Christine E. Lynn College of Nursing

PhD Program: Cognate Course Descriptions

BIOLOGICAL SCIENCES

Brain Diseases: Mechanism and Therapy (BMS 6736) (molecular level) 3 credits)  
Prerequisite: Permission of instructor  
Discussion of the molecular and cellular basis of brain diseases and of the current status of therapeutic intervention for those diseases.

Practical Cell Neuroscience (BSC 5417C) 3 credits   
Prerequisite: Graduate standing  
The overarching objective of this laboratory course is to provide students with hands-on experience in some of the basic, but essential laboratory skills required in molecular biology and biotechnology. Emphasis is placed on understanding the concepts behind designing and implementing controlled experiments. These techniques involve manipulation of DNA, RNA and protein. These skills are directly transferable to the workplace.

Bioinformatics (BSC 6458C) 4 credits  
Prerequisite: Permission of instructor  
A practical approach to accessing nucleic/protein databases, management of databases, identification of genes, and electronic expression profiling.

Advanced Genetics Lab (PCB 5064L) 3 credits  
Prerequisites: Graduate standing and BSC 1010, BSC 1011 and PCB 3063 with minimum grades of "C-" or better  
This laboratory course is open to advanced undergraduates and graduate students. Students gain significant experience in classical and molecular genetics using two powerful model systems, the roundworm Caenorhabditis elegans and fruit fly Drosophila melanogaster. Experiments are performed to identify morphological and behavioral mutant phenotypes, investigate gene linkage and crossing over, establish dominant versus recessive and sex-linked versus autosomal inheritance and generate genetic maps.  
  
Advanced Molecular Genetics of Aging (PCB 5245) 3 credits  
Prerequisites: Graduate standing and PCB 4023 or equivalent  
An in-depth examination of current theories of aging, molecular pathways modulating aging and major discoveries about aging in mammals and in different model organism, including yeast, C. Elegans, drosophila and mouse.  
  
Neurophysiology (PCB 5835C) 3 credits  
Prerequisite: Graduate standing or permission of instructor  
Neurophysiology brings students closer to understanding neurophysiological signaling at the cellular level and whole animal through the use of actual wet and dry laboratory experiences supplemented with lectures. Focuses on signaling from the perspective of the electrical properties of neurons and their signaling, the basis for all neuronal function. Students learn through both theory and practical laboratory experiences and then translate their findings into modular reports.

Advanced Immunology (PCB 6236) 3 credits   
Prerequisite: PCB 4233  
A study of the chemical and biological natures of antigens and antibodies: their preparation and reactions in vivo and in vitro, their applications in basic science and therapy, and the immunochemical and experimental methods involved with tagged or free immunologic products. It is a lecture course.

Conservation Biology (Special Topics) (BSC 6936) 3 credits

**COMPLEX SYSTEMS AND BRAIN**

**Advanced Neurophysiology Lab (PCB 6837L) 3 credits**  
*Prerequisite: Graduate standing or permission of instructor*  
Advanced neurophysiology brings students closer to understanding neurophysiology signaling at the cellular level and whole animal through the use of actual laboratory experiences. Focuses on signaling from the perspective of single ion channels to cellular synaptic transmission and behavior. The electrical properties of neuronal and their signaling is the basis for all neuronal function.

**Cellular Neuroscience and Disease (PCB 6849) 3 credits**  
*Prerequisite: PCB 3063 and permission of instructor; Corequiste: PCB 4023*  
This course focuses on the cellular aspect of human neurological diseases, analyzing different signaling pathways and connecting malfunctions in them to various neurological disorders.

Cognitive Neuroscience (ISC 5465) 3 credits  
An interdisciplinary survey of the neural basis of cognitive functions such as perception, attention, memory, and language.

**Methods in Complex Systems (ISC 6450) 3 credits**  
Classical statistical analysis and inference of linear systems and how those statistical methods and analysis procedures differ for non-linear complex systems. Topics include fractals, chaos, neural networks, and self-organizing critical systems.

**Cognition and Complex Systems (ISC 6452) 3 credits**  
This course provides an introduction to the scientific study of perception, action, and cognition. It focuses on empirical methodologies related to development and evaluation of theories of mind. Examples are drawn from psychology, computation, linguistics, neuroscience, and philosophy

Computational Neuroscience 1 (ISC 6460) 3 credits  
Prerequisite: Permission of instructor  
Covers the basics of computational neuroscience and introduces many research topics of both biological and artificial neural networks.

**Seminar in Attention (ISC 6932) 3 credits**  
Prerequisite: Permission of instructor  
This course examines attention and its role in perception, cognition, and action. Students read recent research articles dealing with significant issues in this area.

Traumatic Brain Injury (Special Topics) (ISC 6930) 3 credits  
Discussion of special topics in complex systems and brain sciences.

**MEDICINE**

Molecular Genetics of the Cell (GMS 6220) 3 credits  
Prerequisite: BCH 3033 or PCB 3063 or equivalent  
Provides a basic background in cell and molecular biology. Emphasis on human physiology and disease.

Macromolecules and Human Disease (GMS 6301) 3 credits  
Prerequisite: BCH 3033 or PCB 4023 or equivalent  
Explores structure and function of biological macromolecules with emphasis on DNA, RNA and proteins.  
Molecular Basis of Disease and Therapy (GMS 6302) 3 credits  
Prerequisites: BCH 4035 and (PCB 4023 or PCB 4522)  
Explores the molecular basis of selected viral pathogens, genetic diseases and cancer through lectures and presentations by faculty in the College of Science and College of Medicine, Scripps Florida and private industry representatives. Discusses novel technologies aimed at developing therapeutics together with the activity of modern biotechnology in drug development.

**Advanced Molecular and Cellular Biology (PCB 5532) 3 credits**  
*Prerequisites: CHM 2210, PCB 4023, BCH 3033 and permission of instructor*  
Course is designed to provide students with a basic background and advanced topics in cell and molecular biology. Emphasis is placed on human physiology and disease.

**Neurobiology of Addiction (PCB 5844) 3 credits**  
*Prerequisite: Permission of instructor*  
This course provides graduate students with fundamental information on molecular, cellular and neurocircuitry systems in the brain that are responsible for drug addiction. Common neurobiological elements are emphasized that provide novel insights into how the brain mediates the acute rewarding effects of drugs of abuse and how it changes during the transition from initial drug use to compulsive drug use and addiction

Advanced Cell Physiology (PCB 6207) 3 credits  
Prerequisite: Permission of instructor  
Course describes in-depth membrane physiology, intracellular signaling pathways and cellular function, with an emphasis on neurons and human muscle cells (skeletal, smooth and cardiac muscle cells).  
  
Molecular Basis of Human Cancer (PCB 6235) 3 credits  
Prerequisites: Graduate standing and PCB 4023 or BCH 3033 or PCB 6207 with minimum grade of "B-"  
Course covers current concepts and knowledge of cancer, exploring the molecular and cellular mechanisms underlying cancer progression with an aim to understand the processes of tumorigenesis.

**Human Genetics (PCB 6665) 3 credits**  
*Prerequisite: Permission of instructor*  
Designed to provide students with a functional understanding of the field of human genetics as it applies to progressive research and medicine. Emphasizes the integrated understanding and application of Genetic Analysis, Diagnosis and Mechanisms in human disease.

**Molecular Biology of the Cardiovascular System and Cardiac Disease (PCB 6705) 3 credits**  
*Prerequisites: BCH 3034, PCB 4023, or permission of instructor*  
Examination of the molecular biology of cellular function focused on tissue adaptation in cardiovascular disease. Investigation of survival responses to cellular stress in atherosclerosis, cardiac hypertrophy, myocardial ischemia and hypertension.

**ANTHROPOLOGY**

**Seminar in Cultural Anthropology 1 (ANG 6490) 3 credits**  
Cultural theory in historical perspective.

**POLITICAL SCIENCE**

**Middle East Politics (CPO 6407) 3 credits**   
*Prerequisite: Admission to graduate study*  
This course will survey the main crises of the 20th century and will analyze current tensions. Special topics: Islam, Arab-Israeli peace, minorities, human rights, democratization.

**SOCIOLOGY**

**Seminar in Global Environmental Perspectives (SYD 6517) 3 credits**  
*Prerequisite: Admission to graduate study or permission of instructor*  
Examines the connections between society and the environment and between local experiences and global dynamics. Global environmental perspectives, disputes, politics and movements will be analyzed.

**Seminar: Critical Perspectives in Social Theory (SYA 6117) 3 credits**  
*Prerequisite: Admission to graduate study or permission of instructor*  
Through in-depth reading of original texts, social histories, and/or novels/literary works, this seminar critically evaluates the assumptions, concepts, methods and explanations in classical and/or contemporary social theory and examines their relevance for the present time.

**Seminar in Class, Status, and Power (SYO 6535) 3 credits**

A critical analysis of theory and research pertaining to the causes and consequences of structured social inequality.

**BUSINESS**

**Organizational Behavior in Healthcare (HSA 6118) 3 credits**  
*Prerequisite or Corequisite: HSA 6103*  
Study of internal operations of healthcare organizations varying from hospitals to nursing homes, outpatient clinics, and assisted living facilities. Examines issues such as physician credentialing, utilization review, quality of clinical care, and accreditation of services.

**Health Policy (HSA 6152) 3 credits**  
*Prerequisite or Corequisite: HSA 6103*  
An examination of the process of formulating and implementing health policy. Emphasis is on the utilization of health services research in the policy formulation process at the federal level.

**Healthcare Finance (HSA 6175) 3 credits**  
*Prerequisite or Corequisite: HSA 6103*  
Introduces health administration students to the public and private sources of payment for health care in the U.S. Includes Medicare, Medicaid, and managed care options.

**Special Topics: Managerial Epidemiology (HSA 6930) 3 credits**  
*Prerequisite: Permission of Department*Graduate level study of a selected area of health care management. Topics will vary.

Organizational Behavior (MAN 6245) 3 credits  
Prerequisites: Graduate standing  
Understanding and practice in the use of behavioral science concepts for analyzing the behavior of individuals and groups in formal organizations. Concepts will be applied to the analysis and discussion of cases.

**SOCIAL WORK**

**Conflict Resolution (SOW 6158) 3 credits**  
*Prerequisite: Completed M.S.W. Foundation Curriculum*  
MSW practice course where students explore the theoretical basis for a conflict resolution approach and gain experience in how to put the techniques into practice.

**Ethical Issues in Contemporary Social Work Practice (SOW 6296) 3 credits**  
Helps social work students become more effective in dealing with complex ethical issues in professional social work practice.

**PUBLIC ADMINISTRATION**

**Organization and Administrative Behavior (PAD 6106) 3 credits**Analysis of the formal, informal, and societal characteristics of complex human organizations. Use is made of standard theories of organizations as well as of their more contemporary variations. M.P.A. core course.

**Seminar in Organization Theory (PAD 7107) 3 credits***Prerequisite: PAD 6106 or equivalent*Review and critique of both classical and contemporary organization theory literature in public administration; exploration of specific topics related to organization effectiveness and individual behavior. Ph.D. core course.

**Organizational Behavior and Development (PAD 7155) 3 credits**  
*Prerequisite: PAD 7107 or permission of instructor*  
A study of the individual behavior in the organization at the micro and macro levels and of the strategies and methods intended to change the attitudes, values, and structures or organizations so that they can better adapt to new technology, markets, and challenges.

**URBAN AND REGIONAL PLANNING**

**Urban Design (URP 6881) 3 credits**  
Elements, concepts, and methods of urban design. Analysis of urban form; methods of implementation.

**EDUCATION**

**Life Span Development (MHS 6482) 3 credits**  
Examines the major theories of human development across the lifespan and emphasizes the relationship of developmental stages and tasks to the process of normal development. Skills and competencies in fostering resilience in clients are addressed.

**Legal, Ethical, and Professional Issues in Counseling (MHS 6700) 3 credits**  
Legal, ethical and professional issues in competent counseling practice are viewed from national, state and local perspectives.

**Counseling Adolescents (MHS 6423) 3 credits***Prerequisite: Permission of instructor*Course explores methods and special issues involved in counseling adolescents.

**Multicultural Education (EDG 5705) 3 credits**  
An introduction to the field of multicultural education, the multiple dimensions of sociocultural diversity and the implications and challenges for equitable education.

**Foundations of Multicultural Curricula (EDF 6887) 3 credits**  
An overview of the historical, philosophical and social foundations of curriculum in the context of the education of diverse populations. Diverse curriculum theories and their implications for curriculum development, educational policy and pedagogical practice are explored.

**Critical Foundations of Education Inquiry (EDF 7578) 3 credits***Prerequisites: EDA 6415, EDF 6481, or permission of instructor*A survey of the multiple forms of critical theory in educational inquiry and their methodological implications. Students will analyze critical research studies and develop theoretical and methodological frameworks for research involving diverse populations.

**Black Perspectives in Education (EDF 6615) 3 credits**  
Drawing on black epistemologies and research traditions, this course examines historical and contemporary issues and their impact on diverse immigrant and nonimmigrant black populations.

**Race, Class and Gender in Education (EDF 6637) 3 credits**  
Drawing on the principles of critical pedagogy, this course examines how the social constructions of race, class and gender influence educational decision making. Analyzes data related to social diversity and examines the implications for equity in education.

**Foundations of Global Education (EDF 6800) 3 credits**  
Addresses the nature and scope of global education, multiple national cultures, and their impact on educational practice, international responses to common educational issues, and the representation of global social problems in curricula.

**Foundations of Multicultural Curricula (EDF 6887) 3 credits**  
An overview of the historical, philosophical and social foundations of curriculum in the context of the education of diverse populations. Diverse curriculum theories and their implications for curriculum development, educational policy and pedagogical practice are explored.

**Leadership 3: Administrative Processes (EDA 6103) 3 credits**  
*Prerequisite: Graduate standing*  
Explores processes necessary for leadership. Allows practitioners to develop the decision-making, problem-solving, communications, motivation, and conflict management skills for team building, consensus building, and group leadership.

**Health Curriculum in Public Schools (HSC 5317) 3 credits**  
Curriculum needs, scope, and sequence of health education in the public schools.

**Health Behavior, Health Education, and Health Promotion (HSC 6585) 3 credits**  
Provides the fundamental concepts of health behavior within social and psychological contexts. Focus is on applying health behavior theories to development of effective health promotion programs. Health education skills addressing problems relating to lifestyle and physical health will be introduced.

**PSYCHOLOGY**

**Seminar in Personality and Social Development (DEP 6098) 3 credits**   
A critical review of contemporary theory and research on personality and social development in children.

**Advanced Social Behavior (SOP 6079) 3 credits**  
Advanced theory and methods for studying the dynamics of social systems. Topics include social interaction, the social inhibition of pro- and antisocial behavior, group productivity, and dynamic social impact.

Gender/Aggression in Human Development (Special Topics) (PSY 5930) 3 credits  
Selected topics in psychology.