NEUROSCIENCE, PH.D.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/ policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

**Evening/Weekend:** Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>51 credits</td>
</tr>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>32 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>Half of degree coursework (26 credits out of 51 total credits) must be completed graduate-level coursework. Details can be found in the Graduate School’s Minimum Graduate Coursework (50%) policy (<a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a>).</td>
</tr>
</tbody>
</table>

Overall Graduate GPA Requirement

Other Grade Requirements: The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.

Assessments and Examinations

Candidates must meet with their advisory committee once per semester until they become a dissertator and then once per year thereafter.

The preliminary examination consists of two papers: a dissertation proposal, and a critical research paper unrelated to the proposal. The preliminary examination should be completed by the end of the second summer of graduate study. Students who fail one or both parts of the preliminary examination may retake the examination within two months. Failure to pass the examination the second time will result in dismissal from the program.

The final dissertation must be submitted to the advisory committee and an oral defense of the thesis must be given. The thesis defense consists of a public presentation of the thesis followed by a closed meeting with the advisory committee. Deposit of the doctoral dissertation in the Graduate School is required.

Language Requirements

No language requirements.

Doctoral Minor/Breadth Requirements

Completion of a doctoral minor is not required of students in the NTP doctoral program.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>NTP/NEURODPT 610</td>
<td>Cellular and Molecular Neuroscience</td>
<td></td>
</tr>
<tr>
<td>NTP/NEURODPT/PSYCH 611</td>
<td>Systems Neuroscience</td>
<td></td>
</tr>
<tr>
<td>NTP 700</td>
<td>Professional Development for Biomedical Graduate Students</td>
<td></td>
</tr>
<tr>
<td>NTP 701</td>
<td>Experimental Design and Statistical Methodology</td>
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</tbody>
</table>

One Mid-level Molecular/Cellular/Developmental Neuroscience Course

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOCHEM/PHMCOL-M/ZOOLOGY 630</td>
<td>Cellular Signal Transduction Mechanisms</td>
<td></td>
</tr>
<tr>
<td>BM E/MED PHYS/PHMCOL-M/PHYSICS/RADIOL 619</td>
<td>Microscopy of Life</td>
<td></td>
</tr>
<tr>
<td>NTP/NEURODPT 629</td>
<td>Molecular and Cellular Mechanisms of Memory</td>
<td></td>
</tr>
<tr>
<td>NTP/NEUROL 735</td>
<td>Neurobiology of Disease</td>
<td></td>
</tr>
<tr>
<td>NTP 670</td>
<td>Stem Cells and the Central Nervous System</td>
<td></td>
</tr>
<tr>
<td>NTP 675</td>
<td>Special Topics</td>
<td></td>
</tr>
<tr>
<td>NTP/NEURODPT/ZOOLOGY 765</td>
<td>Developmental Neuroscience</td>
<td></td>
</tr>
</tbody>
</table>
PHMCOL-M 781 Molecular and Cellular Principles in Pharmacology
ZOOLOGY 604 Computer-based Gene and Disease/Disorder Research Lab

One Mid-level Systems/Behavioral Neuroscience Course

B M E 601 Special Topics in Biomedical Engineering
CS&D 850 Hearing Science I: Basic Acoustics and Psychoacoustics
COMP SCI/B M I/PSYCH 841 Computational Cognitive Science
KINES 713 Neural Basis of Normal and Pathological Movement
KINES 721 Neural Basis for Movement
KINES 861 Principles of Motor Control and Learning
NTP/NEURODPT 630 Neuronal Mechanisms for Sensation and Memory in Cerebral Cortex
NTP 677 Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine
NTP 675 Special Topics
NTP/MED PHYS 651 Methods for Neuroimaging

PSYCH 711 Current Topics in Psychology
PSYCH 733 Perceptual and Cognitive Sciences
PSYCH 954 Seminar-Physiological Psychology
PSYCH 918 Seminar-General Psychology

Seminar 10

NTP 900 Neuroscience Seminar: Current Topics in Neurobiology

Students in our program are expected to be enrolled in NTP 900 every Fall/Spring semester.

Research Credits

NTP 990 Research and Thesis

Students in our program are expected to be enrolled in NTP 990 every Fall/Spring/Summer semester. When students enroll in NTP 990, they should plan to enroll for the appropriate number of credits to reach the minimum required credits each semester to have full-time student status.

Other advanced courses or addition research credits as recommended by the advisory committee to meet minimum credit requirements.

Total Credits 51+

1

PSYCH 711 is a special topics course. The following topics under this course listing are approved to take and will count as a midlevel:

- Cognitive Neuroscience of Attention and Memory
- Introduction to Neural Network Modeling of Cognition

2

Two PSYCH 733 courses (8 weeks each) must be taken to meet the Mid-level Systems/Behavioral Neuroscience requirement. The following course topics are approved:

- Cognitive Neuroscience of Reading and Dyslexia
- Knotty Problems in Psycholinguistics

3

See "Credits Per Term Allowed" policy (http://guide.wisc.edu/graduate/medicine-public-health-school-wide/neuroscience-phd/#policies/credits) for further information on full-time registration.