



## NEUROSCIENCE PROGRAM MINOR REQUIREMENTS

- **Course Requirements for Minor:** To complete the Neuroscience Minor, the student must complete a minimum of **18** credit hours as follows:

Area 1) Introduction to Neuroscience

Area 2) Cognitive and Behavioral - One Course

Area 3) Cellular and Molecular - One Course

Area 4) Clinical and Medical - One Course

Area 5) Electives - Complete 6 credits

Area 6) Lab Requirement

Area 7) Graduation Sign Off

- Due to prerequisites for some courses, completion of the Neuroscience Minor may require **23** credit hours for some students. With approval of the Neuroscience Program Director and the applicable Department Chair, students may apply credits from Area 3 toward both their minor and major to offset the number of prerequisites necessary for courses in these areas. Only one course total may be applied to the minor and major, and only after the appropriate approvals have been received.
- **Grade Requirements:**  
A grade of "C" or better in courses used toward the Minor ("C-" is not acceptable)
- **Credit Hour Requirements:**  
Minimum of **18** credit hours as described below.
- **Recommendations for Minors:** The Neuroscience program recommends that you contact the Neuroscience Program Director for help in selecting courses to compliment your major. We also suggest that if you are interested in the Neuroscience Program, but you have not had much experience with the biological sciences, then you may want to take Psych 2710 (Biological Psychology) as your first course for the Neuroscience Minor. Finally, the Neuroscience Program recommends that you complete Math 1050 for your Quantitative Literacy Requirement, although it is not required. This will also allow you to fulfill a prerequisite for Genetics.

# NEUROSCIENCE MINOR COURSE LIST:

## Area 1:

### Foundation Course:

- ❖ NEUR 2050 Introduction to Neuroscience (3)

## Area 2:

### Cognitive and Behavioral Area: (Complete 1 of the below courses)

- ❖ NEUR 3750 Cognitive and Behavioral Neuroscience (3)  
(Prereq: PSY 2710 or NEUR 2050, or approval of instructor)
- ❖ PSY 2710 Biopsychology (3)  
(Prereq: PSY SS1010 or NEUR 2050)
- ❖ PSY 3730 Perception (3)  
(Prereq: PSY SS1010 or NEUR 2050)

## Area 3:

### Cellular and Molecular Area: (Complete 1 of the below courses)

- ❖ NEUR 3950 Cell & Molecular Neuroscience (3)  
(Prereq: NEUR 2050)
- ❖ ZOOL 3200 Cell Biology (4)  
(Prereq: ZOOL S11110 and either CHEM 1110 and CHEM 1120 Series or CHEM 1210 and CHEM 1220 Series, or approval of instructor)
- ❖ ZOOL 3300 Genetics (4)  
(Prereq: ZOOL S11110 and MATH 1050 or equivalent, or approval of instructor)
- ❖ ZOOL 4100 Vertebrate Embryology (4)  
(Prereq: ZOOL S11110 and ZOOL S11120, or approval of instructor)
- ❖ CHEM 3070 Biochemistry I (3) and CHEM 3075 Biochemistry I Lab (1)  
(Prereq: CHEM 2310 and CHEM 2315)

## Area 4:

### Clinical and Medical Area: (Complete 1 of the below courses)

- ❖ NEUR 3850 Clinical Neuroscience (3)  
(Prereq: PSY 2710 or NEUR 2050, or approval of instructor)
- ❖ PSY 3740 Neuropharmacology (3)  
(Prereq: NEUR 2050 or PSY 2710)
- ❖ HTHS 2240/3240 Introduction to Pharmacology (3)  
(Prereq - Recommended: HTHS 1101, HTHS 1110, HTHS 1111. Cannot take HTHS 3240 for credit)
- ❖ ZOOL LS1020 Human Biology (3)
- ❖ ZOOL 2200 Human Physiology (4)

## Area 5:

**Electives:** (6 credits minimum from the electives listed below)

ANTH LS/DV1020 Biological Anthropology (3)	NEUR 4800 Projects and Research (1-3)
ANTH HU/DV1040 Language and Culture (3)	NEUR 4830 Directed Readings (1-3)
BTNY 2303 Ethnobotany (3)	NEUR 4900 Topics in Neuroscience (2-3)
BTNY 2600 Laboratory Safety (1)	PHIL 3350 Medical ethics (3)
CEET 1110 Basic Electronics (2)	PHYS 3190 Applied Optics (3)
CEET 1120 Information Technology (2)	PHYS 3410 Electronics for Scientists.
CEET 4040 Digital Signal Processing (4)	PHYS 3420 Data Acquisition and Analysis (3)
CHEM PS/SI1050 Intro to General Organic & Biochemistry (5)	PSY 2710 Biopsychology (3)
CHEM SI1120 Elementary Organic Bio-Chemistry (5)	PSY 2830 Psychology of Consciousness (3)
CHEM 2310 Organic Chemistry I (5)	PSY 3600 Psychology Statistics (3)
CHEM 2320 Organic Chemistry II (5)	PSY 3730 Perception (3)
CHEM 2600 Laboratory Safety (1)	PSY 3740 Neuropharmacology (3)
CHEM 3070 Biochemistry I (4)	PSY 4800 Projects and Research (1-3)*‡
CHEM 3080 Biochemistry II (3)	PSY 4830 Directed Readings (1-3)* ‡
CHEM 3090 Biochemical Techniques (1)	PSY 4900 Selected Topics in Psychology (3) ‡
CHEM 4250 Medicinal Chemistry (3)	PSY 4910 Capstone Research Project (3, 3)* ‡
CS 4500 Artificial Intelligence and Neural Networks (4)	ZOOL LS1020 Human Biology (3)
HLTH 3100 Applications of Technology in Health Promotion (3)	ZOOL 2100 Human Anatomy (4)
HLTH SI4013 Health Promotion Research and Assessment (3)	ZOOL 2200 Human Physiology (4)
HLTH 3160 Health Behavior and Special Populations (3)	ZOOL 3200 Cell Biology (4)
HTHS 1101 Medical Terminology (2)	ZOOL 3300 Genetics (4)
HTHS 1110/1111 Biomedical Core Lecture/Lab (8)	ZOOL 4050 Comparative Vertebrate Anatomy (4)
HTHS 2230 Introductory Pathophysiology/Lab (4)	ZOOL 4060 Comparative Physiology (4)
HTHS 2240/3240 Introduction to Pharmacology (3)	ZOOL 4100 Vertebrate Embryology (4)
MICR 3254 Immunology (4)	ZOOL 4120 Histology (4)
MICR 3305 Medical Microbiology (5)	ZOOL 4220 Endocrinology (4)
MICR 4154 Microbial Genetics (4)	ZOOL 4300 Molecular Genetics (4)
MICR 4252 Cell Culture (2) ( <i>cross-listed with Botany</i> )	ZOOL 4350 Animal Behavior (4)
MICR 4554 Virology (4)	ZOOL 4800 Problems in Zoology (1-4) ** ‡
MLS 1113 Intro to Medical Laboratory Practices (4)	ZOOL 4830 Readings in Zoology (1-4) ** ‡
MLS 4803 Research Projects in Medical Laboratory Sciences I (2)	ZOOL 4900 Topics in Zoology (1-4) ** ‡
MLS 4804 Research Projects in Medical Laboratory Sciences II (2)	ZOOL 4920 Short Courses, Workshops, Institutes, and Special Programs (1-4)

\* Prerequisites: PSY SS1010, PSY SI3600 (Statistics), and PSY SI3610 (Research Methods) or equivalent, and faculty mentor permission.

\*\*Prerequisites: ZOOL SI1110 and SI1120, and approval of instructor.

‡ These courses must have a significant neuroscience focus in order to qualify as an elective towards the neuroscience minor; approval by the Neuroscience Program Director is required in advance.

**Note:** Consult the WSU course catalog for prerequisites to the elective courses listed above.

## Area 6:

### Lab Requirement

Students must complete at least one science lab course (in any subject) to complete the neuroscience minor. This can be included as part of a course (for example, CHEM 2310), or as a separate class (for example, CHEM 3075 or NEURO Lab).

## Area 7:

### Graduation Sign Off

Students must meet with the program director and complete the Graduating Neuroscience Minor Survey.

## Core Neuroscience Minor Courses offered by Semester:

	<b>Title</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
NEUR 2050	Introduction to Neuroscience	YES	YES	YES
NEUR 3750	Cognitive & Behavioral Neuroscience	N/A	YES	N/A
NEUR 3850	Clinical Neuroscience	YES	N/A	N/A
NEUR 3950	Cellular & Molecular Neuroscience	N/A	YES	N/A
NEUR 4800	Projects & Research	YES	YES	YES
NEUR 4810	Experimental	N/A	N/A	N/A
NEUR 4830	Directed Reading	YES	YES	YES
NEUR 4900	Topics in Neuroscience	N/A	N/A	N/A
PSY 2710*	Biopsychology	YES	YES	TBD
PSY 3730*	Perception	YES	N/A	N/A
PSY 3740*	Neuropharmacology	TBD	TBD	TBD

NEUR 4800 (Projects & Research) and NEUR 4830 (Directed Reading) require a completed Individualized Instruction Contract with Instructor and Program Director approval. Please contact the instructor for Contract.

\*Subject to departmental approval and faculty availability.