

Questions about the Biological Psychology Concentration¹

What is the Biological Psychology Concentration?

The Biological Psychology Concentration provides an opportunity for a limited number of students to pursue a coherent curriculum that emphasizes the biological basis of behavior. Please note that the Biological Psychology Concentration is not a major or minor.

Why should I be interested in this concentration?

Students who have a strong interest in the biological basis of behavior, cognition, and affect would find the concentration a perfect home for their academic interests. The Concentration provides for a research-intensive curriculum, wherein primary research with a faculty advisor is encouraged in the third year, often leading to a summer's research experience, followed by a fourth year where the student is fairly autonomous in conducting their research project. Many students of the concentration attend national conferences where they can present their work, and some go on to earn authorship in professional publications.

Who can apply? When does the application process take place? What is involved in applying to the concentration?

All second year Psychology and Biology majors will be invited to an informational meeting to be held on Thursday, February 4, 2010. Admission to the Concentration is competitive and requires the completion of an application. Completed applications will be due on Friday, February 26, 2010. Within two to three weeks students will be notified of the status of their application. The application process is not complicated. Students fill out a brief form and are asked to write a one to two page letter of interest in which they describe the reasons for their wanting to join the Concentration and how participation in the Concentration will benefit their educational goals. This letter should also describe a student's potential interest in having the opportunity to conduct research with a faculty member. In addition to the letter of intent, decisions are based upon two letters of recommendation and consideration of a student's academic performance (GPA) while at Holy Cross.

How many students are accepted into the program and why is the Concentration limited in size?

Up to eight students are accepted into the Concentration each year. The quality of the members of the Concentration is more important than sheer number. The expectation of research participation with faculty is another factor that limits the number of students that can be admitted.

What are the requirements of the Concentration?

- 1) An introductory course in Biology, including:
 - Biology 131 (Bio Majors Only)
 - Biology 120, 121 (Premed Psych Majors)(Psychology majors in the concentration that are not Premed need permission to take Biol 120 or 121.)
- 2) Introduction to Psychology (Psychology 100 or 101)
- 3) Four additional courses chosen from the following list – **one of these must be in the non-major department.** (NOTE – The list below is not exhaustive – other courses not listed below may nonetheless qualify, if judged to be appropriate by the Concentration Director.)

¹ Last updated 8/13/09.

Psychology Courses

Sensation and Perception (Psy 220)
Physiological Psychology (Psy 221)
Learning (Psy 223)
Cognitive Neuroscience (Psy 235)
Cognition and Memory (Psy 236)
Psychology of Language (Psy 237)

Evolution and Behavior (Psy 253)
Biology of Mental Disorders (Psy 315)
Drugs of Abuse (Psy 316)
Neuroanatomy and Behavior (Psy 321)
Mind, Body, Health and Medicine (Psy 366)

Biology Courses

Biology Principles (Biol 114; Approval of Concentration Director required)
Comparative Chordate Morphology (Biol 213)
Microbiology (Biol 223)
Developmental Biology (Biol 230)
Vertebrate Endocrinology (Bio 241)
Vertebrate History (Biol 255)
Genetics (Biol 261)

Cell Biology (Biol 266)
Evolution (Biol 283)
Ethology and Behavioral Ecology (Biol 287)
Biochemistry (Biol 301)
Molecular Genetics (Biol 320)
Virology (Biol 341)
Animal Physiology (Biol 390)
Immunology (Biol 392)

- 4) In addition, concentrators must complete two semesters in another science or mathematics (e.g., chemistry, physics, or mathematics).
- 5) Students must be involved in research for a minimum of two semesters with the same faculty member. Only research conducted during the student's fourth year may be taken for course credit; Biol 401 or Psyc 380.
- 6) Concentrators will participate in meetings to be held on a nearly weekly basis where discussion of important articles in the field will be discussed. These meetings will also provide a medium where student's progress in their research activities will be monitored and shared with other student members of the Concentration.
- 7) A written senior thesis must be submitted to the Concentration Director and the faculty member sponsoring the student's research during finals' week prior to graduation. The senior thesis is preceded by a written proposal submitted prior to the beginning of the fall semester of the 4th year, and a progress report is submitted in the first week of the spring semester prior to graduation.

What types of research experiences are available to members of the Biological Psychology Concentration?

A large and varied number of the Holy Cross faculty have an interest in behavioral neuroscience. In addition to faculty in the departments of Biology and Psychology, students may choose to work with, for example, faculty in Chemistry, Physics, Math and Computer Science, or even Philosophy. It is the student's responsibility to identify a suitable faculty sponsor with whom they will work, which will be judged by the Concentration Director, in consultation with the proposed faculty mentor. Pending approval from the Director, it may also be possible to work with faculty outside of the Concentration. Students can choose from a wide variety of topics in the neurosciences ranging from cellular to behavioral approaches.

Who can I speak with about the Concentration?

Prospective Biopsych concentrators should speak with current Biopsych concentrators, and with faculty in both major departments, especially those who teach courses listed as concentration requirements. I would welcome additional questions from you at any time during the semester. My office hours for the Fall 2009 semester are: M 11 am – 1 pm, T 2 – 3 pm, W 3 – 5 pm, R 11 am – noon. Please write to make an appointment if these times are inconvenient (dbitran@holycross.edu).