

# Neuroscience

Are you interested in the cellular and molecular underpinnings of the brain? Or perhaps researching the effects of drugs on our behavior? Are you interested in finding out how the human mind works and working to develop cures/treatments for certain disorders? If you answered "yes" to any of these questions, then you may want to consider a degree in Neuroscience.

The Department of Psychological Science and the Biology Department at NMU work together to promote research, discovery, and application of the scientific principles emphasized in each field of study, within the university and community. As a Neuroscience major, you will learn the integration of biology and psychology, and then focus your knowledge on an area of emphasis.

The list of career opportunities as a Neuroscience major are vast, and depend strongly on the competencies and skills you acquire through your academic work and extracurricular activities.

## Skills and Competencies

A strong foundation in math and science is especially recommended for this area of study, and interpersonal communication and organizational skills are a must for any professional. You should develop a strong interest in cellular research and have the ability to work independently, as well as part of a team. Other skills and competencies specific to a degree in Neuroscience are academic diligence and steady concentration, along with having an aptitude for grasping complex calculations and scientific principles.

## Course Work

**This degree includes the following courses as part of the program requirements, and specific major requirements along with general education courses and graduation requirements.**

### Core

- PSY100 Introduction to Psychology (4 cr.)
- BI111 Introductory Biology: Principles (4 cr.)
- BI207 Human Anatomy and Physiology II (5 cr.)
- PSY204 Physiological Psychology (4 cr.)
- PSY211 Learning
- BI218 Introduction to Cell and Molecular Biology (4 cr.)
- PSY404 Advanced Physiological Psychology (4 cr.)
- BI420 Neuroscience (4 cr.)

### Choose a concentration:

#### Cellular and Molecular

- BI112 Introductory Biology: Diversity (4 cr.)
  - BI215 Principles of Evolution (4 cr.)
  - BI312 Genetics (4 cr.)
  - BI406 Advanced Cell Biology (4 cr.)
  - BI417 Comparative Vertebrate Neuroanatomy (4 cr.)
  - BI425 Endocrinology (3 cr.)
  - BI488 Advanced Research in Biology (1-4 cr.) or BI499 Internship (1-6 cr.)
- Electives (6-8 cr.)

#### Behavioral and Cognitive

- PSY303 Human Neuropsychology (4 cr.)
  - PSY311 Thinking and Cognition (4 cr.)
  - PSY309 Psychopharmacology (4 cr.) or PY410 Sensation and Perception (4 cr.) or PY441 Individual Differences in Development
  - SL459 SL Cognitive Neuroscience (4 cr.)
  - PSY498 Directed Research/Study (1-4 cr.)
- Electives (8 cr.)

### Other Required Courses

- CH111 General Chemistry I (5 cr.)
- CH112 General Chemistry II (5 cr.)

### Required Minor (20-24 credits)

Select one of these options: 1) integrative science minor; 2) pre-professional minor; 3) chemistry, physics, or math minor. If option 3, it is recommended that the student take 8 additional credits from science areas outside of the selected minor

*Detailed course descriptions can be found at [www.nmu.edu/bulletin](http://www.nmu.edu/bulletin).*

## Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advisement Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

## Additional Considerations

These jobs cover a broad range of areas and therefore competencies and skills acquired through academic courses, internships, extra-curricular and work experience are extremely important. Strong communication skills, patience, understanding, and organization are beneficial to these occupations. Many of these occupations require further education and training in the field. Seek advice of faculty in the department of Psychological Science for graduate school preparation

## Job Outlook

Starting salaries are contingent upon geographic location and the individual applicants work experience and initiative, and usually range from \$35,000 to \$70,000. The Psychology field is expected to grow faster than average at a 15% rate.

# Potential Careers

NMU's Neuroscience Program prepares students for employment in the following careers:

Biostatistician  
Clinical Neuroscience  
Clinical Research Assistant  
EEG Technologist  
Epidemiology  
Forensic Science Technician  
Health Educator  
Laboratory Technician  
Medical Technician  
Medical and Healthcare Manager  
Neural Engineer  
Neuro Imaging Technician  
Neuropsychologist  
Patient Care Assistant  
Pharmaceutical Sales  
Pharmacist  
Pharmacy Technician  
Psychometrist  
Special Education Assistant

# Additional Resources and Information

*For Career Planning and Opportunities:*  
Academic & Career Advisement Center  
3302.1 C.B. Hedgcock  
906-227-2971  
[www.nmu.edu/acac](http://www.nmu.edu/acac)

Department of Psychological Science  
1001 New Science Facility  
906-227-2935  
[www.nmu.edu/psychology](http://www.nmu.edu/psychology)

*For Job Search, Resume and Career Information:*  
Career Services  
3302.3 C.B. Hedgcock  
906-227-2800  
[www.nmu.edu/careers](http://www.nmu.edu/careers)

*For Information about NMU Student Organizations Associated with this Major Contact:*  
Center for Student Enrichment  
1206 University Center  
906-227-2439  
[www.nmu.edu/cse](http://www.nmu.edu/cse)

Student Psychological Association

*Internet Resource Links:*  
[www.careers.org](http://www.careers.org)  
[www.bls.gov](http://www.bls.gov)

*For Career Information with National Organizations:*  
[www.apa.org](http://www.apa.org) -American Psychological Assoc.  
[www.nasponline.org](http://www.nasponline.org) -National Association of School Psychologists



**NORTHERN MICHIGAN  
UNIVERSITY**

MARQUETTE, MICHIGAN

The Academic & Career Advisement Center  
2019



What to do with  
a major in...

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