BIOPSYCHOLOGY

Mission and Structure

The Monmouth College Biopsychology major is an interdisciplinary major which trains students to more completely understand the biological mechanisms of behavior and psychological processes. Through taking courses predominantly in the Psychology and Biology departments, students will learn to integrate the skills learned in one field to the issues in the other. To this end, students will learn the fundamental concepts relevant to the intersection of biology and psychology and gain an appreciation for the scientific research methods and statistical tools commonly used in the field. As evidenced through an independent senior research project, students will learn to retrieve, synthesize, evaluate, and conduct scientific research and to communicate their interpretation of this research to others. Furthermore, students will learn to recognize the ethical dimensions and practical applications of biopsychological theory and research, and gain an appreciation for the implications of such practice and research in a variety of disciplines. The Biopsychology major will benefit students interested in pursuing a post baccalaureate degree (M.S. or Ph.D.) in biopsychology and related fields, students interested in attending medical school, and students interested in academic or professional careers requiring a solid foundation in science.

Structure of the Program

Courses for the Biopsychology major are divided into two major categories: required courses and electives. The required courses consist of 6 core courses drawn from Biology, Psychology and Chemistry (4 of which include a laboratory component) and a research methodology sequence which can be completed in either the Biology or Psychology departments. The research component sequence culminates with an integrative senior research project related to the field of biopsychology. The elective courses consist of three courses drawn from the Biology, Psychology and Chemistry departments, with at least one elective course taken from both the Biology and Psychology departments.

The Biopsychology major complements the mission and purposes of the College (as elaborated in the “Monmouth College Statement of Purpose”) in many ways. The major prepares students for both academic and professional careers by providing instruction in biological and psychological concepts, training in laboratory skills, and elective classes geared toward more specific areas of interest. Both the Biology and Psychology departments offer individual mentoring to guide students in their intellectual inquiry. Throughout the program, acquisition of knowledge and skills is assessed via evaluations of both written and oral communication of acquired knowledge, especially in conjunction with laboratory projects and independent research projects. Intrinsically interdisciplinary, the Biopsychology major allows students to recognize the important biological/neurological, developmental, social, and psychological determinants of human behavior. This integrative major uniquely serves the goal of clarifying and contrasting the various assumptions of the subfields within biology and psychology and critically evaluating the assumptions, evidence, and perspectives of not just these disciplines, but other disciplines that study human behavior as well.
Assessment of Biopsychology Major Goals

Goals of the Biopsychology Major | Most Relevant Courses
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1. Understand fundamental concepts and learn basic facts and terminology relevant to the intersection of biology and psychology. | Required courses
2. Understand and evaluate common research methods and statistical tools. | Research sequence
3. Retrieve, synthesize, and critically evaluate scientific literature. | Research sequence
4. Communicate, orally and in writing, results and interpretation of scientific research. | Senior project; plus Psyc202 or Biol322
5. Design and implement research protocols that test predictive hypotheses, analyze data, report results, and interpret their significance. | Research sequence
6. Respect the diversity of behavior and experience. | Required and Elective courses
7. Appreciate the ethical dimensions and social implications of research and practice in the field. | Research sequence
8. Understand and appreciate the relationship between the study of biopsychology and the other traditional liberal arts disciplines. | Many
9. Recognize and appreciate the practical application of theory and research. | Research sequence; Required courses

Means of Assessment
In order to conduct assessment effectively and efficiently, the Biopsychology major goals will be assessed in a limited number of places. First, as all students are required to take Mind, Brain, and Behavior (Psyc243) and Biopsychology (Psyc318), and these two courses are most directly related to the Biopsychology major’s focus, embedded assessment will be used in course exams and assignments to assess the goals as appropriate. Second, each student’s senior project will be assessed for the degree to which the project demonstrates achievement of the major goals. Third, a Senior Comprehensive Exam will be administered to each student during the semester they complete their senior project, and will be included as part of the course grade. The exam will be designed to assess each of the major goals. And finally, senior exit interviews will be used to assess the students’ perceptions of how well their coursework, research projects, and co-curricular education helped them to achieve the Biopsychology major goals, as well as prepare them for employment or further education in the field.