.

Candidates must maintain a minimum 3.0 average throughout their course of study. Any candidate falling below a 3.0 average will be placed on probation. A probationary status may not be maintained for more than one semester, inclusive of summer sessions. Any candidate who fails a required course in the program is subject to dismissal.

Students who have accumulated 2 or more incomplete grades at the start of a semester, including summer sessions, may not begin clinical practica. Clinical practica in students' minor area are excluded from this policy. Students who have an incomplete grade for any clinic course in the major area may begin the next clinic practicum in the sequence only after the incomplete clinic grade has been eliminated and a satisfactory letter grade has been assigned.

All M.A. students are required to successfully complete the comprehensive examination during the last full semester of graduate study. Applicants must file for the examination within the first month of the semester in which they plan to take the examination.

For further information regarding graduate programs and scholarships, contact Associate Professor Eisen, Graduate Program Director, 106 Davison Hall. Students interested in the audiology program, contact Professor Reiter, 107 Davison Hall.

PROGRAM REQUIREMENTS

A candidate elects one of two programs of study—Audiology or Speech-Language Pathology. Audiology majors require a minimum of 50 semester hours of graduate work taken within the department, including 7 semester hours in speech-language pathology.

Speech-language pathology majors require a minimum of 53 semester hours of graduate work taken within the department. Students who have completed a 3 semester hour undergraduate course in aural rehabilitation are required to complete only 4 graduate level semester hours of audiology. All other speech-language pathology students are required to complete 7 semester hours in audiology including aural rehabilitation.

Within each of the programs of study, a student chooses either a Master's Thesis or non-thesis track. The Master's Thesis track requires SPCH 301-302 as part of the M.A. degree requirement. Regardless of the track chosen, a comprehensive examination must be taken in the student's final semester of study under advisement of the Graduate Program Director. The Comprehensive Examination will be offered two times each academic year: in Fall and Spring semesters.

Each student must complete 25 hours of supervised clinical observation prior to registering for graduate clinical practica. A minimum of 375 clock hours of direct contact clinical practica are required at the graduate level with at least one practicum scheduled during a fall or spring semester. Within the first year of study, speech-language students must complete at least 20 hours of clinical work in audiology; Audiology students must complete at least 20 hours of clinical work in Speech-Language Pathology.

Each student must provide documentation of: inoculation for measles/mumps, rubella, hepatitis B and, annually, documentation of a negative TB test and physical examination.

M.A. IN AUDIOLOGY *(50 s.h.)*

First Year of Study (205-237A)

SPCH	205	Physiological and Psychological Acoustics, 3 s.h.
	207	Research Seminar: Speech and Hearing, 3 s.h.
	226	Clinical Practicum: Audiology, 1 s.h.
	227	Introduction to Audiometric Instrumentation and Testing, 3 s.h.
	228	Introductory Speech-Language Practicum (Preschool, K-12, Adult), 1 s.h.
	237A	Advanced Audiology I, 3 s.h.
	237B	Advanced Audiology II, 3 s.h.
	238	Seminar: Auditory Pathologies, 3 s.h.
	239	Pediatric Auditory Assessment, 3 s.h.
	240A	Introduction to Hearing Aids and Related Instrumentation, 3 s.h.
	240B	Advanced Hearing Aids and Related Instrumentation, 3 s.h.
	247	Aural Rehabilitation Across the Age Span, 3 s.h.
	250A	Objective Procedures in Audiological Diagnosis I, 3 s.h.
	250B	Objective Procedures in Audiological Diagnosis II, 3 s.h.
	260A	Clinical Methods and Procedures I (Audiology), 2 s.h.
	261A	Clinical Methods and Procedures II (Audiology), 2 s.h.
	262A	Advanced Seminar: Clinical Management (Audiology), 2 s.h.

In addition to SPCH 228, at least 6 semester hours in speech-language pathology as follows: 3 semester hours in speech disorders chosen from:

SPCH	230	Disorders of Fluency, 3 s.h.
	244	Cleft Palate and Cranio-facial Disorders, 3 s.h.
	248	Motor Speech Disorders, 3 s.h. or
	249	Voice Disorders, 3 s.h.

and 3 semester hours in language disorders chosen from:

SPCH	241	Pediatric Communication Disorders: Birth to Five, 3 s.h.
	242	Aphasia and Related Disorders, 3 s.h.
	243	Language, Learning, and Literacy: Development and Disabilities from Kindergarten Through Adulthood, 3 s.h.

MASTER OF ARTS IN SPEECH-LANGUAGE PATHOLOGY (SLP)

The M.A. Program in SLP offers students two options. Option I is intended for students who seek ASHA certification and NYS licensure as a speech-language pathologist in clinical, hospital, private practice; Option II is for students who plan to work in educational settings, and seek ASHA certification and NYS licensure as a speech-language pathologist.

Option I - The M.A. Program in Speech-Language Pathology *(53-56 s.h)*

This 53-56 s.h. M.A. is the appropriate degree for students who have their initial teaching certificate.

SPCH	207	Research and Seminar: Speech and Hearing, 3 s.h.
	209	Developmental Psycholinguistics (taken within the first 12 semester hours), 3 s.h.
	226	Clinical Practicum: Audiology, 1 s.h.
	228	Introductory Speech, 1 s.h.
	229	Evaluation and Interpretation of Communication Disorders, 3 s.h. (taken within the first 21 semester hours)
	204	The Neural Bases of Speech, Language and Hearing, 3 s.h.
	212	Communication in Healthy Aging, 3 s.h.
	232	Disorders of Phonology and Articulation, 3 s.h.
	241	Pediatric Communication Disorders: Birth to Five, 3 s.h.
	242	Aphasia and Related Disorders, 3 s.h.
	243	Language, Learning and Literacy: Development and Disabilities from Kindergarten Through Adulthood, 3 s.h.
	247	Aural Rehabilitation Across the Age Span, 3 s.h. (if not completed on the undergraduate level)
	248	Motor Speech Disorders, 3 s.h.
	249	Voice Disorders, 3 s.h.
	260S	Practicum II: Speech Language Intervention and Assessment (Preschool, K-12), 2 s.h.
	261S	Practicum III: Management of Speech Language Disorders, 2 s.h.
	262S	Practicum IV: Teaching Students with Speech Language Disabilities in Educational Settings, 2 s.h.

At least 3 semester hours of speech and hearing science chosen from:

SPCH	203	Seminar: Speech and Hearing Sciences, 3 s.h.
	205	Physiological and Psychological Acoustics, 3 s.h.
	206	Experimental Phonetics, 3 s.h.

Six semester hours of speech-language electives must be chosen. Electives may include one 3.s.h. course chosen from:

SPCH	230	Disorders of Fluency, 3 s.h.
	244	Cleft Palate and Cranio-facial Disorders, 3 s.h.
	253	Swallowing Disorders in Children and Adults, 3 s.h.

And/or one Special Topics Seminars chosen from:

	263A-Z	Special Topics Seminar: Speech Language Hearing Sciences, 1 s.h.

At least 3 semester hours in hearing disorders chosen from:

SPCH	237A	Advanced Audiology I, 3 s.h.
	238	Seminar: Auditory Pathologies, 3 s.h.
	239	Pediatric Auditory Assessment, 3 s.h.

And for those students for whom it is a requirement (see above), 3 semester hours in aural rehabilitation

Students who do not have an undergraduate degree or concentration in Speech-Language Pathology must complete SPCH 209 and one graduate level course in either speech or language disorders prior to registering for SPCH 228.

Option II - M.A. in Speech-Language Pathology (with Teacher Certification) *(61-64 s.h.)*
Students who complete this 61-64 s.h. M.A. option will be eligible to apply for initial NYS certification as Teacher of Students with Speech-Language Disabilities. All requirements for the M.A. in Speech-Language Pathology, as listed above (or equivalent), must be completed, including SPCH 230 Disorders of Fluency, 3 s.h., and SPCH 253, Swallowing Disorders in Children and Adults, 3 s.h., are required in lieu of 6 s.h. of electives.

SPCH	264	Speech and Language Pathology in the Schools, 2 s.h.
FDED	247	The Family as Educator: Multicultural Dimensions, 3 s.h. or
	248	Multicultural Education in the Metropolitan Area, 3 s.h.

Three (3) of the following 1 s.h. Special Topic Seminars:

SPCH	263A	Augmentative & Alternative Communication, 1 s.h.
	263E	Family Centered Intervention for Communication Disorders, 1 s.h.
	263H	Speech and Language Development in Children with Cochlear Implants, 1 s.h.
	263I	Early Intervention: Clinical Practice Guidelines for Speech Language Pathologists, 1 s.h.

This M.A. degree prepares students for eligibility toward NYS teacher certification.

In addition to the above coursework, students are required to complete a 1 hour seminar regarding OSHA's Universal Precautions for blood borne pathogens, a 2 hour seminar regarding identification and reporting of Child Abuse and Child Abduction, and a 2 hour seminar focusing on school violence prevention and intervention.

In their final semester of study, students must successfully complete all required NYS teacher examinations. Following completion of the M.A. degree and the teacher education requirements, students should submit their application materials directly to Hofstra's Certification Office.

The following Advanced Certificate is available for students who have completed an M.A. in Speech-Language Pathology and who hold a teaching certificate for Teaching Students With Speech and Language Disabilities.

GRADUATION REQUIREMENTS

1. Completion of all program requirements.
2. A minimum grade point average of 3.0 in overall graduate course work.

BILINGUAL EXTENSION: SPEECH-LANGUAGE PATHOLOGY *(14 s.h.)*

This 14 s.h. Advanced Certificate includes all requirements for Option II of the M.A. in Speech-Language Pathology, as listed above, and must include:

SPCH	260S	Practicum II: Speech-Language Intervention and Assessment (Preschool, K-12), 2 s.h.
	262S	Practicum IV: Teaching Students with Speech-Language Disabilities in Schools, 2 s.h.
	264	Speech and Language Pathology in the Schools, 2 s.h.
	265	Language Diversity Across the Lifespan, 3 s.h.
	266	Communication Assessment and Intervention for Bilingual Students, 3 s.h.
FDED	247	The Family as Educator: Multicultural Dimensions, 3 s.h.
	248	Multicultural Education in the Metropolitan Area, 3 s.h.

and three (3) of the following 1 s.h. Special Topic Seminars:

SPCH	263A	Augmentative & Alternative Communication, 1 s.h.
	263E	Family Centered Intervention for Communication Disorders, 1 s.h.
	263H	Speech and Language Development in Children with Cochlear Implants, 1 s.h.
	263I	Early Intervention: Clinical Practice Guidelines for Speech Language Pathologists, 1 s.h.

This coursework also prepares students for eligibility toward NYS teacher certification.

In their final semester of study, students must successfully complete all required NYS teacher examinations and NYS language proficiency examinations. Following completion of the M.A. degree and the teacher education requirements, students shall submit their application materials directly to Hofstra's Certification Office.

(SPCH) COURSES

SPCH 203 Periodically 3 s.h.
Seminar: Speech and Hearing Sciences
Acquaints students with the literature and research in the areas of acoustic phonetics, psychological and physiological acoustics, with emphasis placed upon clinical application. Preliminary consideration is given to the parameters of the acoustic signal and to basic measurement techniques. Subsequently, students develop individual topics which serve as discussion topics during the course.

SPCH 204 Spring 3 s.h.
The Neural Bases of Speech, Language and Hearing
Explores how human communication is predicated on neuronal communication. Examines brain anatomy and physiology as they relate to speech, language and hearing. Topics include: embryonic development, neuronal communication, perceptual and motor responses produced by different neuronal interconnections.
Prerequisite: undergraduate course in anatomy and physiology. (Formerly Neurolingusitics; Neurologic Bases of Communication Processes.)

SPCH 205 Fall 3 s.h.
Physiological and Psychological Acoustics
Detailed study of the factors underlying the perception of auditory stimuli. Topics include psychological scaling, loudness, pitch, binaural hearing, masking, adaptation, absolute threshold and differential thresholds; the transformer action of the middle ear, the analytical function of the cochlea, the electrical activity of the auditory system, cortical responsiveness to complex stimuli as well as theories of hearing.
Prerequisite: SPCH 103 or equivalent.

SPCH 206 Spring 3 s.h.
Experimental Phonetic
Examination of the instrumentation used to study the production and perception of voice and speech signals. Emphasis placed on acoustic and physiological methods of speech analysis. Laboratory equipment is utilized in individual student projects.
Prerequisite: permission of instructor.

SPCH 207 Fall, Spring 3 s.h.
Research Seminar: Speech and Hearing
Critical analysis of research problems, measurement of data, and interpretation of research in the field of speech, language and hearing, with emphasis on student's individual projects.

SPCH 209 Fall, Spring 3 s.h.
Developmental Psycholinguistics
An in-depth study of the multiple factors affecting spoken and written language development. Developmental variation, cognitive, cultural, pragmatic, environmental and familial aspects are explored. Research in developmental psycholinguistics, literacy, bilingualism, and discourse processes is examined. Students are required to complete field research of language behavior.
Prerequisite: SPCH 102 or equivalent; or permission.

SPCH 210 Periodically 3 s.h.
Discourse Processes: Computer Analysis
Methods of computer analysis of normal and disordered discourse from preschool age to adults. Course consists of lecture, discussion and hands-on computer lab experience. Students are required to obtain, electronically transcribe and analyze samples of discourse using the SALT program (Systemic Analysis of Language Transcripts).
Prerequisite: SPCH 209 or permission. (Formerly Computer Methods of Analysis; Language Behavior; Discourse Processes.)

SPCH 212 Summer 3 s.h.
Communication in Healthy Aging
Focuses on the biologic, psychologic and physiologic changes that affect communication. The natural aging processes that underlie speech, language and hearing are contrasted with pathological changes in communication. Cultural and linguistic influences are explored. Available to graduate students in Audiology, Speech-Language Pathology, Gerontology, Psychology, Sociology; Counseling, Special Education, and Rehabilitation.

SPCH 226 Fall, Spring, Summer 1 s.h.
Clinical Practicum: Audiology
Supervised practice and seminar at the Hofstra Speech-Language-Hearing Clinic. Students administer evaluations and provide treatment to individuals of different ages from infancy through adults. A weekly seminar focuses on methods and models for diagnosis and management of children and adults. Seminar topics include screening procedures, tympanometry, ABR and OAE, CAP, habilitation and educational issues, hearing aids, disabilities related to hearing impairment. Legal, ethical, and sociocultural and linguistic issues are explored. In order to meet the requirements of this practicum, students should be available at least 100 hours/semester, SPCH 226 may be repeated once for credit with permission of graduate program director. May not be taken on a Pass/Fail basis.
Prerequisites: 25 hours of observation, undergraduate major in communication disorders or SPCH 137 or equivalent. For Audiology majors must be taken concurrently or following 227.

SPCH 227 Fall, Spring 3 s.h.
Introduction to Audiometric Instrumentation and Testing
Provides intensive study (via hands-on practice, readings and discussion) of tests and procedures relevant to the differential diagnoses of hearing disorders, including interpretation of findings and report preparation. A minimum of 28 laboratory hours with accompanying lecture is required (hours to be arranged). May not be taken on a Pass/Fail basis.
Prerequisite: SPCH 137 or permission of instructor.

SPCH 228 Fall, Spring, Summer 1 s.h.
Introductory Speech-Language Practicum (Preschool, K-12, Adult)
Supervised practicum at the Hofstra Speech-Language-Hearing Clinic. Students administer evaluations and provide treatment to individuals at different developmental levels from culturally and linguistically diverse populations. In order to meet the requirements of this practicum, students must be available at least 100 hours/semester. A weekly seminar focuses on professional issues—ethical and legal issues, theories, and applications of method for diagnosis, clinical and education intervention (e.g., ethical and legal issues, history, data collection and interpretation, and outcomes) and various disorders (e.g., language, phonologic, fluency, neurologic, and literacy deficits). SPCH 228 may be repeated once for credit with permission of graduate program director.
Prerequisites: 25 hours of observation, undergraduate major in communication disorders or SPCH 209 and three graduate semester hours in either speech disorders or language disorders prior to registration. Must be taken concurrently with SPCH 229 or permission. (Formerly Introduction to Clinical Practicum; Introductory Speech-Language Practicum.)

SPCH 229 Fall, Spring 3 s.h.
Evaluation and Interpretation of Communication Disorders
Provides an intensive study of standardized and non-standardized procedures relevant to the evaluation of speech, language and literacy at different developmental levels. Impact of sociocultural issues are addressed. An ethnographic approach guides interpretation of events, report writing, and intervention planning. In addition to lectures, students are required to complete a minimum of 10 laboratory hours. Laboratory fee, $10.
Prerequisites: SPCH 132, 135, 209, practicum, or permission of instructor.

SPCH 230 Spring 3 s.h.
Disorders of Fluency
In-depth investigation of normal vs. disordered fluency, including the development of fluency in children; physiological processes involved in fluent and disfluent speech across the life span; theoretical perspectives regarding etiology, socio-cultural issues, and approaches to clinical and educational management.

SPCH 232 Fall 3 s.h.
Disorders of Phonology and Articulation
Exploration of the problems in acquisition and production of the sound system of English at different developmental levels. Theoretical and applied perspectives are investigated. Techniques of evaluation and remediation are explored using various theoretical models. Cultural and linguistic differences are discussed.

SPCH 235 Summer I and II combined 3 s.h.
Introduction to Speech-Language-Hearing Disorders
An intensive study of theories, clinical manifestations and etiologic factors associated with the full scope of communication disorders. Cultural and linguistic factors are addressed. Course is for nonmajors and for students who have not formerly studied speech, language, and hearing disorders. Students completing prerequisites for the M.A. Programs in Audiology or Speech-Language Pathology must register for SPCH 235 and 235L concurrently. Prerequisite: graduate status. May not be used for credit toward the M.A. in Speech-Language Pathology or Audiology. (Formerly Introduction to Speech, Language and Hearing Disorders; Introduction to Speech and Language Disorders.)

SPCH 235L Summer I and II combined 2 s.h.
Clinical Observation and Report Writing
Course is required for students seeking supervised clinical observation to satisfy ASHA's requirements. Students learn how to observe, and to write reports and correspondence for varied audiences (educators, physicians, family members, psychologists, etc.) Course is designed for students completing prerequisites for and pursuing entry into the M.A. program in Audiology or Speech-Language Pathology. At least 25 hours of supervised clinical observation are completed at Hofstra's Speech-Language-Hearing Clinic and affiliated off-campus facilities. Clinical observations are integrated with the study of communication disorders. Must be taken concurrently with SPCH 235.

SPCH 237 Fall 3 s.h.
Advanced Audiology
Advanced pure tone and speech audiometry and tests in the differential diagnosis of auditory disorders. Evaluation of nonorganic hearing loss. Analysis of clinical data. Implications of cultural and linguistic differences for audiologic assessment.
Prerequisite: SPCH 137 or permission of instructor.

SPCH 237A Fall 3 s.h.
Advanced Audiology I
An in-depth exploration of the basic audiological evaluation. Theoretical and practical issues regarding pure tone testing, speech threshold and speech discrimination testing, and immittance testing are examined. Careful attention is given to goals of assessing the site of auditory lesion and the extent of the communicative handicap. Logic and application of clinical masking, and the effects of cultural diversity and aging on test dynamics are emphasized. Credit given for this course or SPCH 237, not both.

SPCH 237B Spring 3 s.h.
Advanced Audiology II
Advanced examination of the procedures and principles of differential diagnosis in audiology. The course analyzes the range of specialized "site of lesion" tests for both peripheral and central auditory pathologies, with respect to their physiological underpinnings, procedural methodologies, and implications for diagnosis. Finally, the course explores variations in testing related to patient variables such as aging and cultural diversity.
Prerequisite: SPCH 237A.

SPCH 238 Spring 3 s.h.
Seminar: Auditory Pathologies
In-depth investigation of congenital and acquired pathologies which directly or indirectly affect the auditory system. Disorders, diagnoses, treatments, rehabilitation and prognoses of various disorders are discussed.

SPCH 239 Once a year 3 s.h.
Pediatric Auditory Assessment
Differential diagnosis of auditory disorders in children. Tests and techniques in the identification of deafness in infants and young children including behavioral and electrophysiological measurements. Impact of cultural factors and auditory disorders on speech and language development is discussed.
Prerequisite: SPCH 137 or equivalent.

SPCH 240A Spring 3 s.h.
Introduction to Hearing Aids and Related Instrumentation
This introductory course examines the theoretical foundations of current hearing aid technology. The history of amplification and its present status in the United States and abroad is examined. The physical and electro-acoustic characteristics of hearing aids are studied. Students develop an understanding of the advantages of various types of hearing aid technology. Classes consist of lectures and hands-on experience in selecting amplification devices. Students conduct electro-acoustic measurements, make earmold impressions, hearing aid modifications and perform basic hearing aid repair techniques. May not be taken on a Pass/Fail basis. Credit given for this course or 240, not both.

SPCH 240B Fall 3 s.h.
Advanced Hearing Aids and Related Instrumentation
This advanced course examines the theoretical and clinical issues related to hearing aid candidacy and fitting. Research is presented on self-assessment scales used to assess hearing aid benefit. The selection and evaluation of assistive devices are discussed. Course includes discussion of analog, digital and programmable aids. Business aspects of hearing aid dispensing is highlighted through model dispensing programs. Case analysis is used extensively throughout the course to illustrate successful and unsuccessful hearing aid fittings. Field trips to hearing aid manufacturing companies and an assistive device center are required for this course. May not be taken on a Pass/Fail basis. Credit given for this course or 240 not both.

SPCH 241 Fall, Spring 3 s.h.
Pediatric Communication Disorders: Birth to Five
In-depth study of communication behaviors of at risk and disordered infants, toddlers, and preschoolers. The impact of speech and language disorders on the development of emergent literacy is explored. Clinical and educational implications of neurologic, environmental, psychologic, cultural, and social phenomena are investigated. Students are required to complete field research comparing infants and children with and without communication disorders.
Prerequisite: a course in either normal language development, theories of development, or permission of instructor. (Formerly Disorders of Early Child Language.)

SPCH 242 Fall, Spring 3 s.h.
Aphasia and Related Disorders
An exploration of communication disorders that result from left brain damage, right brain damage, and diffuse neurological injury. Linguistic, sociocultural, and neuropsychological perspectives are examined. Clinical management and differential diagnosis are considered with respect to the multicultural community. (Formerly Aphasia.)

SPCH 243 Spring 3 s.h.
Language, Learning, and Literacy: Development and Disabilities From Kindergarten Through Adulthood
An intensive study of the connections between oral and written language, literacy development, discourse processes, academic skills, and their sociocultural significance. Theoretical models of intervention and the influence of diverse linguistic and cultural factors are addressed. Students are required to complete field research of persons who have language-learning disabilities.
Prerequisites: a course in either normal language, reading, writing, psychologic processes, or permission of instructor. (Formerly Language Disorders and Learning Disabilities; Language Disorders and Learning Disabilities: Kindergarten Through Adulthood.)

SPCH 244 Summer 3 s.h.
Cleft Palate and Cranio-facial Disorders
The incidence, etiology, symptomatology of the various types of cleft lip and palate and cranio-facial disorders. A comprehensive view of children and adults with cleft palate, concomitant component, and manifestations of cranio-facial disorders including genetic, cultural and environmental factors. Presentation of the team approach to habilitation, with consideration of the significance and roles of participating members. Statement and study of the accompanying speech syndromes and the major methods of speech habilitation.

SPCH 246 Periodically 3 s.h.
Environmental Noise and Industrial Audiology
Intensive study of the problems related to noise in the environment and work place. Topics covered include effects of noise on man, noise measurement and analysis, basic architectural acoustics, community and industrial problems, governmental regulations and programs for the conservation of hearing.

SPCH 247 Fall 3 s.h.
Aural Rehabilitation Across the Age Span
Discusses theoretical underpinnings and practical applications of aural rehabilitation methods appropriate to hearing impaired populations of different ages. Auditory training, language stimulation, speech reading and speech conservation procedures are explored in detail. The role of hearing aids, assistive listening devices, classroom amplifiers and cochlear implants and cultural issues in aural rehabilitation is discussed.

SPCH 248 Annually 3 s.h.
Motor Speech Disorders
In-depth study of neuromotor speech disorders in children and adults. Maturational, biological and neuropathological aspects of oral motor function are explored. Emphasis is placed on differential diagnosis and the use of instrumentation to measure motor speech behavior. Intervention is discussed with reference to the use of augmentative systems in persons with severe motor speech dysfunction.

SPCH 249 Fall 3 s.h.
Voice Disorders
Consideration of etiology, symptomatology and rehabilitation of organic, psychogenic, neurogenic and other voice disorders, including laryngectomy. Emphasis placed on physiological, acoustic and aerodynamic aspects of the normal and disordered voice signal across the life span, as well as on emotional, cultural, and other factors influencing vocal function.

SPCH 250 Spring 3 s.h.
Objective Procedures in Audio-Vestibular Diagnosis
Exploration of current technological advances in objective diagnosis of auditory and vestibular disorders. Brainstem Evoked Response Audiometry (BSER), Electronystagmography (ENG), and other objective tests studied in theory and practice via lectures, demonstrations and hands-on workshops. May not be taken on a Pass/Fail basis.
Prerequisites: SPCH 237, 205 or permission of department.

SPCH 250A Fall 3 s.h.
Objective Procedures in Audiological Diagnosis I
This course explores current technological advances in assessment of the patient manifesting symptoms of vertigo. Participants study the anatomy, function, dysfunction and diagnosis of the inner ear's vestibular mechanism, and peripheral and central vestibular systems. The course features lectures, demonstrations and hands-on workshops using Electronystagmography (ENG). Credit given for this course or SPCH 250, not both.

SPCH 250B Once a year 3 s.h.
Objective Procedures in Audiological Diagnosis II
An intensive study of auditory evoked potentials, their measurement by means of Auditory Brainstem Response technology (ABR), and their role in the objective assessment of hearing sensitivity and diagnosis of audiologic pathologies of the peripheral and central auditory system. The course features lectures, demonstrations, and hands-on workshops using ABR instrumentation. The course also explores Otacoustic Emissions (OAE) technology. Participants pay special attention to pediatric and geriatric populations.
Prerequisite: SPCH 250A.

SPCH 251A Fall, Spring 1-2 s.h.
Independent Studies
Scholarly readings and independent research focused on a single topic from student's major area. To be arranged with student's major adviser.
Prerequisite: permission of adviser and graduate program director is contingent on approval of student's research proposal.

SPCH 252 Fall, Spring 3 s.h.
Independent Studies
In-depth research focusing on a specialized area of the student's major. Study includes conferences with a faculty mentor resulting in a substantive research paper. To be arranged with the student's major adviser.
Prerequisite: permission of adviser and graduate program director contingent on approval of a student's research proposal.

SPCH 253 Annually 3 s.h.
Swallowing Disorders in Children and Adults
Examination of the neuroanatomical and neurophysiological basis of the deglutition process. Intensive study of the normal process at different developmental levels. Investigation of biological and physiological features of deglutition through lectures, reading, research and films. Disorders affecting prefeeding, feeding and swallowing abilities. Etiology, symptomatology, assessment and intervention are discussed, along with consideration of cultural and dietary issues. May not be taken on a Pass/Fail basis.

SPCH 260A Fall, Spring, Summer 2 s.h.
Clinical Methods and Procedures I (Audiology)
A practicum at affiliated off-campus hospitals and/or clinical facilities, completed along with a weekly on-campus seminar. Students gain hands-on experience in clinical management of individuals at different developmental levels, who have hearing impairments. Issues investigated in a seminar include specialized hearing aid measurement such as Real Ear and programmable hearing aids. Selection and fitting of aids, ear mold modification, hearing aid orientation and counseling issues are discussed. May be repeated once for credit with permission of graduate program director.
Prerequisites: SPCH 226, 227.

SPCH 260S Fall, Spring, Summer 2 s.h.
Practicum II: Speech-Language Intervention and Assessment (Preschool, K-12)
A minimum of 100 hours of practicum at affiliated off-campus schools and clinical facilities, completed along with a weekly on-campus seminar. Students gain hands-on experience in the clinical and educational management of individuals with communication disorders, at different developmental levels, reflecting cultural diversity of the local geographic area. Issues explored in the seminar include interdisciplinary interaction, cultural and linguistic diversity, literacy dysphagia, and models of intervention. May be repeated once for credit with permission of graduate program director.
Prerequisites: SPCH 228 and 229, and a graduate course in pediatric disorders. May be used for bilingual extension credit, by advisement. (Formerly Clinical Methods and Procedures I (Speech-Language Pathology; Methods and Procedures for Speech- Language Intervention I.)

SPCH 261A Fall, Spring, Summer 2 s.h.
Clinical Methods and Procedures II (Audiology)
A clinical externship and seminar for audiology majors in rehabilitation and/or assessment of auditory disorders. Supervise clinical practice with individuals at different developmental levels takes place on campus and at off-campus affiliated hospital and clinical sites. The seminar investigates special diagnostic procedures including ENG, posturography, vestibular disorders, ABR & OAE methods and models. Implications of cultural and linguistic diversity are addressed. May be repeated once for credit with permission of graduate program director.
Prerequisite: SPCH 260A.

SPCH 261S Fall, Spring, Summer 2 s.h.
Practicum III: Management of Speech-Language Disorders
A 100 hour practicum at affiliated off-campus schools and/or clinical health care facilities. The speech-language practicum is taken concurrently with a weekly on-campus seminar. Students obtain direct contact experience with individuals from different cultural and linguistic backgrounds. Students provide clinical and/or educational management of individuals at different development levels, who have communicative disorders. The weekly seminar explores issues such as medical speech-language pathology, coma, evaluation and treatment techniques (e.g. AAC, motor speech, laryngectomy, MS, etc.). May be repeated once for credit with permission of graduate program director.
Prerequisites: SPCH: 260S, 242, 241 or 243. (Formerly Clinical Methods and Procedures II (Speech-Language Pathology; Methods and Procedures II: Management of Speech-Language Disorders.)

SPCH 262A Fall, Spring, Summer 2 s.h.
Advanced Seminar: Clinical Management (Audiology)
An advanced seminar and clinical externship for audiology majors in management of auditory disorders. Students are responsible for development of alternative assessment and intervention techniques. Seminar topics are varied each semester based on current clinical research and technology; topics include cerumen management, auditory neuropathy, and interoperative monitoring. Implications of cultural and linguistic diversity are addressed. Supervised clinical practice with individuals at different developmental levels takes place on campus and at off-campus affiliated health care and clinical sites. May be repeated once for credit with permission of graduate program director.
Prerequisite: SPCH 261A.

SPCH 262S Fall, Spring, Summer 2 s.h.
Practicum IV: Teaching Students With Speech-Language Disabilities in Schools
A minimum of 150 hours of supervised student teaching completed along with a seminar. This course is required for students seeking New York State certification as a Teacher of Students With Speech and Language Disabilities. This advanced seminar includes in-depth study of school culture, technology in the classroom, methods and materials, intersection with parents and the community, policies and issues re: CSE and CPSE models of school service delivery. Course content focuses on individuals at various developmental levels and individuals from different cultural backgrounds. Students are responsible for development of innovative strategies for educational management. Supervised practice takes place on campus and at off-campus affiliated educational facilities including preschool and K-12 settings. May be repeated once for credit with permission of graduate program director. May be used for Bilingual Extension credit, by advisement.
Prerequisites: SPCH 261S and SPCH 241, 243, 264. (Formerly Advanced Seminar: Clinical Management; Advanced Seminar: Management of Communication Disorders (Speech-Language Pathology.)

SPCH 263, A-Z **Periodically** **1 s.h. each**
Special Topics Seminar: Speech-Language-Hearing Sciences
Each special topics seminar covers current theoretical and/or applied material in speech-language pathology. Examples of seminar offerings include Augmentative Communication, Traumatic Brain Injury, Family-Centered Interventions, Brain and Language, Early Intervention, Feeding and Swallowing in Children, Feeding and Swallowing in Adults. Students may choose three of these 1 s.h. Special Topics Seminars and one 3 s.h. elective to satisfy their 6 s.h. elective requirement. Students seeking New York State teacher certification are required to complete asterisked courses or to provide documentation of equivalency. Consult the department for specific course information.
Prerequisites: at least 12 s.h. of graduate work in SLP.

SPCH 264 **Spring, Summer** **2 s.h.**
Speech and Language Pathology in the Schools
This course explores the culture, research and professional practices that guide decision making in school settings. Topics include: educational laws and regulations, philosophies of education, models of service delivery, individualized educational programming, rights and responsibilities of teachers and other staff, establishing entry and exit criteria for speech-language services, family education, language and curriculum development, relating oral language to written expression, multicultural and bilingual considerations. This course is required for students seeking New York State certification as a Teacher of Students With Speech and Language Disabilities. May not be taken on a Pass/Fail basis.
Prerequisites: SPCH 228, 209, 260A, 241, 243, or equivalent. (Formerly SPCH 139, Organization of a Speech and Hearing Program in Elementary and Secondary Education.)

SPCH 265 **Periodically** **3 s.h.**
Language Diversity Across the Lifespan
An in-depth study of the multiple factors affecting simultaneous and successive bilingualism across the lifespan. Sociolinguistic, psycholinguistic, developmental, and pedagogical perspectives are examined. Students are required to complete field research of communication behavior involving more than one language. Required for students completing the Bilingual Extension and New York State certification eligibility for Teacher of Students with Speech-Language Disabilities. May not be taken on a Pass/Fail basis.
Prerequisite: SPCH 209.

SPCH 266 **Periodically** **3 s.h.**
Communication Assessment and Intervention for Bilingual Students
Graduate students develop knowledge about methods and tools for assessment, and methods and materials for teaching language and communication skills with students who are bilingual or who have limited English proficiency. Assessment and intervention issues focus on language and literacy, parent education, and the language arts in relation to one's native language. Required for graduate students seeking the Bilingual Extension for Speech- Language Pathology and certification as Teacher of Students With Speech and Language Disabilities. No degree credit. May not be taken on a Pass/Fail basis.
Prerequisites: SPCH 229, 264, and 265.

SPCH 301-302 **Fall, Spring** **3 s.h. each**
Master's Essay
Guided independent readings and preparation of the master's thesis and related research.

HCLAS ELECTIVE COURSES

ANTHROPOLOGY (ANTH) COURSES

ANTH 200 **Once a year** **3 s.h.**
Fundamentals of Anthropology
Scope and aims of modern anthropology. Human origins, race, prehistory, language, culture and the diversity of human societies. General principles and theory.

ANTH 214 **Periodically** **3 s.h.**
Aging in Cross-Cultural Perspective
A comparative overview of the origins and development of institutions and customs pertaining to aging in a variety of cultural settings, both western and nonwestern, traditional and modern.

ANTH 215 **Periodically** **3 s.h.**
Introduction to Gerontology: Aging in American Life
Explanation of the social and cultural dimensions of aging in America. Included are societal assumptions about age, family contexts, work environments, aging through popular literature and culture, and social policy issues.

ANTH 218 **Periodically** **3 s.h.**
People and Cultures of Latin America
An integrated study of the institutions, culture groups and literary traditions of Spanish America. Social and economic functions of the "hacienda," Church, politics, university and others in combination with literary works that exemplify these topics. Specific regions or countries are examined individually. Same as SPAN 218.

ANTH 250 **Periodically** **1-3 s.h.**
Readings in Anthropology
Independent study on special topics in anthropology.
Prerequisite: permission of chairperson.

ANTH 272 **Periodically** **3 s.h.**
Sociology of Juvenile Corrections
Analysis of the social organization of juvenile corrections and rehabilitation in the United States. Includes: visiting lecturers, field trips and class lectures on the historical development of juvenile corrections; the social obstacle to rehabilitation of minors; class struggle and youth crime and correction; corrections as a career; social implications of a separate rehabilitation system for youth and related areas. An exploration of alternatives.

ANTH 288 **Periodically** **3 s.h.**
Advanced Seminar in Anthropology
Course deals with innovative or advanced topics and may include field projects. Students prepare individual projects on a research theme. May be repeated for credit when topics vary.

ASTRONOMY (ASTR) COURSES

ASTR 280 **Periodically** **3 s.h.**
Workshop in Astronomy
The sky around us; early history; the Copernican revolution; the solar system; the sun and stars; star clusters, nebulae and galaxies; the big bang and after-effects; life in the universe. Intended for elementary, middle school and secondary school teachers.
Prerequisite: a methods course in the teaching of science or permission of the instructor.

DRAMA (DRAM) COURSES

DRAM 250 **Periodically** **1-3 s.h.**
Independent Studies
Designed to permit students to pursue an individualized plan of *Research or creative work may be undertaken with periodic conferences set up to discuss the progress of the project.
Permission of instructor.

DRAM 277,278 **January, Spring, Summer** **3 s.h. each**
Theater Methods in Educational Dramatics
Designed especially for practicing teachers. First semester: theories and methods of creative dramatics, emphasizing the use of drama in the classroom as a teaching and expressive medium. Major attention is devoted to the lower grades. Second semester: theories and methods of school dramatics leading toward formal presentation, emphasizing the principal phases of production. Major attention is devoted to the upper grades.

ECONOMICS (ECO) COURSES

ECO 201 **Fall, Spring, Summer** **3 s.h.**
General Economics
An intensive survey of basic economics. Open to matriculated M.B.A. students. No degree credit for M.B.A. students.

ECO 232 **Periodically** **3 s.h.**
Macroeconomic Theory
Theory and measurement of variations in output, employment and income; causes and control of economic fluctuations; economic growth. Not open to students who have already taken an intermediate macroeconomic theory course.

ENGINEERING (ENGG) COURSES

ENGG 201 Fall 3 s.h.
Quantitative Methods for Decision Making
Introduction to various operations research tools and techniques used in decision making. Linear Programming methods, including the simplex method and duality as well as the transportation and assignment problem, will be studied in order to provide students with an understanding of mathematical optimization methods. Additional topics, including forecasting and inventory control methods, will be covered so as to familiarize students with problem solving methods for decision making. Software tools will be utilized, and examples will be based on typical engineering management decisions.

ENGG 202 Fall 3 s.h.
Probability and Statistics for Engineering Managers
Introduction to the statistical methods used for quantitative analysis by managers. Probability theory will be used to demonstrate the theories of randomness and variability. Statistical analysis methods, including: confidence interval calculation, hypothesis testing, and regression analysis, will then be covered in order to provide students with the analytical tools useful for and necessary of managers. Examples from engineering will be used to demonstrate the concepts and statistical methods.

ENGG 203 Fall 3 s.h.
Project Management
An introduction to the concept of the project management as a unique management approach. Since projects are the focus of many engineering ventures, it is especially important that engineering managers are capable of addressing the variety of challenges a project presents. Concepts such as project organizational design, the strategic context of projects, project leadership and control, project evaluation, and stakeholder management will be discussed. Specific tools for the management of projects, including, but not limited to, software packages will be demonstrated and used. The various aspects of projects, such as directing, planning, and controlling, will be studied through the use of case studies.

ENGG 204 Spring 3 s.h.
Accounting and Finance for Engineering Managers
A comprehensive overview of the concepts of financial and managerial accounting, focusing on accounting systems, statements, and reports along with the analysis of these reports. Analysis of balance sheets, income and retained earnings sheets, and statements of cash flows will be covered. The ethical dimensions of utilizing financial data for decision making will be discussed. Case studies and the analysis of publicly held companies will be employed in order to demonstrate and reinforce the concepts of financial decision making.

ENGG 205 Spring 3 s.h.
Total Quality Management
An examination of the concept of quality in the context of the business world. A multitude of tools with an emphasis on quantitative methods, designed to insure and maintain quality will be studied in depth including: analysis of variance, statistical quality control, benchmarking, and ISO certification. Also, the theories of Deming, Juran, and others that have added significantly to the study of quality will be covered as well in order to provide a historical and contemporary look at quality in industry. Emphasis will be placed on the engineering aspects of the measurement and maintenance of quality.
Prerequisite: ENGG 202.

ENGG 209 Once a year 3 s.h.
Wave Propagation and Distributed Systems
General features common to wave motion, wave propagation, reflection and generation are developed and applied to acoustics, electromagnetics and optics, elastic and hydrodynamic waves. Dispersion, diffraction and coherence are also studied. Applications to systems for energy and information transfer.
Prerequisites: PHYS 12A, MATH 144 or equivalent.

ENGG 210 Spring 3 s.h.
Engineering Management Capstone Project
The capstone design project requires students to take a team-based multi-disciplinary approach and address an industry-based engineering management problem. The design project will require the integration of the many tools utilized by engineering managers as taught in the coursework of the engineering management program. Course deliverables will include a written report and oral presentation demonstrating that appropriate research and analysis support the recommendations put forth by the students. This course is designed to be the culmination of students' studies in engineering management. (Normally taken for 3 credits. Must be taken for 6 credits, if necessary, to meet AACSB guidelines governing the ratio of Engineering credits to Business credits in this program. See Program Requirements, above.)
Prerequisites: ENGG 201, 202, 203.

ENGG 212 Once a year 3 s.h.
Information Systems Analysis
Transform methods applied to the analysis of linear and nonlinear systems that process information signals. Study of optimum linear systems to minimize noise. Two-dimensional systems for image transmission and processing. Multidimensional transforms for frequency analysis of optical filtering and imaging systems.
Prerequisites: ENGG 177 or equivalent; ENGG 209 or 111; ENGG 171 or 185 or MATH 137 or 241.

FRENCH (FREN) COURSES

FREN 200 Periodically 3 s.h.
History of the French Language
The evolution of the language from Latin to modern French.

FREN 201 Periodically 3 s.h.
The French Language
The phonetic and phonological structure of French. Exercises in phonetics in the language laboratory.

FREN 202 Periodically 3 s.h.
Studies in French Civilization
A view of the contemporary period through representative texts revealing aspects of present-day France. Supplemented by films and recordings.

FREN 210 Periodically 3 s.h.
Humanism and Renaissance

FREN 211 Periodically 3 s.h.
Studies in Classicism

FREN 212 Periodically 3 s.h.
Studies in the Enlightenment

FREN 213 Periodically 3 s.h.
Literature of the 19th Century
Study of the novel, poetry or criticism.

FREN 214 Periodically 3 s.h.
Literature of the 20th Century
Study of the novel, the theater or poetry from 1900 to the present.

FREN 221-226 Periodically 3 s.h. each
Special Topics
Intensive study of the language or a major author, movement or literary genre. Subjects to be announced.

FREN 301 Periodically 3 s.h.
Master's Essay
This course represents a department member's guidance and sponsoring of a student who undertakes to write a master's essay. In the manner of the master's thesis, the essay is expected to show thoroughness of scholarship. The student may present an original translation together with a substantial scholarly introduction and footnoted variants and explanations. Material for which prior translations exist will not be acceptable. Credit will be given when the essay is approved by appropriate members of the department.

HISTORY (HIST) COURSES

HIST 235 Once a year 3 s.h.
Studies in Long Island Regional History
Long Island from the native Indian inhabitants and early Dutch and English settlements to present day suburbs, the New York metropolis and exurbs. Variety of topics selected by the instructor. Introduction to methods and sources for local history: family history, artifacts and material culture, and oral history. Students are encouraged to study local subjects in relation to regional and national patterns with attention to both similarities and differences. Open to all graduate students.

History Reading Courses:
These courses are designed to permit students to pursue an individualized plan of reading in subject areas of interest under the guidance of a member of the history faculty. Students prepare a list of suitable readings in consultation with their tutor with whom they will confer periodically about the progress of their work. Limited to those who have attended at least one semester as a matriculated student in the M.A. program in history and has been accepted for a reading course by a member of the department before registration. Students are normally expected to use sources in the language of the area which they are studying.

HIST 251, 252 Fall, Spring 3 s.h. each
Readings in American History

HIST 253, 254 Fall, Spring 3 s.h. each
Readings in European History

HIST 291, 292 3 s.h. each
Special Studies in History
Studies in periods, personalities on themes in history. Subjects to be announced yearly.

HIST 255, 256 Fall, Spring 3 s.h. each
Readings in Russian History

MUSIC (MUS) COURSES

MUS 231 Periodically 3 .s.h.
Jazz Pedagogy
A creative study of Jazz Pedagogy for Elementary and Secondary Music Educators through recorded literature, analysis, composition, arranging, and performance. A strong emphasis will be placed on creative participation and research to provide a strong foundation in the teaching of Jazz as an art form along with a deeper appreciation for its syntactical structure and creative possibilities. *Prerequisite: Bachelor's degree in music or permission of the instructor.*