This advanced course in physiological psychology focuses on the biological and environmental forces that shape the development of the brain and behavior. It is assumed that students have a basic understanding of the nervous system and behavior from PSB 3002 or PSB 3340. If you are a little rusty, it would be a good idea to review the basics of nervous system structure and function.

Topics covered in this course will include cellular aspects of brain development, the structure and function of behavior during early development, the roles of hormones in the growth and differentiation of the brain and their effects on behavior, experiential factors in brain development, the relationship between development and evolution, and the relationship between development of the brain and recovery from brain damage. Sensory and motor development and the development of feeding, sexual behavior, language, learning and memory, and socialization and play will be discussed. This course will consider each of these topics from behavior down to the level of the cell, and thus will bridge the gap between traditional courses in developmental biology and developmental psychology.

The Introduction to Physiological Psychology course and Behavioral Neuroscience courses were "fact oriented," i.e., emphasized memorization of basic terms, structures, and functions. Because there is little time for consideration of broader conceptual issues, students often have little intuitive grasp of how everything fits together. I think that this course will help you develop that intuition, because developmental studies of the nervous system and behavior enable us to understand how and why the adult nervous system is organized as it is. The readings are mostly review articles and book chapters written as scientific communications rather than for use as texts, and some of them are fairly difficult. However, I have tried to choose the most succinct, current, and best-written material available.

The class will be conducted as a mixture of lecture and discussion. The amount of overlap between the lecture and readings varies, but the two are usually complementary rather than redundant. I expect you to read the relevant material before coming to class so that you can participate in class discussions. Don't be afraid to speak up. This class works best when there is a lot of student participation, and there aren't that many classes at the University of Florida in which you are encouraged to freely express yourself. Because of the relatively "open" format of the class, I never know exactly how fast we will cover particular topics. However, the exam dates are firm.
Evaluation: Your final grade will be based on three hourly exams and a cumulative final, which will be weighted equally. No make-up exams will be given, but the lowest of your exam grades will be dropped. If you miss an exam, that exam becomes your "drop." If you are happy with your grade based on the three hourly exams, you need not take the final. The exams consist of true-false and essay questions. The essays will be challenging and, I hope, instructive.
TOPICS

Organization of the brain and behavior

Development of the CNS: Overview

Development of the CNS: Cellular processes

Development of the CNS: Epigenesis

Behavioral embryology

Postnatal behavior

Hormones and development of the brain and behavior

Thyroid hormones

Sex hormones
Stress hormones

Sensory development

Ontogeny and phylogeny

Development of Communication

Development and brain damage

Development of learning and memory

Play and Social development

Teratology and Fetal Alcohol Syndrome

Schizophrenia

Autism Spectrum Disorders

EXAM SCHEDULE

Exam 1: Tuesday, September 25
Exam 2: Tuesday, October 30
Exam 3: Tuesday, December 4
FINAL EXAM: Monday, December 10
Rm. 129 PSY, 5:30 p.m.- 7:30 p.m.