Twin Cities Campus

Cellular and Molecular Neuroscience Minor

Neuroscience

College of Biological Sciences

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2019
- Required credits in this minor: 26

<JW add here>

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Admission Requirements

Students must complete 1 courses before admission to the program.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Cellular and Molecular Neuroscience prerequisites

CHEM 1081 - Chemistry for the Life Sciences I [PHYS] (3.0 cr)
CHEM 1065 - Chemical Principles I Laboratory [PHYS] (1.0 cr)
CHEM 1082 - Chemistry for the Life Sciences II (3.0 cr)
CHEM 1086 - Chemistry for the Life Sciences II Laboratory (1.0 cr)
or CHEM 1061 - Chemical Principles I [PHYS] (3.0 cr)
CHEM 1065 - Chemical Principles I Laboratory [PHYS] (1.0 cr)
CHEM 1062 - Chemical Principles II [PHYS] (3.0 cr)
CHEM 1066 - Chemical Principles II Laboratory [PHYS] (1.0 cr)
or CHEM 1071H - Honors Chemistry I [PHYS] (3.0 cr)
CHEM 1075H - Honors Chemistry I Laboratory [PHYS] (1.0 cr)
CHEM 1072H - Honors Chemistry II [PHYS] (3.0 cr)
CHEM 1076H - Honors Chemistry II Laboratory [PHYS] (1.0 cr)
BIOL 1009 - General Biology [BIOL] (4.0 cr)
or BIOL 1951 - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
or BIOL 1951H - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
Take exactly 1 course(s) from the following:

- BIOC 3021 - Biochemistry (3.0 cr)
- BIOC 3022 - Biochemistry for Life Scientists (3.0 cr)
- BIOC 4331 - Biochemistry I: Structure, Catalysis, and Metabolism in Biological Systems (4.0 cr)
- BIOL 3025 - Molecular Biology and Society [TS] (3.0 cr)

Neurobiology I

NSCI 3101 - Neurobiology I: Molecules, Cells, and Systems (3.0 cr)

Minor Requirements

Students who are pursuing the CBS neuroscience BS are not eligible for the cellular and molecular neuroscience minor.

Cellular and Molecular Neuroscience minor requirements

Core courses

Take 2 or more course(s) from the following:

- NSC 5461 - Cellular and Molecular Neuroscience (3.0 cr)
- NSCI 3102W - Neurobiology II: Perception and Behavior [WI] (3.0 cr)
- NSCI 4101 - Development of the Nervous System: Cellular and Molecular Mechanisms (3.0 cr)
- NSCI 4150 - Advanced Topics in Neuroscience (3.0 cr)
- NSCI 2001 - Human Neuroanatomy (without a lab) (3.0 cr)
  or NSCI 2101 - Human Neuroanatomy [BIOL] (4.0 cr)

Additional elective

Courses listed as cellular and molecular neuroscience minor requirement options (NSCI 2001, 2100, 3001W, 3100, 3102W, 4100,

4150) that are also elective options may count for one requirement or the other, but not both.
Take 1 or more course(s) from the following:

- BMEN 5411 - Neural Engineering (3.0 cr)
- EEB 4330W - Animal Communication [WI] (3.0 cr)
- NSC 5203 - Basic and Clinical Vision Science (3.0 cr)
- NSC 5461 - Cellular and Molecular Neuroscience (3.0 cr)
- NSC 5561 - Systems Neuroscience (4.0 cr)
- NSC 5661 - Behavioral Neuroscience (2.0 cr)
- NSC 8217 - Systems and Computational Neuroscience (2.0 cr)
- NSCI 3001W - Neuroscience and Society [CIV, WI] (4.0 cr)
- NSCI 3505W - Mind and Brain [WI] (4.0 cr)
- NSCI 3102W - Neurobiology II: Perception and Behavior [WI] (3.0 cr)
- NSCI 4101 - Development of the Nervous System: Cellular and Molecular Mechanisms (3.0 cr)
- NSCI 4105 - Neurobiology Laboratory I (3.0 cr)
- NSCI 4150 - Advanced Topics in Neuroscience (3.0 cr)
- NSCI 5300 *{Inactive}*(3.0 cr)
- PHAR 4248 - Drugs of Abuse (2.0 cr)
- PHCL 4343 - Pharmacology of the Synapse (3.0 cr)
- PSY 5036W - Computational Vision [WI] (3.0 cr)
- PSY 5038W - Introduction to Neural Networks [WI] (3.0 cr)
- PSY 5062 - Cognitive Neuropsychology (3.0 cr)
- NSCI 2001 - Human Neuroanatomy (without a lab) (3.0 cr)
  or NSCI 2101 - Human Neuroanatomy [BIOL] (4.0 cr)