NEUROSCIENCE, DOCTORAL MINOR

Neuroscience as a discipline is at a vital juncture. Groundbreaking advances such as mapping of the human genome, development of advanced molecular, genetic, and imaging technologies, and novel integrative approaches have expanded knowledge about the workings of the brain as never before. With this increased understanding, neuroscientists now envision significant treatments for numerous diseases, including neurodegenerative diseases, psychiatric illnesses, and developmental and emotional disorders. The doctoral minor in neuroscience is both interdepartmental and interdisciplinary. The course curriculum draws on expertise from faculty who are spread across over 22 departments on campus.

A doctoral minor in neuroscience will be of interest to doctoral students who are interested in augmenting the discipline to their research. The minor emphasizes the core sequence of cell and molecular neuroscience and systems neuroscience as well as a midlevel graduate course in one of the two areas: cell/molecular/developmental or systems/behavior.

ADMISSIONS

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All Graduate School students must utilize the Graduate Student Portal in MyUW to add, change, or discontinue any doctoral minor. To apply to this minor, log in to MyUW, click on Graduate Student Portal, and then click on Add/Change Programs. Select the information for the doctoral minor for which you are applying.

Once the requirements are complete, please return the completed PhD Minor in Neuroscience Form (https://ntp.wiscweb.wisc.edu/wp-content/uploads/sites/81/2017/03/PhD_Minor_Form.pdf) to the Neuroscience Training Program office for signature by the program director.

REQUIREMENTS

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GRADE REQUIREMENT

Students must earn a 3.0 grade point average (GPA) for all required courses to earn the doctoral minor.

REQUIRED COURSES

Code	Title	Credits
Core		
Students must complete the following courses.		
NTP/ NEURODPT 610	Cellular and Molecular Neuroscience	4
NTP/NEURODPT/ PSYCH 611	Systems Neuroscience	4
Electives		
Students must select a mid-level course from the lists below.		1-3
Total Credits		**9**

Electives

Cellular/Molecular/Developmental Approved Mid-level Courses

Code	Title	Credits
B M E/MED PHYS/ PHMCOL-M/PHYSICS/ RADIOL 619	Microscopy of Life	3
NEURODPT/ ZOOLOGY 765	Developmental Neuroscience	3
NTP 675	Special Topics (Molecular Mechanisms of Brain Damage)	2
NTP 675	Special Topics (Reproductive Neuroendocrinology)	1-3
NEUROL 735	Neurobiology of Disease	2
ZOOLOGY 604	Computer-based Gene and Disease/Disorder Research Lab	2

Systems/Behavioral/Computational Approved Mid-level Courses

Code	Title	Credits
B M E 601	Special Topics in Biomedical Engineering (Problem-Based Learning in Clinical Neuroengineering Seminar)	2
CS&D 850	Hearing Science I: Basic Acoustics and Psychoacoustics	3
COMP SCI/B M I/ PSYCH 841	Computational Cognitive Science	3
KINES 713	Neural Basis of Normal and Pathological Movement	3
KINES 721	Neural Basis for Movement	3
KINES 861	Principles of Motor Control and Learning	3
MED PHYS 651	Methods for Neuroimaging Research	3
NTP 677	Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine	3
NTP 675	Special Topics (Neuroethology)	2
NTP 675	Special Topics (Brain Mapping in Health and Disease: Applications)	3
PSYCH 720	Essentials of Cognitive Neuroscience	3
PSYCH 711	Current Topics in Psychology (Cognitive Neuroscience of Attention and Memory)	2-3
PSYCH 711	Current Topics in Psychology (Introduction to Neural Network Modeling of Cognition)	2-3
PSYCH 733	Perceptual and Cognitive Sciences (Perceptual Systems Analysis) [1]	2
PSYCH 733	Perceptual and Cognitive Sciences (Cognitive Neuroscience of Reading and Dyslexia) [1]	2
PSYCH 733	Perceptual and Cognitive Sciences (Knotty Problems in Psycholinguistics) [1]	2

PSYCH 918	Seminar-General Psychology (Visual Perception)	1-3
PSYCH 954	Seminar-Physiological Psychology (Neuropharmacology)	3

[1] Two PSYCH 733 courses (8 weeks each) must be taken to meet the midlevel systems requirement.