

# Neuroscience

## Chair

Daniel T. Tranel (Neurology/Psychological and Brain Sciences)

**Graduate degree:** PhD in neuroscience

**Faculty:** <https://neuroscience.grad.uiowa.edu/people/faculty>

**Website:** <https://neuroscience.grad.uiowa.edu>

## Courses

### Neuroscience Courses

**NSCI:5212 Foundations in Behavioral and Cognitive Neuroscience** **4 s.h.**

Concepts, methods, and findings in behavioral and cognitive neurosciences. Prerequisites: BIOL:3253. 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 I** **3 s.h.**

Neurobiology from molecular/cellular to systems levels, including cell biology of the neuron; membrane electrophysiology; synaptic transmission and plasticity, functional neuroanatomy, sensory, motor and autonomic systems; emotion, memory, sleep, language, attention and cognition, neuronal development; focus on systems and developmental neurobiology; first in a two-semester sequence. Same as BIOL:5653, PSY:5203.

**NSCI:5654 Fundamental Neurobiology II** **3 s.h.**

Neurobiology from molecular/cellular to systems levels, including cell biology of the neuron; membrane electrophysiology; synaptic transmission and plasticity; functional neuroanatomy, sensory, motor and autonomic systems; emotion, memory, sleep, language, attention and cognition, neuronal development; focus on molecular/cellular neurobiology and neurophysiology; second in a two-semester sequence. Prerequisites: BIOL:5653 or NSCI:5653 or PSY:5203. Same as BIOL:5654, PSY:5205.

**NSCI:5658 Fundamental Neurobiology I Discussion** **2 s.h.**

Discussion of selected papers, including classics from neurobiology literature; coordinated with BIOL:5653 lecture material. Same as BIOL:5658, PSY:5204.

**NSCI:5659 Fundamental Neurobiology II Discussion** **2 s.h.**

Discussion of selected papers, including classics from neurobiology literature; coordinated with BIOL:5654 lecture material. Same as BIOL:5659, PSY:5206.

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

Research presentations. Same as ACB:6265, BIOL:6265, MPB:6265, PSY:6265.

**NSCI:6360 Readings in Auditory Neuroscience** **2 s.h.**

Presentation of a significant paper from the recent literature while leading a discussion of the paper with a group consisting of students, postdocs, and faculty involved in auditory research. Same as CSD:6360.

**NSCI:7235 Neurobiology of Disease** **3 s.h.**

Broad, thematic understanding of disease mechanisms in neurobiological disorders. Prerequisites: ACB:6252. Same as NEUR:7235.

**NSCI:7305 Neuroscience Research** **arr.**

Requirements: neuroscience graduate standing.