

# NEUROSCIENCE, MS

Tulane University offers two versions of its Master of Science degree in Neuroscience. One version is for students with baccalaureate degrees from other institutions. The other version is our 4 + 1 program for students who earned their B.S. at Tulane University. The purpose of the 4+1 M.S. Program in Neuroscience is to provide Tulane students with training at the graduate level for one additional year beyond the baccalaureate degree. Completion of an empirical master's thesis under the guidance of an advisor who is a member of the Neuroscience Graduate Faculty is optional and only available for 4 + 1 students.

Students in both versions of the M.S. program take courses relevant to their interests in Neuroscience and related fields. The mission of the M.S. program is to prepare students for admission to doctoral programs in the neurosciences, for admission to medical or other profession schools, or the workforce. Completion of the M.S. program does not guarantee acceptance to Tulane's Ph.D. programs or medical school. Students pursuing an advanced degree in Neuroscience benefit from a multidisciplinary education and training in the sciences of the brain and nervous system, including cell and molecular biology, neuropharmacology, neurophysiology, neuroanatomy, neuroendocrinology, and biological psychology.

Students accepted to the 4+1 program may follow one of two tracks toward completion of an M.S. in Neuroscience.

For the **Thesis Track option** (24 credit hours), students will take courses relevant to their interests in neuroscience or related fields and complete an empirical masters thesis under the supervision of an adviser who is a member of the Neuroscience Graduate program. Because completion of an empirical masters thesis normally requires more than one year, *students accepted into the 4+1 program must be active in research at the undergraduate level*. Each student will be encouraged to develop a masters thesis that is a continuation or extension of his or her undergraduate honors thesis or independent study. The thesis adviser will provide guidance in the selection of courses and in all aspects of the masters thesis. For the **Non-Thesis Track option** (30 credit hours), students will take courses relevant to their interests in neuroscience or related fields but are not required to complete an empirical masters thesis.

**Note:** Students who pursue the thesis track in the Masters Program in Neuroscience are strongly encouraged to defend and submit the masters thesis to the School of Science and Engineering within one year after entering the program. However, the masters thesis *must* be defended and submitted in final form to the School of Science and Engineering within two years after entering the masters program. Students who fail to meet the two-year deadline will be recommended for dismissal from the Masters Program in Neuroscience.

## Requirements

### Graduation Requirements

Students must complete 30 credits of coursework if they are pursuing the non-thesis track. If they decide to complete a Master's thesis, 24 credits of coursework must be completed.

### 4+1 Required Courses

Course ID	Title	Credits
NSCI 6030	Brain Institute Seminar	1
NSCI 6040	Trends In Neuroscience	1
NSCI 6150	Methods in Neuroscience	3
NSCI 6310	Cellular Neuroscience	3
NSCI 6400	Neuroscience Applied	3

### M.S. Required Courses

Course ID	Title	Credits
NSCI 6030	Brain Institute Seminar	1
NSCI 6040	Trends In Neuroscience	1
NSCI 6150	Methods in Neuroscience	3
NSCI 6310	Cellular Neuroscience	3
or NSCI 7110	Graduate Neuroscience I	
NSCI 6400	Neuroscience Applied	3

### Elective Courses

In addition to the 11 credits of required courses listed above, students should take at least 19 credits of elective graduate courses to reach the minimum of 30 credits required to graduate.

Course ID	Title	Credits
NSCI 6060	Behavioral Endocrinology	3
NSCI 6070	Neurobiology of Aging	3
NSCI 6110	Brain and Language	3
NSCI 6130	Sport Rel Brain Injury	3
NSCI 6200	General Endocrinology	3
NSCI 6220	Neural Microengineering	3
NSCI 6320	Systems Neuroscience	3
NSCI 6330	Neurobiol Learn & Memory	3
NSCI 6340	Neurobiology of Disease	3
NSCI 6350	Developmental Neurobiol	3
NSCI 6370	Molecular Neurobiology	3
NSCI 6530	Psychopharmacology	3
NSCI 6550	Syn Org of the Brain	3
NSCI 6900	Graduate NSCI Internship	1-3
NSCI 7100	Special Projects In NSCI	1-3
NSCI 7120	Graduate Neuroscience II	3
NSCI 7981	Research in Neuroscience -MA	1-4
NSCI 9980	Master's Thesis Research	3
CELL 6010	Cellular Biochemistry	3
CELL 6030	Molecular Biology	3
CELL 6035	Molecular Biology Lab	
CELL 6080	Adv Dev & Cell Biol II	3
CELL 6110	Human Histology	4
CELL 6111	Human Histology Lab	
CELL 6130	Embryology	3
CELL 6131	Embryology Lab	
CELL 6160	Developmental Biology	3
CELL 6210	Physiology	3
CELL 6220	Microbiology	3
CELL 6450	Genome Biology	3
CELL 6480	Head and Neck Anatomy	3
CELL 6490	Anatomy	0-4
CELL 6750	Cell Biology	3
EBIO 6080	Biostat & Experi Design	3
EENS 6400	The Scientific Enterprise	3
GBCH 6110	Basic Medical Biochemistry	3
PSYC 6090	Univariate I	3
PSYC 6110	Psyc Appl Univar Stat II	3
PSYC 6130	Psyc Appl Multivar Stats	3
SCEN 6000	Entrepreneurship Eng & Biosci	3
SCEN 6030	Anatomy & Physiology I (with or without lab 6035)	3(4)
SCEN 6035	Anatomy & Physiology I Lab	
SCEN 6040	Anatomy & Physiology II (with or without lab 6045)	3(4)
SCEN 6045	Anatomy and Physiology II Lab	