NEUROSCIENCE MINOR

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The minor is open to all students, including psychology majors. However, students should note that they are limited to no more than 45 credit hours within a specific department. Students must earn a grade of C or better in at least four of the five courses.

Department Programs

Majors

- Neuroscience Major, B.S. (http://catalog.unc.edu/undergraduate/programs-study/neuroscience-major-bs/)
- Psychology Major, B.A. (http://catalog.unc.edu/undergraduate/programs-study/psychology-major-ba/)
- Psychology Major, B.S. (http://catalog.unc.edu/undergraduate/programs-study/psychology-major-bs/)

Minors

- Cognitive Science Minor (http://catalog.unc.edu/undergraduate/programs-study/cognitive-science-minor/)
- Neuroscience Minor (p. 1)

Graduate Programs

- M.A. in Psychology (http://catalog.unc.edu/graduate/schools-departments/psychology-neuroscience/)
- Ph.D. in Psychology (http://catalog.unc.edu/graduate/schools-departments/psychology-neuroscience/)

Requirements

In addition to the program requirements listed below, students must:

- take at least nine hours of their minor "core" requirements at UNC–Chapel Hill
- earn a minimum cumulative GPA of 2.000 in the minor core requirements. Some programs may require higher standards for minor or specific courses.

For more information, please consult the degree requirements section of the catalog (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements/#degreerequirementstext).

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>NSCI 175</td>
<td>Introduction to Neuroscience (with a grade of C or better)</td>
<td>3</td>
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Four courses distributed over at least three academic departments, selected from the following lists:

**Psychology and Neuroscience:**

- NSCI 222 Learning
- NSCI 225 Sensation and Perception
- NSCI 320 Neuropsychopharmacology
- NSCI 325 Neuroscience of Psychiatric Disorders
- NSCI 401 Animal Behavior
- NSCI 403 Advanced Biopsychology Laboratory
- NSCI 405 Advanced Molecular Neuropharmacology
- NSCI 415 History of Neuroscience
- NSCI 420 Functional Neuroanatomy
- NSCI 421 Principles of Brain Circuits
- NSCI 422 Genetics of Brain Diseases
- NSCI 423 Neurotechnology in Modern Neuroscience Research
- NSCI 424 Neural Connections: Hands on Neuroscience
- NSCI 427 Neurobiology of Aging
- NSCI 428 Neuroscience, Society, and the Media
- NSCI 434 Cognitive Neuroscience
- NSCI 437 Neurobiology of Learning and Memory
- NSCI 439 Neuroimmunology
- NSCI 507 Autism
- NSCI 568 Emotion
- NSCI 571 Social Neuroscience
- NSCI 573 Neuropsychobiology of Stress
- PSYC 245 Psychopathology
- PSYC 404 Clinical Psychopharmacology
- PSYC 469 Evolution and Development of Biobehavioral Systems
- PSYC 517 Addiction
- PSYC 533 The General Linear Model in Psychology
- PSYC 559 Applied Machine Learning in Psychology
- PSYC 602 Evolutionary Psychology

**Applied Physical Sciences:**
### Neuroscience Minor

<table>
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<tr>
<th>Course Code</th>
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<tr>
<td>APPL 101</td>
<td>Exploring Engineering</td>
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<tr>
<td>APPL 240</td>
<td>Developing Your Sixth Sense: Designing Sensors and Electrical Circuits to Make Measurements</td>
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<tr>
<td>APPL 350</td>
<td>Data Science for Applied Science and Engineering</td>
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<tr>
<td>APPL 430</td>
<td>Optical Instrumentation for Scientists and Engineers</td>
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<tr>
<td>APPL 435</td>
<td>Nanophotonics</td>
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**Biology:**
- BIOL 205: Cellular and Developmental Biology \(^H\)
- BIOL 425: Human Genetics
- BIOL 431: Biological Physics
- BIOL 450: Neurobiology
- BIOL 451: Comparative Physiology
- BIOL 455: Behavioral Neuroscience
- BIOL 458: Sensory Neurobiology and Behavior
- BIOL 547: Synaptic Plasticity: Analysis of Primary Literature
- BIOL 552: Behavioral Endocrinology
- BIOL 553: Mathematical and Computational Models in Biology
- BIOL 554: Introduction to Computational Neuroscience
- BIOL 542: Light Microscopy for the Biological Sciences

**Biomedical Engineering:**
- BMME 207: Biomedical Electronics
- BMME 301: Human Physiology: Electrical Analysis
- BMME 445: Systems Neuroscience
- BMME 550: Medical Imaging I: Ultrasonic, Optical, and Magnetic Resonance Systems

**Biostatistics:**
- BIOS 500H: Introduction to Biostatistics

**Chemistry:**
- CHEM 430: Introduction to Biological Chemistry \(^H\)

**Computer Science:**
- COMP 110: Introduction to Programming and Data Science \(^H\)
- COMP 111: Introduction to Scientific Programming
- COMP 210: Data Structures and Analysis
- COMP 211: Systems Fundamentals
- COMP 301: Foundations of Programming
- COMP 311: Computer Organization
- COMP 283: Discrete Structures \(^H\)
- COMP 555: Bioalgorithms
- COMP 560: Artificial Intelligence
- COMP 562: Introduction to Machine Learning
- COMP 576: Mathematics for Image Computing
- COMP 581: Introduction to Robotics \(^H\)
- COMP 631: Computer Networks
- COMP 633: Parallel and Distributed Computing
- COMP 651: Computational Geometry
- COMP 665: Images, Graphics, and Vision

**Exercise and Sport Science:**
- EXSS 175: Human Anatomy

- EXSS 276: Human Physiology
- EXSS 380: Neuromuscular Control and Learning

**Mathematics:**
- MATH 233: Calculus of Functions of Several Variables \(^H\)
- MATH 347: Linear Algebra for Applications
- MATH 383: First Course in Differential Equations \(^H\)
- MATH 523: Functions of a Complex Variable with Applications
- MATH 528: Mathematical Methods for the Physical Sciences I
- MATH 529: Mathematical Methods for the Physical Sciences II
- MATH 535: Introduction to Probability
- MATH 553: Mathematical and Computational Models in Biology
- MATH 555: Introduction to Dynamics
- MATH 564: Mathematical Modeling in the Life Sciences
- MATH 566: Introduction to Numerical Analysis
- MATH 577: Linear Algebra
- MATH 661: Scientific Computation I
- MATH 662: Scientific Computation II
- MATH 668: Methods of Applied Mathematics I
- MATH 669: Methods of Applied Mathematics II

**Physics:**
- PHYS 133: How Bio Works
- PHYS 405: Biological Physics

**Statistics and Operations Research:**
- STOR 215: Foundations of Decision Sciences
- STOR 415: Introduction to Optimization
- STOR 435: Introduction to Probability
- STOR 445: Stochastic Modeling
- STOR 455: Methods of Data Analysis
- STOR 555: Mathematical Statistics
- STOR 556: Time Series Data Analysis
- STOR 565: Machine Learning

**Total Hours:** 15

\(^H\) Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.

See the program page [here](http://catalog.unc.edu/undergraduate/programs-study/psychology-major-ba/#opportunitiestext) for special opportunities.