Major in Neuroscience

School of Science and Engineering

http://tulane.edu/sse/neuro
Office: 200 Flower Hall
Phone: (504) 862-3305

Project Assistant:
   Ebony Ragotzy: eragotzy@tulane.edu
Director:
   Beth Wee, Ph.D.: bwee@tulane.edu

Major (B.S.)
A major in Neuroscience allows a student to pursue an interdepartmental curriculum that focuses on the role of the nervous system in regulating physiological and behavioral functions. Neuroscience combines many traditional fields of study including Psychology, Biology, Chemistry, Physics, Anatomy, and Physiology. The field of Neuroscience encompasses a broad domain that ranges from the cellular and molecular control of brain cells to the regulation of responses in whole organisms.

Full-time students are eligible to declare Neuroscience as a major before the end of their sophomore year. Upon declaration of the major, the student will be assigned to a faculty advisor who is a member of the Undergraduate Program Faculty (see below). The student will meet regularly with the advisor to plan and monitor the course curriculum, approve changes in the curriculum, assist in development of research activities, plan post-graduate studies, and certify completion of the major requirements for graduation.

The major in Neuroscience prepares students for graduate study in Neuroscience or related programs, and/or medical school. A Bachelor of Science in Neuroscience requires 9 credits of core courses; 12 credits of elective courses; and 41 credits of co-requisite courses in Biology, Psychology, Chemistry, Physics, and Mathematics (see reverse of page). At least 6 of the elective credits must be taken from the list of Neuroscience electives and at least 3 courses with laboratories must be completed. Courses not listed in the standard curriculum can be substituted with permission. Students majoring in Neuroscience are strongly encouraged to participate in university research as independent studies and/or honors theses. Neuroscience majors who are interested in studying abroad should contact Dr. Beth Wee.

Undergraduate Program Faculty
Katelyn Black, kblack6@tulane.edu Neuroscience
Sara Clark, sclark4@tulane.edu Neuroscience
Paul Colombo, pcolomb@tulane.edu Psychology
James Cronin, cronin@tulane.edu Cell & Molecular Biology
Jill Daniel, jmdaniel@tulane.edu Psychology
Gary Dohanich, dohanich@tulane.edu Psychology
Laurie Earls, learls@tulane.edu Cell & Molecular Biology
Jonathan Fadok, jfadok@tulane.edu Psychology
Maria Galazo, mgalazo@tulane.edu Cell and Molecular Biology
Thomas Hebert, thebert1@tulane.edu Psychology
Hai Huang, hhuan5@tulane.edu Cell & Molecular Biology
Julie Markant, jmarkant@tulane.edu Psychology
Michael Moore, mooremj@tulane.edu Biomedical Engineering
Laura Schrader, schrader@tulane.edu Cell & Molecular Biology
Jeffrey Tasker, tasker@tulane.edu Cell & Molecular Biology
Beth Wee, bwee@tulane.edu Psychology

For a full list of research labs see: brain.tulane.edu
### Required Core Courses

- NSCI/PSYC 3300 3 Brain and Behavior Black/Colombo/Fadok/Harrison/Wee
- NSCI/CELL 3310 (S) 3 Cellular Neuroscience Tasker/Huang
- NSCI/CELL 3320 (F) 3 Systems Neuroscience Schrader/Galazo

### Elective Courses (Minimum of 12 credits, including minimum of 3 labs)

#### Elective Neuroscience Lecture Courses (Minimum of 6 credits)

- NSCI/PSYC 3770 (F) 3 Sensation and Perception Hebert
- NSCI/PSYC 4060 (S) 3 Behavioral Endocrinology Dohanich/Wee
- NSCI/LING 4110 (F) 3 Brain and Language Howard
- NSCI 4130 (S) 3 Sports Related Brain Injury Juengling
- NSCI/CELL 4300 (S) 3 General Endocrinology Clark
- NSCI/PSYC 4330 (F) 3 Neurobiology of Learning and Memory Daniel/Harrison
- NSCI/CELL 4340 (S) 3 Neurobiology of Disease Cronin
- NSCI/CELL 4350 (F) 3 Developmental Neurobiology Clark
- NSCI/CELL 4370 (S) 3 Molecular Neurobiology Huang
- NSCI/PSYC 4510 (S) 3 Biological Psychology Colombo
- NSCI/PSYC 4512 (S) 3 Memory Systems of the Brain Colombo
- NSCI/PSYC 4513 (F) 3 Music & Brain Colombo
- NSCI/PSYC 4530 (F) 3 Psychopharmacology Dohanich

#### Elective Laboratory Courses (Minimum of 3 labs, at least 1 in neuroscience area*)

- NSCI/CELL 3315*(F,S) 1 Cellular Neuroscience Lab Clark
- NSCI 3325* 1 Neuroanatomy Lab Black
- NSCI/PSYC 3775* (M) 1 Sensation and Perception Lab Hebert
- NSCI/PSYC 4065* (S) 1 Behavioral Endocrinology Lab Hebert
- NSCI/PSYC 4385* (S) 1 Cognitive Neuroscience Lab Hebert
- NSCI/PSYC 4515* (S) 1 Biological Psychology Lab Hebert
- CELL 2115 (F, S) 1 General Biology Lab Boudaba
- CELL 3035 (S) 1 Molecular Biology Lab Abboud
- CELL 3755 (S) 1 Cell Biology Lab Jones
- CELL 4111 (F) 4 Cells and Tissues Staff
- CELL 4490/4491 (S) 4 Anatomy Lab Garner
- PSYC 3130 (F,S) 4 Experimental Psychology Wyland
- SCEN 3030, 3135 (F) 3,1 Anatomy and Physiology I (Lecture/Lab) Dancisak
- SCEN 3040, 3145 (S) 3,1 Anatomy and Physiology II (Lecture/Lab) Dancisak

*Independent Study (3) or Honors Thesis (7) may fulfill only one laboratory requirement*

#### Elective Lecture Courses (Minimum of 3 credits)

- PSYC 3090 (F,S) 4 Univariate Statistics I Corey
- PSYC 3330 3 Abnormal Psychology Staff
- PSYC 3680 (F) 3 Comparative Animal Behavior Wee
- PSYC 6110 (S) 3 Univariate Statistics II Corey
- CELL 3030 (F,S) 3 Molecular Biology Mullin/Wang
- CELL 3050 (F) 3 Foundations of Pharmacology Dotson
- CELL 3210 (F) 3 Cellular Physiology Cronin
- CELL 3560 (S) 3 Fundamentals of Pathophysiology Cronin
- CELL 3750 (F,S) 3 Cell Biology Dotson
- CELL 4010 (F,S) 3 Cellular Biochemistry Abboud
- CELL 4160 (F) 3 Developmental Biology Chen
- EBI0 1010/1015 (S,M) 3,1 Diversity of Life (Lecture/Lab) Staff
- EBI0 4080 (F) 1 Biostatistics & Experimental Design Staff
- BMEN 3010 (S) 3 Physical Dimensions of Aging Dancisak
- SCEN 4110 (S) 3 Basic Medical Biochemistry Landry

#### Co-Requisite Courses

- PSYC 1000 3 Introductory Psychology Staff
- CELL 1010 3 Introduction to Cell and Molecular Biology Vijayaraghavan
- CELL 2050 (F,S) 3 Genetics Dotson/Meadows
- CHEM 1070/1075 (F,M) 4 General Chemistry I Staff
- CHEM 1080/1085 (S,M) 4 General Chemistry II Staff
- CHEM 2410/2415 (F,M) 4 Organic Chemistry I Staff
- CHEM 2420/2425 (S,M) 4 Organic Chemistry II Staff
- PHYS 1210 or 1310 (F,M) 4 General Physics I Staff
- PHYS 1220 or 1320 (S,M) 4 General Physics II Staff

Two courses required for B.S., one semester of Calculus required

---

F = Fall, S = Spring, M = Summer

Revised 2/8/19