BACHELOR OF SCIENCE IN BEHAVIORAL NEUROSCIENCE

Program Contact: Todd Ahern (Todd.Ahern@quinnipiac.edu) 203-582-6402

Behavioral neuroscience is an interdisciplinary field that studies brain and behavior in a multifaceted and integrative way. The behavioral neuroscience major is a course of study that emphasizes the interaction between the psychological and biological foundations of behavior. Behavioral neuroscience majors choose one of two tracks (Natural Science Track or Psychological Science Track) based on their individual goals and interests. Students can participate in supervised concentrations offered in our department to gain experience in applying their knowledge of psychology to a real-world setting.

The Natural Science track is a science-intensive program that provides training to students who have primary interests in the biological sciences as applied to psychology and behavior. The curriculum in this track can fulfill the science prerequisites for most professional schools such as medical school and students may fully participate in the Pre-Medical Studies program. Students are eligible for participating in the Master of Science in Molecular and Cell Biology program (http://catalog.qu.edu/graduate-studies/arts-sciences/molecular-cell-biology-ms/) or the Master of Health Sciences in Biomedical Sciences (http://catalog.qu.edu/graduate-studies/health-sciences/medical-laboratory-sciences-mhs/) and their respective dual-degree programs (http://catalog.qu.edu/arts-sciences/biological-sciences/#programstext).

The Psychological Science track includes a core set of courses in biology, chemistry, and physics, but is more psychology-intensive than the Natural Science Track. This track would be appropriate for those who are most interested in aspects of psychology that are most directly related to physiology and brain function, and how they relate to behavior. The curriculum in this track prepares students for entry to graduate programs or employment in behavioral neuroscience and related fields.

Students seeking a BS in Behavioral Neuroscience must complete requirements for the University Curriculum and a foreign language up to the 102 level. Initial placement in English and mathematics scores is determined by examination and evaluation of high school units presented. Within the major, behavioral neuroscience students take a set of courses that emphasize scientific reasoning. After taking PS 101, all majors take PS 206, PS 307, PS 308 or PS 353, and PS 401 in separate semesters. The capstone course, PS 401, must be taken in the senior year; taken as a seminar during the regular academic year, and following completion of PS 308 or PS 353. In each of the following sequence courses, students must earn a grade of C- or higher before moving on to the next course: PS 206, PS 307, PS 308 or PS 353. **Students must earn a grade of C- or higher** in PS 101 before moving on to any 200-level PS courses and in PS 252 before moving on to the PS 357 course. All majors are encouraged to work closely with their academic adviser to plan their progress through the major.

BS in Behavioral Neuroscience: Natural Science Track

Students on the natural science track must complete a biological and physical science core, and a psychology core.

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### Bachelor of Science in Behavioral Neuroscience

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### Code | Title | Credits
---|---|---
**University Curriculum**
| | | 46
**Modern Language Requirement**
| | | 3-6
**Biological and Physical Science Core**
| BIO 150 & 150L | General Biology for Majors and General Biology for Majors Laboratory | 4
| BIO 151 & 151L | Molecular and Cell Biology and Genetics and Molecular and Cell Biology and Genetics Lab | 4
| CHE 110 & 110L | General Chemistry I and General Chemistry I Lab | 4
| CHE 111 & 111L | General Chemistry II and General Chemistry II Lab | 4
| CHE 210 & 210L | Organic Chemistry I and Organic Chemistry I Lab | 4
| CHE 211 & 211L | Organic Chemistry II and Organic Chemistry II Lab | 4
| PHY 110 & 110L | General Physics I and General Physics I Lab | 4
| PHY 111 & 111L | General Physics II and General Physics II Lab | 4

or

| PHY 121 | University Physics | 4
| PHY 122 | University Physics II | 4
| BIO 211 & 211L | Human Anatomy and Physiology I and Human Anatomy and Physiology Lab I | 4
| BIO 212 & 212L | Human Anatomy and Physiology II and Human Anatomy and Physiology II Lab | 4
| BIO 329 | Neurobiology | 3
| BIO 346 & 346L | Cell Physiology and Cell Physiology Lab | 4
| CHE 315 & 315L | Biochemistry I and Biochemistry I Lab | 4

**Psychology Core**

| PS 101 | Introduction to Psychology | 3
| PS 206 | Introduction to Statistics in Psychology | 3
| PS 307 | Introduction to Research Methods in Psychology with Lab | 4
| PS 308 | Advanced Research Methods in Psychology with Lab | 4

or

| PS 353 | Research Methods in Behavioral Neuroscience | 3
| PS 401 | Integrative Capstone for Psychology and Behavioral Neuroscience Majors | 3

**Psychology Content Courses**

| PS 233 | Cognitive Psychology | 3
| PS 252 | Physiological Psychology | 3
| PS 272 | Abnormal Psychology | 3
All majors are encouraged to work closely with their academic adviser to plan their progress through the major.

**BS in Behavioral Neuroscience: Psychological Science Track**

All students majoring in Behavioral Neuroscience: psychological science track must complete a biological and physical science core and a psychology core.

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<tr>
<th>Code</th>
<th>Title</th>
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<tr>
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<td>PS 354</td>
<td>Sensation and Perception</td>
<td>3</td>
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<td>PS 357</td>
<td>Drugs, Brain and Behavior</td>
<td>3</td>
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<td>Three 200 or above PS electives</td>
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All students majoring in Behavioral Neuroscience: psychological science track must complete the following courses in their first year:

- FYS 101 | First-Year Seminar | 3       |
- EN 101 | Introduction to Academic Reading and Writing | 3       |
- EN 102 | Academic Writing and Research | 3       |
- MA 141 | Calculus of a Single Variable | 3       |
- or MA 151 | Calculus I | 3       |
- BIO 150 | General Biology for Majors | 4       |
- BIO 151 | Molecular Cell Biology and Genetics | 4       |
- CHE 110 | General Chemistry I | 3       |
- CHE 111 | General Chemistry II | 3       |
- PS 101 | Introduction to Psychology | 3       |

1. All students must complete the 46 credits of the University Curriculum (http://catalog.qu.edu/academics/university-curriculum/).
2. Some of these courses can fulfill the University Curriculum requirements.
3. Students who do not directly place into MA 141 should take MA 140.

All majors are encouraged to work closely with their academic adviser to plan their progress through the major.

**Modern Language Requirement**

All CAS students (both bachelor of science and bachelor of arts) must complete one modern language through the 102 level. Modern language courses may also count toward the UC Personal Inquiry II requirement. Students who have taken a language in high school should take the modern language placement test for that language. Students with placement scores at the 201 level or higher have demonstrated language competency and thus have passed out of the language requirement.

**Student Learning Outcomes**

a. **Breadth of Knowledge of Psychology**: Use and evaluate various psychological perspectives to evaluate and predict complexities in affect, behavior and cognition; understand the history of the field and how psychology fits with other disciplines.

b. **Scientific Reasoning**: Conduct, interpret and evaluate scientific studies in terms of the reliability, validity and generalizability of the research designs; develop open-mindedness, curiosity and amiable skepticism toward claims.

c. **Ethical Responsibility**: Apply ethical standards to research and practice situations; demonstrate interpersonal sensitivity in work and communities.

d. **Communication Skills**: Demonstrate flexibility and clarity of argument in both written and oral communication.

e. **Personal Development**: Apply psychological thinking to issues encountered in work and personal life, such as using evidence to solve problems; engage in teamwork as well as self-reflection and self-management.
Note, our discussion draws upon American Psychological Association’s (APA) Guidelines for the Undergraduate Psychology Major.

**Admission Requirements: College of Arts and Sciences**

The requirements for admission into the undergraduate College of Arts and Sciences programs are the same as those for admission to Quinnipiac University.

Admission to the university is competitive, and applicants are expected to present a strong college prep program in high school. Prospective first-year students are strongly encouraged to file an application as early in the senior year as possible, and arrange to have first quarter grades sent from their high school counselor as soon as they are available.

For detailed admission requirements, including required documents, please visit the Admissions (http://catalog.qu.edu/general-information/admissions/) page of this catalog.

**Pre-Medical Studies Program**

Students majoring in Health Science Studies, Biology, Biomedical Sciences or the natural science track of Behavioral Neuroscience may fully participate in the pre-medical studies program. The curriculum in this degree program can fulfill the science prerequisites for most professional schools. Students should refer to Pre-Medical Studies (http://catalog.qu.edu/academics/premedical-studies/) for more information about the pre-medical studies program and contact the Health Professions Advisory Committee for further academic advising.