Neuroscience Courses (NSCI)

This is a list of all neuroscience courses. For more information, see Neuroscience.

**NSCI:4353 Neurophysiology: Cells and Systems 3-4 s.h.**  
Physiological properties of nerve cells, nervous systems; axonal conduction, synaptic transmission, sensory transduction, integrative processes, higher functions.  
Prerequisites: (BIOL:2753 or BIOL:3253) and (MATH:1460 or MATH:1380 or MATH:1550 or MATH:1850) and ((PHYS:1511 and PHYS:1512) or (PHYS:1611 and PHYS:1612)). Same as BIOL:4353.

**NSCI:5212 Foundations in Behavioral and Cognitive Neuroscience 4 s.h.**  
Concepts, methods, and findings in behavioral and cognitive neurosciences. Prerequisites: BIOL:3253 or PSY:5210 or NSCI:5210. Same as PSY:5212.

**NSCI:5365 Seminar: Neuropsychology and Neuroscience arr.**  
Clinical neuropsychology and cognitive neuroscience: cutting-edge research from scientific journals, case presentations in clinical neuropsychology, and current research. Same as NEUR:5365, PSY:5365.

**NSCI:5653 Fundamental Neurobiology 3 s.h.**  
Neurobiology from molecular/cellular to systems levels, including cell biology of the neuron; membrane electrophysiology; synaptic transmission and plasticity, functional neuroanatomy, peripheral and CNS sensory systems, peripheral and CNS motor systems, autonomic systems, emotion, memory, sleep, language, attention and cognition, neuronal development. Same as BIOL:5653, PSY:5203.

**NSCI:5658 Fundamental Neurobiology Discussion 1 s.h.**  
Discussion of selected papers, including classics from neurobiology literature; coordinated with BIOL:5653 lecture material. Same as BIOL:5658, PSY:5204.

**NSCI:6050 Advanced Quantitative Training for Neuroscience 4 s.h.**  
Review of statistical inference, type-I errors, statistical power, measurement reliability issues in context of between-/within-subjects t-tests, ANOVAs, correlations, and regressions with attention to causality and generalizability; multiple linear regression, model building, model testing, confounding/mediation, interactions; mixed models with nested/crossed, fixed/random factors, and repeated measure designs. Offered spring semesters. Prerequisites: PSY:5050.

**NSCI:6209 Steroid Receptor Signaling 1 s.h.**  
Structure-function relationship and genomic and nongenomic actions of the steroid hormone receptor family; basis for actions of novel new ligands on these receptors. Offered spring semesters of even years. Same as MPB:6209, PCOL:6209.

**NSCI:6240 Topics in Cognitive Neuroscience 1-3 s.h.**  
Key topics in the neural basis of human cognition; research literature. Recommendations: graduate courses in basic neuroscience and cognitive psychology. Same as NEUR:6240.

**NSCI:6265 Neuroscience Seminar 0-1 s.h.**  

**NSCI:7235 Neurobiology of Disease 3 s.h.**  
Broad, thematic understanding of disease mechanisms in neurobiological disorders. Same as NEUR:7235.

**NSCI:7301 Directed Study in Neuroscience arr.**  
Requirements: neuroscience graduate standing.

**NSCI:7305 Neuroscience Research arr.**  
Requirements: neuroscience graduate standing.