Neuroscience (NEUROSC)

NEUROSC C129/PB HLTH C129 The Aging Human Brain 3 Units
Department: Neuroscience; Public Health
Course level: Undergraduate
Term course may be offered: Fall. Offered odd-numbered years.
Grading: Letter grade.
Hours and format: 2 hours of Lecture and 1 hour of Discussion per week for 15 weeks.
The course will survey the field of the human brain, with introductory lectures on the concepts of aging, and brief surveys of normal neuroanatomy, neurophysiology, neurochemistry, and neuropsychology as well as methods such as imaging, epidemiology, and pathology. The neurobiological changes associated with aging will be covered from the same perspectives: neuropsychology, anatomy, biochemistry, and physiology. Major neurological diseases of aging including Alzheimer's and Parkinson's disease will be covered, as will compensatory mechanisms, neuroendocrine changes with aging, depression and aging, epidemiology of aging, and risk factors for decline.
Instructor: Jagust

NEUROSC C160/MCELLBI C160 Introduction to Neurobiology 4 Units
Department: Neuroscience; Molecular and Cell Biology
Course level: Undergraduate
Terms course may be offered: Fall and spring
Grading: Letter grade.
Hours and format: 3 hours of Lecture and 1 hour of Discussion per week for 15 weeks.
Prerequisites: 102 or 100, Biology 1A and 1AL, Physics 8A-8B.
An introductory course designed to provide a general understanding of the nervous system including how it functions, how it develops, and how it changes with learning and memory. Analysis from the level of molecules to cells to simple circuits to complex networks to higher brain functions.

NEUROSC C217D/PB HLTH C217D Biological and Public Health Aspects of Alzheimer's Disease 3 Units
Department: Neuroscience; Public Health
Course level: Graduate
Term course may be offered: Spring
Grading: Letter grade.
Hours and format: 2 hours of seminar/discussion per week.
Prerequisites: Graduate standing or consent of instructor.
This course will survey the field of Alzheimer's disease (AD) from a biological and public health perspective by reading original research papers in the fields of medicine, neuroscience, and epidemiology. The course will begin with a historical survey of the concept of AD, followed by a description of clinical and neuropathological features. Subsequent classes will cover the genetics and molecular biology of the disease, as well as biomarkers, epidemiology, risk factors, treatment, development of new diagnostic approaches, and ethical issues. The course will also serve as a model for the analysis of complex diseases with multiple genetic and environmental causes, and late onset neurodegenerative diseases. The course will also serve as a model for the analysis of complex diseases with multiple genetic and environmental causes and late-onset neurodegenerative disease.
Instructor: Jagust

NEUROSC C260/MCELLBI C260 Introduction to Neurobiology 4 Units
Department: Neuroscience; Molecular and Cell Biology
Course level: Graduate
Term course may be offered: Fall
Grading: Letter grade.
Hours and format: 3 hours of Lecture and 1 hour of Discussion per week