

# NEUROSCIENCE B.S. - COGNITIVE NEUROSCIENCE

The University of Montana Neuroscience Program also offers a combined Bachelor of Science and Master of Science degree in Neuroscience with an emphasis on Cellular & Molecular Neuroscience. This five-year ("4 + 1") accelerated program is specifically designed for students who have demonstrated academic excellence and are deeply interested in pursuing intensive research training in preparation for graduate/professional schools, or who wish to enter the biomedical/biotech sector with advanced standing. The first 3 years of study are aligned with the existing Cellular & Molecular track of the B.S. in Neuroscience. Some students in the Cognitive & Behavioral track may also be eligible, depending upon their course selections. In the 4th year, students will take graduate neuroscience courses and complete their B.S. degree. This will allow students to enter the Neuroscience Graduate Program with advanced standing and, pending completion and defense of an M.S. thesis project, earn an M.S. in 5 years. See the Neuroscience website (<https://www.umt.edu/neuroscience/default.php>) for details on the curriculum and regulations in the Neuroscience B.S./M.S. Program.

## Bachelor of Science - Neuroscience; Cognitive Neuroscience Concentration

### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements/>) of the catalog.

### Summary

Code	Title	Hours
	Neuroscience Core Courses	25
	Other Required Courses	26-33
	Additional Major Courses	19-20
	Intersection Courses	1-9
	<b>Total Hours</b>	<b>71-87</b>

Degree Specific Credits: 71-87

Required Cumulative GPA: 2.0

### Neuroscience Core Courses

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BIOB 160N & BIOB 161N	Principles of Living Systems and Principles of Living Systems Lab	4
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
NEUR 280	Fundamental Neuroscience	3
NEUR 281	Fundamentals of Neuroscience II: Cognition	3
NEUR 380	Molecular Neuroscience	3

NEUR 458	Neuroscience Research Techniques Lab	4
<b>Total Hours</b>		<b>25</b>

Minimum Required Grade: C-

### Other Required Courses

#### Mathematics and Physics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
M 162	Applied Calculus	4
PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	5
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	5
<b>Complete one of the following courses:</b>		
STAT 216 or PSYX 222	Introduction to Statistics Psychological Statistics	3-4
<b>Total Hours</b>		<b>17-18</b>

Minimum Required Grade: C-

#### Chemistry

Code	Title	Hours
<b>Complete one of the following Chemistry sequences:</b>		<b>9-15</b>
CHMY 121N	Introduction to General Chemistry	
CHMY 123	Introduction to Organic and Biochemistry	
CHMY 124	Introduction to Organic and Biochemistry Lab	

#### OR

CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	

Minimum Required Grade: C-

### Additional Major Courses

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BCH 380	Biochemistry	4
PSYX 270	Fundamentals of Psychology of Learning	3
PSYX 280	Fundamentals of Memory and Cognition	3
PSYX 356	Human Neuropsychology	3
<b>Total Hours</b>		<b>13</b>

Minimum Required Grade: C-

Code	Title	Hours
<b>Complete two of the following courses:</b>		<b>6-7</b>
BIOB 301	Developmental Biology	
BIOH 365	Human Anatomy and Physiology for Health Professions I	
KIN 330	Motor Learning and Control	

NEUR 441	CNS Diseases	
NEUR 475	Neuropharmacology	
NEUR 481	Systems Neuroscience of Behavior and Cognition	
NEUR 491	Special Topics (Neuroanatomy)	
PSYX 352	Comparative Psychology	
<b>Total Hours</b>		<b>6-7</b>

Minimum Required Grade: C-

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### Intersection Courses

Code	Title	Hours
<b>Complete one of the following courses</b>		<b>1-9</b>
BIOE 406	Behavior & Evolution	
DANC 345	New Visions Dance	
ECNS 491	Special Topics (Behavioral/Experimental Economics)	
HTH 430	Health and Mind/Body/Spirit	
PSYX 233	Fundamentals of Psychology of Aging	
<b>Total Hours</b>		<b>1-9</b>

Minimum Required Grade: C-