Info Session: Thursday, February 5, from 5-6pm in Beaven 118
2015 Application Deadline: Friday, February 27

Biological Psychology Concentration
The biological psychology concentration provides an opportunity for a limited number of second year students to pursue a coherent curriculum that emphasizes the biological basis of behavior. As a concentration, it is not considered a major or minor. Up to eight second year students are accepted into the concentration each year.

Curriculum requirements for the concentration include an introductory course in biology and psychology and four additional courses from a broad range of course offerings. Students are also required to participate in a senior research thesis and are expected to participate in weekly meetings.

Interested students are urged to contact the either of the Concentration Co-Directors, Pr. Alo Basu (abasu@holycross.edu, x3750) or Pr. Daniel Bitran (dbitrans@holycross.edu, x3329) as early as possible in their career.

In order to apply for the Biological Psychology Concentration, you should take steps to identify a Holy Cross faculty member with whom you will be doing your research. Thus it is important for you to approach faculty members with whom you are interested in working as soon as possible. You should find out what they are working on and develop a tentative research plan.

Second, you need to complete an application consisting of a personal statement of research interests and a description of your goals. The application must be accompanied by an unofficial copy of your most current transcript (available from STAR). In addition, 3 letters of recommendation should be uploaded by your faculty recommenders.

Why Study Biological Psychology?
Introduction: The past two decades have witnessed an unprecedented expansion in our understanding of the brain and nervous system, and their relations to behavior. The discipline that has been most involved in the effort to understand brain-behavior relations is termed biological psychology or behavioral neuroscience. This field is, by its very nature, an interdisciplinary field, one that comprises not only central portions of biology and psychology, but also chemistry, physics, mathematics, and computer science.

Why a Concentration? In recognition of the fact that the subject matter of biological psychology cannot be accommodated by any one department, the Biology and Psychology Departments jointly offer the Biological Psychology Concentration. The program is not a double-major; it is structured to provide an integration of the two disciplines for students who choose either biology or psychology as their major.

Goals of the Concentration: The concentration is not intended simply to prepare undergraduates for advanced degrees in neuroscience. In fact, a study of colleges comparable to Holy Cross with similar programs revealed that only about one-fourth of students who major or concentrate in this area go on to advanced study in neuroscience. Another third are premedical/predental students who see Biological Psychology as a relevant complement to their undergraduate preparation. The remaining students who select Biological Psychology do so for the same reasons that they might involve themselves in any area of study. Their postgraduate plans are, in turn, as varied as any sample of students’ plans would be, ranging from business and law school to social service and the arts.
Requirements and Courses

Requirements

• An introductory course in Biology:
  o Biology 161
  o Biology 162
• Introduction to Psychology
• Four additional courses from the list below - one of these must be in the non-major department. (NOTE – This list is not exhaustive – other courses not listed below may nonetheless qualify if judged to be appropriate by the Concentration Director.)
• Concentrators must complete two courses in another science or mathematics (e.g., chemistry, physics, math, or computer science).
• 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.
• Concentrators must 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 vehicle where student’s progress in their research activities will be monitored and shared with other student members of the concentration.
• A written senior thesis must be submitted to the Concentration Director and the faculty member sponsoring the student’s research during final’s week prior to graduation.
  o The senior thesis is preceded by a written proposal submitted by the second week of the fall semester of the fourth year.
  o A progress report is submitted in the first week of the spring semester prior to graduation.

Biology Courses

• Comp Chordate Morphology (Biol 213)
• Microbiology (Biol 223)
• Developmental Biology (Biol 230)
• Vertebrate History (Biol 255)
• Genetics (Biol 261)
• Cell Biology (Biol 266)
• Neurobiology (Biol 267)
• 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)

Psychology Courses

• Sensation and Perception (Psyc 220)
• Physiological Psychology (Psyc 221)
• Learning (Psyc 223)
• Cognitive Neuroscience (Psyc 235)
• Cognition and Memory (Psyc 236)
• Evolution and Behavior (Psyc 253)
• Neuroethology (Psyc 299)
• Biology of Mental Disorders (Psyc 315)
• Drugs of Abuse (Psyc 316)
• Neuroanatomy and Behavior (Psyc 321)
• Face Perception (Psyc 345)
• Mind, Body, Health and Medicine (Psyc 366)
Admission to the Program

**General Information:** Admission to the concentration is by application. Each spring semester up to eight second-year students are admitted. In February, all second year biology, psychology, and undeclared majors are invited to an informational meeting about the concentration. Applications are typically due two weeks later.

The application consists of a letter of interest, a copy of the transcript, and three letters of recommendation. Applicants are encouraged to familiarize themselves with the concentration prior to writing their letter of interest by speaking with current concentrators and faculty involved with the concentration.

Notification of acceptance into the concentration is made prior to spring registration. Students who have been accepted to the concentration meet with the Director to guide them through registration into courses that fulfill the concentration requirements.

**Concentration Faculty**

Dr. John Axelson, Professor, Psychology Department  
Dr. Alo Basu, Assistant Professor, Psychology Department  
Dr. Robert Bellin, Associate Professor, Biology Department  
Dr. Daniel Bitran, Professor, Psychology Department  
Dr. Gregory DiGirolamo, Associate Professor, Psychology Department  
Dr. Patricia Kramer, Associate Professor, Psychology Department  
Dr. Charles Locurto, Professor, Psychology Department  

Dr. Michelle Mondoux, Assistant Professor, Biology Department  
Dr. Sarah Petty, Assistant Professor, Chemistry Department  
Dr. Ken Prestwich, Associate Professor, Biology Department  
Dr. Constance Royden, Associate Professor, Math and Computer Science Department  
Dr. Richard C. Schmidt, Professor, Psychology Department  
Dr. Ann Sheehy, Associate Professor, Biology Department  
Dr. Edward Soares, Associate Professor, Math and Computer Science Department  
Dr. Karsten Stueber, Professor, Philosophy Department  
Dr. Sarah Webster, Assistant Professor, Biology Department  
Dr. Amy Wolfson, Professor, Psychology Department

**Biological Psychology Concentrators**

**Class of 2016**

Erin Hillis (psychology)  
Stefania Khoda (psychology)  
Michael Mastroianni (biology)  
Nicole Parentela (psychology)  
Amanda Snow (biology)  
Caterina Teves (psychology)  
Max Trojan (biology)

**Class of 2015**

Bethanne Bartscherer (psychology)  
Christina Carlone (psychology)  
Taylor Hendershott (psychology)  
Dan Luu (biology)  
John Milner (psychology)  
Thuy Uong (chemistry)