Mind, Brain and Behavior

How do we think? What is human consciousness? What is the relationship between the mind, the brain and behavior? During the past few decades, an explosive growth of knowledge in the cognitive sciences has begun to yield answers to fundamental mysteries about the nature of human thought. Students in this two-year program investigate new theories and problems emerging from this interdisciplinary area of study.

The Mind, Brain and Behavior (MBB) program, which is open to incoming freshmen in the College of Arts & Sciences, is a two-year program that engages students with the research culture of the university. The program builds upon areas of research strength and increasing faculty collaboration within the university. It brings together faculty from several departments and students who share an interest in an area of study to create a lively intellectual and social community; to foster a culture of inquiry; and to enable students, early in their undergraduate career, to participate in research. For more information on the application process, visit college.artsci.wustl.edu/firstyearprograms.

During the first year, freshmen take two core courses that provide an introduction to the interdisciplinary study of the mind-brain (MBB 120A Introduction to Study of the Mind-Brain: Psychological, Biological and Philosophical Perspectives and MBB 122 Introduction to the Study of the Mind Brain II). These courses are taught collaboratively by faculty members from different disciplines. In the sophomore year, students are able to undertake research under the supervision of a faculty member who serves as a research mentor for the MBB program (MBB 300 Research in Mind, Brain and Behavior). Sophomores may choose among several research options, each combining independent work with opportunities to work collaboratively.

Participation in Mind, Brain and Behavior is fully compatible with all majors and pre-professional programs. Enrollment in Mind, Brain and Behavior is limited to 45 students each year.

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Participating Faculty, 2014-15

David A. Balota
Professor
PhD, University of South Carolina
(Psychology and Neurology)

John Doris
Professor
PhD, University of Michigan–Ann Arbor
(Philosophy and Philosophy–Neuroscience–Psychology)

Janet M. Duchek
Associate Professor
PhD, University of South Carolina
(Psychology)

Steven E. Petersen
James S. McDonnell Professor of Cognitive Neuroscience
PhD, California Institute of Technology
(Neurology and Neurological Surgery; Radiology; and Psychology)

Elizabeth Schechter
Assistant Professor
PhD, University of Maryland
(Philosophy-Neuroscience-Psychology (PNP))

The Mind, Brain and Behavior (MBB) program, which is open to incoming freshmen in the College of Arts & Sciences, is a two-year program that engages students with the research culture of the university. There is no major in this area.

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L96 MBB 120A Introduction to Study of the Mind-Brain: Psychological, Biological and Philosophical Perspectives

A consideration of three primary areas of research in cognitive science: attention, memory and language. These topics are used to illustrate the techniques by which mental abilities are investigated and explained in psychology and neuroscience: the focus, in particular, is on the use of reaction time studies, brain imaging and cell recordings to isolate the basic components that make up complex functions. In addition to the central concepts and theories in each area, the course addresses philosophical implications of this research concerning how the mind and brain are related, how the mind-brain encodes or represents information, and the nature of consciousness. And there is an emphasis on applying these findings to important problems, such as Alzheimer’s disease and deficits due to brain damage.

The class is taught by three members of the faculty from different disciplines and combines a whole-group lecture with small discussion classes. The goal is to give students a good understanding of the interdisciplinary nature of cognitive science and to help them develop the ability to think and write critically about scientific research into the mind-brain. Prerequisite: admission to the Mind, Brain and Behavior program.

Credit 3 units. A&S: NS A&S: IQ, NSM BU: SCI

L96 MBB 122 Introduction to the Study of the Mind Brain II

In this course, participants in the Mind, Brain and Behavior Program continue their exploration of cognitive science. We explore different frameworks for thinking about how the different branches of cognitive science relate to each other. The course contains an introduction to relevant topics in the philosophy of science and the philosophy of mind. Prerequisite: MBB/PNP 120.
Credit 3 units. A&S: SS A&S: IQ, SSC EN: S

L96 MBB 300 Research in Mind, Brain and Behavior
An introduction to research for students in the Mind, Brain and Behavior program. Students work under the supervision of a mentor. Prerequisite: admission to the Mind, Brain and Behavior program, completion of MBB/PNP 122, and permission of the mentor.
Credit variable, maximum 3 units. A&S: NS A&S: IQ, NSM