

# NEURAL SCIENCE (MINOR)

## Program Description

Neural science (NS) is a collection of disciplines unified by a concern for the function of the brain. Experimental approaches in neural science vary from analyses of molecular and cellular mechanisms in nerve cells and groups of nerve cells to behavioral and psychological studies of whole organisms. Theoretical tools include mathematical and computational modeling approaches that have proved useful in other areas of science. We attract students who are interested in understanding the brain's command of all its diverse functions including but not limited to the following questions: How do cell circuits enable us to read and speak? How and why do we form relationships? How do we think, remember, despair, or motivate? What are possible causes of devastating disorders of the brain and body, as well as ways to prevent or cure them?

The NS major studies the brain and its impact on behavior and cognitive functions, the understanding of which is regarded as the Holy Grail of the current century. Increasing understanding of the brain will enable scientists to develop treatments for neurodegenerative diseases (such as Parkinson's disease & Alzheimer's disease) and mental illnesses. NS research will also help us find out more about normal human behavior and mental wellbeing, and can thus help develop artificial intelligence as well as treating illnesses. NS research could also lead to better understanding of how we learn, allowing us to optimize our intelligence. These developments are likely to provide significant benefits for society and have implications for a diverse range of public policy areas such as health, education, law, and security.

The undergraduate NS curriculum blends courses from many of the basic sciences (such as mathematics, biology, physics, & chemistry) as a foundation for higher level work in NS. NS major requirement contains 6 required courses including one capstone course and 2 elective courses. In addition, students who demonstrate a genuine interest in research and achieve a cumulative grade point average of 3.65 or higher in all courses required for the major and over all courses taken for credit can apply to be on Honors Track.

## Program Requirements

Course	Title	Credits
<i>Basic Science Courses</i>		
BIOL-SHU 21	Foundations of Biology I	3
BIOL-SHU 22	Foundations of Biology II	3
BIOL-SHU 123	Foundations of Biology Lab	2
<i>Neural Science Required Courses</i>		
NEUR-SHU 201	Introduction to Neural Science	4
NEUR-SHU 251	Behavioral and Integrative Neuroscience	4
or NEUR-SHU 210	Cellular and Molecular Neuroscience	
<b>Total Credits</b>		<b>16</b>

## Policies

### Minor Policies

Students may minor in subjects outside of their major. A minor in a secondary subject enables a student to acquire a useful understanding of concepts and analysis without the same degree of coverage as would be obtained in a major. A grade of C or better is required for a course to be

counted toward a minor. If a student fails a course required for the minor, the course must be retaken at NYU; a course taken outside the University will not normally be allowed to substitute for a minor requirement. No course for the minor may be taken as pass/fail. Students may use Core Curriculum classes to fill minor requirements but at least 12 credits of the minor must be unique to the minor, meaning that it is not double-counted with any other major, minor, or core requirement.

Additionally, no single course may be used to meet more than two requirements.

### NYU Policies

University-wide policies can be found on the New York University Policy pages (<https://bulletins.nyu.edu/nyu/policies/>).

### NYU Shanghai Policies

Additional academic policies can be found on the NYU Shanghai Academic Policies page (<https://bulletins.nyu.edu/undergraduate/shanghai/academic-policies/>).