

NEUROSCIENCE, PHD

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

| Face to Face | Evening/ Weekend | Online | Hybrid | Accelerated |
|--------------|---------------------|--------|--------|-------------|
| Yes | No | No | No | No |

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

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

Requirement Detail

| | |
|---|--|
| Minimum Credit Requirement | 51 credits |
| Minimum Residence Credit Requirement | 32 credits |
| Minimum Graduate Coursework Requirement | 26 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/). |
| Overall Graduate GPA Requirement | 3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/). |
| Other Grade Requirements | n/a |

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.

Graduate School Breadth Requirement Completion of a doctoral minor or graduate/professional certificate is not required of students in the NTP doctoral program.

REQUIRED COURSES

| Code | Title | Credits |
|------------------------|---|---------|
| Core Courses | | |
| NTP/NEURODPT 610 | Cellular and Molecular Neuroscience | 4 |
| NTP/NEURODPT/PSYCH 611 | Systems Neuroscience | 4 |
| NTP 700 | Professional Development for Biomedical Graduate Students | 1 |
| NTP 701 | Experimental Design and Statistical Methodology | 1 |

One Mid-level Molecular/Cellular/Developmental Neuroscience Course

| | | |
|--|---|-----|
| Complete at least 1 credit from following; | | 1-4 |
| B M E/ MED PHYS/ PHMCOL- M/PHYSICS/ RADIOL 619 | Microscopy of Life | |
| NEUROL 735 | Neurobiology of Disease | |
| NEURODPT 629 | Molecular and Cellular Mechanisms of Memory | |
| NEURODPT/ ZOOLOGY 765 | Developmental Neuroscience | |
| NTP 675 | Special Topics | |
| 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

| | | |
|--|---|-----------|
| Complete at least 1 credit from following: | | 1-4 |
| 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 677 | Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine | |
| NTP 675 | Special Topics | |
| MED PHYS 651 | Methods for Neuroimaging Research | |
| PSYCH 711 | Current Topics in Psychology ¹ | |
| PSYCH 733 | Perceptual and Cognitive Sciences ² | |
| PSYCH 954 | Seminar-Physiological Psychology | |
| PSYCH 918 | Seminar-General Psychology | |
| Seminar | | |
| Students in our program are expected to be enrolled in the following seminar every Fall/Spring semester; complete 10 credits. | | 10 |
| NTP 900 | Neuroscience Seminar: Current Topics in Neurobiology | |
| Research Credits | | |
| Complete at least 15 credits of the following research course: ³ | | 15-18 |
| NTP 990 | Research and Thesis | |
| Additional Coursework | | |
| Complete other advanced courses or additional research credits as recommended by the advisory committee to meet minimum credit requirements. | | 11-14 |
| 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 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. See "Credits Per Term Allowed" policy (p.) for further information on full-time registration.