Psychological and Brain Sciences

Psychological and Brain Sciences are concerned with understanding the biological and psychological processes underlying animal and human behavior, and with the effects of environmental influences on behavior at all stages of development.

The undergraduate program leading to the baccalaureate degree is intended to provide students with a sound background in psychological and brain sciences and, at the same time, to prepare them for advanced study.

The program for doctoral students in psychological and brain sciences is scientifically oriented and emphasizes research methodology. The broad aims of the graduate program are to train students to become scientists rather than practitioners, and to provide them with the knowledge and skills they need to help solve the problems of contemporary society.

Facilities

The department’s offices and laboratories contain dozens of desktop computers (PCs and Macintoshes) and UNIX workstations used for experimental control and for computational studies, simulation, data analysis, and manuscript preparation.

The F. M. Kirby Research Center for Functional Brain Imaging houses 3.0T and 7.0T Philips research-directed MRI scanners for fMRI studies of human perception, memory, and cognition.

The cognitive psychology and cognitive neuroscience laboratories contain a wide range of computer equipment and special-purpose research equipment, including image-processing and large-format graphics systems, eye-movement monitors, speech recognition and analysis systems, stereoscopic graphic systems, video equipment, and other stimulus-presentation and response-collection devices.

The biopsychology laboratories have all the facilities necessary to conduct modern behavioral neuroscience research, including equipment for behavioral and operant testing, electrophysiology, histology, surgery, neurochemistry, and systems for the analysis and synthesis of audio signals.

The courses in psychological and brain sciences have four purposes:

1. to acquaint all interested students with a sampling of topics through a variety of introductory and advanced courses;
2. to prepare majors for graduate work in psychology and related disciplines through a program that meets the admission requirements of the outstanding graduate departments in the United States;
3. to offer a distribution of courses for a minor concentration in psychology as well as several fields of concentration for area majors in the social and behavioral sciences; and
4. to provide an honors track designed for exceptional students who want training beyond that provided by the standard undergraduate curriculum.

I. Required Courses Outside the Department

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>AS.110.106</td>
<td>Calculus I *</td>
<td>4</td>
</tr>
<tr>
<td>or AS.110.108</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>or AS.110.201</td>
<td>Linear Algebra</td>
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</tr>
<tr>
<td>EN.550.111</td>
<td>Statistical Analysis I **</td>
<td>4</td>
</tr>
<tr>
<td>EN.550.112</td>
<td>Statistical Analysis II **</td>
<td>4</td>
</tr>
</tbody>
</table>

* AS.110.105 Introduction to Calculus may not be used for this requirement.

** These courses should be taken as early as possible as they are prerequisites for many psychology courses.

II. Required Courses Within the Department

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>AS.200.207</td>
<td>Research Methods in Experimental Psychology (fall)</td>
<td>3</td>
</tr>
<tr>
<td>Select three of the following:</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>AS.200.101</td>
<td>Introduction to Psychology</td>
<td></td>
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<tr>
<td>AS.200.110</td>
<td>Introduction to Cognitive Psychology</td>
<td></td>
</tr>
<tr>
<td>AS.200.132</td>
<td>Introduction to Developmental Psychology</td>
<td></td>
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<tr>
<td>AS.200.133</td>
<td>Introduction to Social Psychology</td>
<td></td>
</tr>
<tr>
<td>AS.200.141</td>
<td>Foundations of Brain, Behavior and Cognition</td>
<td></td>
</tr>
<tr>
<td>Five upper-level psychology courses *</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Research, internship, independent study, or a designated seminar course **</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>N, Q, and/or E ~</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>H, N, Q, and/or E</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

* 200-level and above, with a minimum of three courses at the 300-level or higher.

One upper level course in Cognitive Science may be used to satisfy these course credits with the approval of the director of undergraduate studies. Research Methods in Experimental Psychology, research, independent study, and internships may not be used to satisfy these course requirements.

** The seminar course must have an enrollment of 19 students.

Courses used to fulfill the five upper-level course requirements may not be used to satisfy this requirement. Students may take 1-3 credits in any given semester to fulfill this requirement. All students are required to discuss their plans with their faculty advisor before junior clearance.

*** Students who are planning advanced study in psychological and brain sciences are strongly encouraged to engage in psychological research and/or clinical internships.

~ You may use EN.550.111 Statistical Analysis I and EN.550.112 Statistical Analysis II/AS.110.201 Linear Algebra to fulfill this requirement.

Restrictions

No courses taken during Intersession or through the School of Education and the Carey Business School may be counted toward the...
requirements for the B.A. degree in Psychological and Brain Sciences (although a limited number of such courses may be counted toward the 120 credits required for graduation). Courses in the Summer at Hopkins daytime program do count toward the requirements for the B.A. in Psychological and Brain Sciences.

Preparation for Graduate Work in Psychology
The Department of Psychological and Brain Sciences provides preparation for graduate training in all areas of psychology, including clinical and counseling. Virtually all psychology graduate programs, including those that provide training in clinical or counseling psychology, expect students to have a strong background in scientific psychology, including statistics. The department encourages students to obtain additional practical experiences outside the classroom, including research in a laboratory and/or an internship in a mental health care setting. These additional experiences are particularly salient to graduate school admission committees.

Honors Program in Psychology
The B.A. degree with honors provides recognition for outstanding achievement in formal course work and research. The requirements for a degree with honors include those for the regular B.A. degree, plus the following:

• A minimum grade point average of 3.5 in psychology courses (exclusive of independent study or research) through the fall semester of the student’s junior year.

• A formal application to be submitted to the director of undergraduate studies by March 31 of the student’s junior year. The application must include a copy of the student’s transcript, a brief description of the proposed honors research project, and written endorsement of the application by the student’s faculty sponsor. The sponsor must have a full-time faculty appointment at Johns Hopkins and either a primary or a joint appointment in the Department of Psychological and Brain Sciences. Admission into the Honors Program is not guaranteed.

• Completion of two 300- or 600-level psychology courses, in addition to those required for the regular B.A. degree. Neither of these can be research or reading courses. These additional courses are not in addition to the 120 credits required for graduation.

• Completion of an independent research project under the supervision of a member of the department’s faculty, culminating in a written honors thesis. The student will enroll in AS.200.519 Seniors Honors Research and AS.200.520 Seniors Honors Research during both semesters of the senior year. The honors thesis must be submitted no later than March 31 of the senior year and must be read and approved in writing by two members of the faculty.

• Students considering application to the honors program should begin discussing possible thesis research topics with a faculty sponsor no later than the fall semester of their junior year.

Minor in Psychology
A minor in psychology is available to undergraduates majoring in any department. Students electing to minor in psychology should declare their intention directly to the director of undergraduate studies in the Department of Psychological and Brain Sciences by the end of junior year. The minor requires successful completion of the following:

Select three of the following:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>AS.200.101</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>AS.200.110</td>
<td>Introduction to Cognitive Psychology</td>
</tr>
<tr>
<td>or AS.050.101</td>
<td>Cognition</td>
</tr>
<tr>
<td>AS.200.132</td>
<td>Introduction to Developmental Psychology</td>
</tr>
<tr>
<td>AS.200.133</td>
<td>Introduction to Social Psychology</td>
</tr>
<tr>
<td>AS.200.141</td>
<td>Foundations of Brain, Behavior and Cognition</td>
</tr>
</tbody>
</table>

Three additional psychology courses, including at least two at the 300 or 600 level *

One additional psychology course at any level **

Total Credits 21

* No course from the Carey Business School or School of Education may count toward the minor.

** No more than one research or readings course may count toward the minor.

Undergraduate Academic Awards
The Department of Psychological and Brain Sciences offers two undergraduate academic awards. The G. Stanley Hall Prize is awarded for outstanding achievement by an undergraduate in psychology. The Julian C. Stanley Award is given to the psychology major who most closely approximates Dr. Stanley’s personal and professional standards of excellence.

Master of Arts in Psychology
A student who has been admitted into the Ph.D. program can earn a Master of Arts degree in partial fulfillment of the requirements for the Ph.D. degree. Normally, candidates for the Ph.D. degree in psychology will qualify for the M.A. degree at the end of their second year, after having completed two area seminars and at least two courses in psychological research design and/or advanced statistics, provided that their performance is of the quality judged satisfactory for the M.A. level. There is no terminal master’s program.

Requirements for the Ph.D. Degree
The Department of Psychological and Brain Sciences emphasizes training and experience in the research methods essential to the development of new knowledge in the various fields of psychology. The core program for training doctoral students emphasizes scientific methodology and provides training in both pure research and research related to problems in the everyday world, with emphasis on the ways in which basic research methodology can be adapted to the study of applied problems. Each doctoral candidate is expected to become familiar with both a relatively narrowly defined area and a broad spectrum of knowledge related to the student’s topic of specialization.

In addition to general university requirements, the Department of Psychological and Brain Sciences has the following regulations:

Statistics
Most students will take AS.200.314 Advanced Statistical Methods during the first semester and AS.200.315 Advanced Research Design and Analysis during the second semester. Students with exceptional statistical training should take two more advanced courses by arrangement with the director of graduate studies.
Fundamentals and Core Topics in PBS
These courses offer an introduction to the fundamental principles of cognitive and physiological psychology and psychological and brain sciences. Students will read seminal and contemporary papers in topics that cover the breadth of the field.

First-Year Research Report
During the first year, the student, together with the faculty advisor, chooses a research project that will provide extended research experience. Normally, the student designs a study as a larger ongoing project. A project proposal must be submitted by April 15 of the first year; this presents the nature of the problem, reviews the relevant literature, and describes the study in detail, together with the anticipated data, means of analysis, and interpretations. A final report must be submitted by December 15 of the second year; this includes all the information appropriate for published work.

Advanced Examination
Each student must pass an in-depth examination in his/her chosen area. This examination which includes both a written and oral part, is graded by a committee of at least two faculty members. The student must pass the advanced examination by the beginning of the third year.

Advanced Study
Each student with a faculty advisor plans a course of study consisting of intermediate and advanced topical and research seminars.

Topical Seminars
One or more faculty members lead seminars on topics of special interest, such as cognitive processes, developmental psycholinguistics, neuro-physiological aspects of behavior, mathematical psychology, and information processing. Through these seminars a student gets intensive knowledge in particular specialties. Topics vary from semester to semester and are determined by the interests of both faculty and graduate students.

Research Seminars
Students and faculty engaged or interested in research in particular areas organize these seminars. Participants discuss their own research and other current research in the area.

Teaching Requirement
Teaching requirements are fulfilled by graduate students serving as teaching assistants to members of the department’s faculty, in courses taught in the School of Arts and Sciences. All graduate students are expected to TA a total of four semesters, as follows: second semester–first year students; first and second semester–second year students; first semester–third year students. A committee composed of graduate student representatives participates each semester in the selection of teaching assignments.

Advanced students may apply for a Dean’s Teaching Fellowship. A course is proposed by the student and is sponsored by a faculty member. These are highly competitive and prestigious awards. For details please visit http://krieger.jhu.edu/teachingfellowship/.

Literature Review
The literature review should be modeled on articles appearing in professional journals. Ordinarily the review provides a background for the thesis plan, but it may be prepared on a topic other than the one selected for the thesis. It is a separate document and is evaluated by the same committee that evaluates the thesis plan.

Thesis Plan
By the end of the third year or at least one calendar year before receiving the Ph.D. degree, each doctoral candidate must develop a plan for the dissertation research and present the plan before a departmental committee. With the committee’s approval, the student then prepares a dissertation.

Dissertation
The dissertation represents the student’s finest piece of scholarly work. It establishes the pattern for a research career and the basis for postgraduate employment. The Graduate Board of the University administers the final oral examination, a defense of the thesis. The doctoral dissertation must be in a form suitable for and worthy of publication.

Financial Aid
Financial support packages are available to all doctoral students, with 9-month stipends that are competitive with those of other universities. Financial support includes tuition remission. Summer research assistantships are available in the department.

For further information on graduate study in psychology, contact Academic Program Coordinator, Laura Dalrymple, Department of Psychological and Brain Sciences, 410-516-6175.

For current faculty and contact information go to http://pbs.jhu.edu/directory/

Faculty
Acting Chair
Susan Courtney
Professor: cognitive neuroscience, working memory, attention, and functional neuroimaging.

Professors
Gregory F. Ball
biopsychology, behavioral neuroendocrinology, neuroethology.

Howard Egeth
perception, memory, cognition, psychology and law.

Michela Gallagher
learning and memory, neurobiology of aging.

Peter Holland
learning, memory, motivation, behavioral ecology.

Steven Yantis
visual perception, attention, and functional neuroimaging.

Associate Professors
Lisa Feigenson
cognitive development, numerical cognition.

Justin Halberda
cognitive development, reasoning, language acquisition.
**Assistant Professors**

Marina Bedny  
brain development and plasticity, cognitive neuroscience, concepts.

Jonathan Flombaum  
visual perception, attention and cognition.

Veit Stuphorn  
neurophysiological studies of decision-making.

Michael Yassa  
cognitive neuroscience, long-term memory, aging and dementia.

**Associate Faculty**

Richard Allen  
Associate Professor: (Neurology); School of Medicine.

Stephen Drigotas  
Teaching Professor and Undergraduate Advisor: social psychology.

David H. Edwin  
Associate Professor (Medical Psychology; School of Medicine): clinical and medical psychology.

Heather Roberts Fox  
Lecturer: industrial/organizational psychology.

Linda Gorman  
Teaching Professor: Neuroscience.

Paul J. Hofer  
Adjunct Associate Professor (U.S. Sentencing Commission, Washington, D.C.): law and psychology.

Ann Jarema  
Junior Lecturer: clinical psychology.

Chris Kraft  
Psychologist and Instructor, Psychiatry and Behavioral Sciences (Johns Hopkins Center for Marital and Sexual Health).

Meghan McGlaughlin  
Junior Lecturer: clinical psychology.

Aaron R. Noonberg  
Adjunct Assistant Professor (Clinical Practice): forensic psychology, neuropsychology, and behavioral medicine.

Herbert Petri  
Adjunct Professor (Department of Psychology, Towson University): motivational processes, neuropsychology of memory.

Lawrence Raifman  
Adjunct Assistant Professor (Private Practice and Director of Forensic Services, Springfield Hospital Center): clinical applications of psychology and the law, behavioral finance.

**Joint Faculty**

Marilyn Albert  
Professor and Director at Division of Cognitive Neuroscience; School of Medicine: aging, cognition, memory.

Arnold Bakker  
Assistant Professor (School of Medicine Psychiatry): psychiatric neuroimaging.

Charles Connor  
Professor and Director of the Mind/Brain Institute: neurophysiology of visual perception and object recognition.

Barry Gordon  
Professor (Therapeutic Cognitive Neuroscience, Neurology & Cognitive Science); Dir. (Cognitive Neurology/Neuropsychology): language disorders, memory disorders, severe organic amnesia, focal amnesia, retrograde amnesia.

Steven Gross  
Associate Professor (Philosophy): philosophy of language, philosophy of mind, metaphysics.

Stewart Hendry  
Professor (Mind/Brain Institute): primate functional neuroanatomy.

Rudiger Von Der Heydt  
Professor (Mind/Brain Institute): perceptual organization in visual cortex.

Steven Hsiao  
Professor (Mind/Brain Institute): neurophysiology of tactile shape and texture perception.

Alfredo Kirkwood  
Associate Professor (Mind/Brain Institute): mechanisms of cortical modification.

James Knierim  
Associate Professor (Mind/Brain Institute): behavioral neurophysiology of the hippocampal formation.

Barbara Landau  
Dick and Lydia Todd Faculty Development Professor and Chair (Cognitive Science): language acquisition, cognitive development, spatial representation, acquisition of the lexicon.

Michael E. McCloskey  
Professor (Cognitive Science): language, memory, cognitive processes.

Guy McKhann  
Professor (Mind/Brain Institute): neurological and cognitive outcomes after coronary artery bypass surgery.

Ernst Niebur  
Associate Professor (Mind/Brain Institute): computational neuroscience.

Brenda Rapp  
Professor (Cognitive Science): cognitive neuropsychology, attention, reading and writing.

Peter R. Rapp  
Senior Investigative Chief (National Institute on Aging, Bayview).

**Professor Emeritus**

Bert F. Green Jr.  
psychological measurement, quantitative methods, and computer methods.

For current course information and registration go to https://isis.jhu.edu/classes/
Courses

AS.200.101. Introduction to Psychology. 3 Credits.
This course surveys all the major areas of scientific psychology, including the physiological bases of behavior; sensation and perception; learning, memory and cognition; developmental, social, and personality psychology; and psychopathology.
Instructor(s): S. Drigotas
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.106. Introduction to Clinical Psychology. 3 Credits.
This is a survey of the education and training requirements of mental health professionals; fundamentals of abnormal psychology; clinical diagnosis, assessment, and interventions; and professional activities of clinical/counseling/school psychologists. This course is meant as a precursor to AS.200.212, AS.200.313, and AS.200.328.
Area: Social and Behavioral Sciences.

AS.200.110. Introduction to Cognitive Psychology. 3 Credits.
Introductory survey of current research and theory on topics in cognitive psychology. The course will cover a range of topics in perception, attention, learning, reasoning, and memory, emphasizing relationships among mind, brain, and behavior.
Instructor(s): J. Flombaum
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.132. Introduction to Developmental Psychology. 3 Credits.
An introductory survey of human development from the prenatal period through adolescence. The developing child is examined in terms of cognitive, social, emotional, motor, and language development.
Instructor(s): L. Feigenson
Area: Social and Behavioral Sciences.

AS.200.133. Introduction to Social Psychology. 3 Credits.
An introductory survey of social psychology. Topics include social perception, social cognition, attitudes, prejudice, attraction, social influence, altruism, aggression, and group behavior.
Instructor(s): S. Drigotas
Area: Social and Behavioral Sciences.

AS.200.141. Foundations of Brain, Behavior and Cognition. 3 Credits.
Formerly listed as Introduction to Physiopsychology. A survey of neuropsychology relating the organization of behavior to the integrative action of the nervous system. Cross-listed with Behavioral Biology and Neuroscience.
Instructor(s): L. Gorman
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.159. Evolutionary Psychology. 1 Credit.
In this course we discuss evolutionary psychology, which is the idea that the mind can be understood as an adaptation to our ancestral environment by means of natural selection. Freshmen only.
Instructor(s): H. Egeth
Area: Social and Behavioral Sciences.

AS.200.161. Illusions, delusions, and other confusions: Why what you think you know about human nature is (largely) wrong. 1 Credit.
This course is suitable for all, but would be especially useful for a student who does not expect to take many (or any) additional psychology or cognitive science courses. We will explore what modern psychology has uncovered about how our intuitions concerning human nature deceive us. Freshmen Only.
Instructor(s): H. Egeth
Area: Social and Behavioral Sciences.

AS.200.162. Childhood Disorders & Treatments. 3 Credits.
This course examines the psychological disorders that are usually first diagnosed prior to adulthood. Some of the specific disorders that will be discussed are Attention-Deficit and Disruptive Behavior Disorders, Pervasive Developmental Disorders, Learning Disorders and Mental Retardation. Students will become familiar with various diagnoses, etiologies, and methods of treatment. The course will follow deadlines for Term I for add/drop/withdraw and grade changes. This is an online course. The class will meet for ten weeks from May 29 to August 3.
Instructor(s): A. Jarema
Area: Social and Behavioral Sciences.

AS.200.204. Human Sexuality. 3 Credits.
Course focuses on sexual development, sexuality across the lifespan, gender identity, sexual attraction and arousal, sexually transmitted disease, and the history of commercial sex workers and pornography. Juniors and seniors only within the following majors/minors: Behavioral Biology, Biology, Neuroscience, Psychological & Brain Sciences, Public Health, and the Study of Women, Gender, & Sexuality. All registration will be done during the normal registration period and you must meet all requirements to register. Formerly taught as AS.200.302.
Instructor(s): C. Kraft
Area: Social and Behavioral Sciences
Writing Intensive.

AS.200.206. Foundations of Mind. 4 Credits.
An interdisciplinary investigation into the innateness of concepts: perception, number, language, and morality, physics discussed. Evidence from animals, infants, patients, brains. Students collect data in sections investigating claims from the readings. Cross-listed with Cognitive Science and Philosophy.
Area: Social and Behavioral Sciences.

AS.200.207. Research Methods in Experimental Psychology. 3 Credits.
Formerly known as Lab in the Analysis of Psychological Data (LAPD), this course is an overview of research methods used in psychology, experimental designs, interpreting results in psychology, and research ethics. Each student will complete an individual research project on a topic of his/her choosing as part of the course training. The class is taught interactively through lectures and labs.
Prerequisites: EN.550.111 (Statistical Analysis I) or EN.550.112 (Statistical Analysis II)
Instructor(s): H. Egeth
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
Writing Intensive.
AS.200.208. Animal Behavior. 3 Credits.
Examines basic principles of animal behavior (orientation, migration, communication, reproduction, parent-offspring relations, ontogeny of behavior and social organization). Evolution and adaptive significance of behavior will be emphasized.
Instructor(s): F. Madison; G. Ball
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.209. Personality Theory. 3 Credits.
An overview of the major theories of personality with their empirical bases and applications.
Area: Social and Behavioral Sciences.

AS.200.211. Sensation & Perception. 3 Credits.
A survey of the psychological and neurophysiological basis of seeing, hearing, touching, tasting, and smelling.
Instructor(s): M. Kibbe; S. Hendry; S. Yantis
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.212. Abnormal Psychology. 3 Credits.
A survey of the major syndromes of psychological disorders. Research and theory about the mechanisms, development, and diagnosis of psychopathology are emphasized.
Instructor(s): A. Noonberg
Area: Social and Behavioral Sciences.

AS.200.214. Brain Myths: Folk Psychology. 3 Credits.
This course examines popular “facts” about the brain and cognition, exploring the origins, how they are perpetuated in the media, and the empirical data that support or refute the claims. Recommended Course Background: One previous course in psychology or neuroscience. Area: Natural Sciences, Social and Behavioral Sciences Writing Intensive.

AS.200.216. Predictions Markets and the Wisdom of Crowds. 3 Credits.
Predictions markets and the wisdom of crowds: How cognitive psychology and behavior economics research inform forecasting & policy decisions. Dependent upon the collective wisdom of markets, prediction markets have risen from relative obscurity to relevance in a short time. Today, many regard these markets as the best forecasting tool available. This course looks at the mechanics of predictions markets, their history, and current application to electoral politics, policy decisions, and corporate finance. Finally, the consequence decision anomalies in prediction markets and regulatory reforms considered in hopes of developing deeper, more robust markets.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

AS.200.217. Psychology and Film: Perception of Mental Illness and Popular Cinema. 3 Credits.
In this course, we will discuss the influence of social beliefs, as well as the ethical and moral codes on the perception of mental illness. We will view this societal perception through the lens of film, with a particular focus on how mental illness has been portrayed in popular cinema throughout the 20th and 21st centuries. The class will not only explore how cinema reflects societal views, but also, how cinema informs those views.
Instructor(s): J. Dunn
Area: Social and Behavioral Sciences.

AS.200.220. Discover Hopkins Health Studies: Application of Abnormal Psychology to Forensic Cases. 1 Credit.
This introductory course will examine the basic diagnostic psychology principles with special application to forensic psychology. The class will focus on investigating forensic psychology queries including: Does my client have a mental illness? Why did he or she act in such a self-defeating way? Does the law require special disposition? Should my client be punished or rehabilitated? We will explore the reasons behind why a movie star would shoppift or a famous athlete would engage in a series of extra marital relationships; why a policeman would commit a series of bank robberies in broad daylight; or why someone would shoot a Congresswoman and kill and wound many others in the process.
Instructor(s): K. Hill; L. Raifman
Area: Social and Behavioral Sciences.

AS.200.222. Positive Psychology. 3 Credits.
The course will review the growing field of positive psychology and will review the research on positive human attributes such as optimism, happiness, hope, resiliency, self-esteem, altruism, empathy, and forgiveness. This course will explore the research on how such positive attributes are developed and how they relate to psychological and physical well-being.
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences.

AS.200.301. History Of Psychology. 3 Credits.
A survey of leading figures, schools, and systems in the history of psychology. The course will emphasize the development of experimental psychology in late 19th century Germany and its establishment in America at Johns Hopkins, Harvard, Chicago, and Columbia. Special topics will include the development of clinical and applied psychology and psychological testing. Juniors and seniors only. Recommended Courses Background: two prior Psychology courses.
Instructor(s): P. Hofer
Area: Humanities, Social and Behavioral Sciences.

AS.200.303. Developmental Learning Disabilities. 3 Credits.
Area: Natural Sciences, Social and Behavioral Sciences Writing Intensive.

AS.200.304. Neuroscience of Decision Making. 3 Credits.
This course will survey the neural mechanisms of decision-making. Current experimental research and theory concerning selection, control, and evaluation of actions are examined in humans and animals. Topics will range from simple perceptual judgements to complex social behavior. The course involves a weekly lecture about a specific topic followed by a student presentation of a current research paper. Cross-listed with Neuroscience
Prerequisites: AS.080.305 OR AS.080.205 OR AS.200.141
Instructor(s): V. Stuphorn
Area: Natural Sciences.

AS.200.306. Psychology in the Workplace. 3 Credits.
Industrial-organizational (I-O) psychology is the scientific study of the workplace. Rigor and methods of psychology are applied to issues of critical relevance to business, including talent management, coaching, assessment, selection, training, organizational development, performance, and work-life balance.
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences.
**AS.200.307. Clinical Psychology. 3 Credits.**
This course is a survey of the field of clinical psychology. Accordingly, the primary objectives of the course are: (1) to familiarize students with the history of clinical psychology as a field, including the roles in which clinical psychologists serve and settings in which they work, as well as “hot topics” of current debate in the field; (2) to orient students to the range of theoretical orientations which guide how clinical psychologists approach their work, including assessment, prevention/intervention, and research; (3) to highlight controversies in assessment and treatment as well as emphasize critical thinking in clinical psychology; and (4) to clarify students’ interests and goals within the mental health field, generally, and clinical psychology, in particular, including client populations and research questions of interest to individual students.  
**Prerequisites:** AS.200.101 AND AS.200.212  
Instructor(s): J. Neemann.

**AS.200.308. Neurobiology of Learning and Memory. 3 Credits.**
This course is an advanced survey of the scientific study of learning and memory. An inter disciplinary approach is used to integrate the state of the field across levels from the cellular-molecular basis of synaptic plasticity to functional circuitry implicated in learning to memory systems in the brain. The course is designed to provide a deep understanding of the outstanding issues and current debates in learning and memory research with a specific emphasis on animal models. This is an interactive lecture/seminar course with active student participation. Recommended Course Background: AS.200.370 or AS.200.141 or AS.080.305/AS.080.306 or AS.020.306.  
Instructor(s): M. Yassa  
Area: Natural Sciences, Social and Behavioral Sciences.

**AS.200.309. Evolutionary Mechanisms of Human Behavior. 3 Credits.**
This course examines the evolution of human adaptive behaviors. In particular it examines evolutionary contributions to behaviors concerned with problems of survival such as mating strategies, parenting, and group living. Recommended Course Background: AS.200.101  
Instructor(s): H. Petri  
Area: Social and Behavioral Sciences.

**AS.200.310. Neural Basis of Cognitive Control. 3 Credits.**
This course examines the neural basis of “cognitive control”. What is happening in our brains that enables control our thoughts and behavior? What does it mean neurologically when we say someone has “lost control”? What contributions do the neural processes of attention, memory, habits and emotions make? This is a very active area of current research, and this upper-level seminar will make broad use of the primary cognitive and systems neuroscience literature.  
**Prerequisites:** AS.080.203 OR AS.050.203 OR AS.200.141 OR AS.200.305  
Instructor(s): S. Courtney-Faruqe  
Area: Natural Sciences

**AS.200.312. Imaging the Human Mind. 3 Credits.**
**Prerequisites:** EN.550.111 AND (AS.080.203 OR AS.050.203)  
Instructor(s): S. Courtney-Faruqe  
Area: Natural Sciences, Social and Behavioral Sciences

**AS.200.313. Advanced Personality. 3 Credits.**
This is an advanced intensive writing and discussion course requiring original library research. Topics include the structure of affect/mood; the five-factor model; the person-situation debate; the idiosyncratic/nomothetic debate; stability and change in personality over time; evolution, genetics, and biology of personality; effects of culture and geography on personality; intelligence and genius; the self and personal narratives; implicit motives and the dynamic unconscious; and self-regulation and psychopathology. Open to juniors or seniors. Recommended Course Background: two semesters of statistics and either AS.200.132 or AS.200.133. Those earning credit for AS.200.327 cannot also earn credit for AS.200.313.  
**Prerequisites:** AS.200.132 OR AS.200.133  
Area: Social and Behavioral Sciences

**Writing Intensive.**

**AS.200.314. Advanced Statistical Methods. 3 Credits.**
Topics in applied probability and statistical inference; analysis of variance; experimental design. Intended for graduate students in psychology. Recommended Course Background: one statistics course.  
**Prerequisites:** Statistics Sequence restriction: students who have completed any of these courses may not register: EN.550.211 OR EN.550.230 OR AS.280.345 OR AS.200.315 OR EN.550.310 OR EN.550.311 OR EN.560.435 OR EN.550.420 OR EN.550.430  
Instructor(s): S. Yantis  
Area: Quantitative and Mathematical Sciences

**AS.200.315. Advanced Research Design and Analysis. 3 Credits.**
Second half of graduate statistics sequence, covering complex research design and analysis. Signature required for undergrad registration.  
**Prerequisites:** AS.200.314 or equivalent  
Instructor(s): A. Shelton  
Area: Quantitative and Mathematical Sciences.

**AS.200.316. Thought and Perception. 3 Credits.**
What is the relationship between thought and perception? We will address this question through contemporary readings in both psychology and philosophy. Included among the specific questions to be addressed: do the terms, “perception” and “cognition” designate functionally distinct parts of the mind? To what extent is conscious experience (for example, how things look) influenced by changes in belief, expectations, and motivation? To what extent are we capable of observation that is independent of belief, and what is the role of perceptual evidence in scientific theorizing? Is there a level of visual processing that is encapsulated from higher cognition? What role does language play in how we see? What role does/can attention play in mediating between cognition and perception? Readings from Fodor, Pylyshyn, Siegal, Churchland, Bargh, Balcetis, and others.Instructor’s approval only. This class will meet jointly with AS.200.616 and Professor Gross’ AS.150.476.  
Instructor(s): J. Flombaum; S. Gross  
Area: Humanities, Social and Behavioral Sciences

**Writing Intensive.**

**AS.200.317. Interpersonal Relations. 3 Credits.**
This course will investigate interpersonal processes ranging from attraction and courtship to relationship functioning and distress. Open to Psychology and Behavioral Biology majors only.  
**Prerequisites:** AS.200.133  
Instructor(s): S. Drigotas  
Area: Social and Behavioral Sciences.
**AS.200.318. Quantitative Methods for Brain Sciences. 3 Credits.**
Focus on frequently-used quantitative methods used in the study of brain sciences, including gaining conceptual understanding of techniques, analysis and summarization of data, extracting the process underlying a data set, explaining data as a function of variables, data visualization, etc. Instructor signature required for undergraduate registration.

**Prerequisites: AS.200.314 or equivalent**
Instructor(s): S. Mysore
Area: Quantitative and Mathematical Sciences.

**AS.200.321. Developmental Psychopathology. 3 Credits.**
Prereq: 200.132 Developmental psychopathology is the study of the development of psychological disorders such as psychopathy, autism, schizophrenia and depression from a lifespan perspective. Atypical development and typical development are mutually informative; therefore, developmental psychopathology is not the study of pathological development, but the study of the basic mechanisms that cause developmental pathways to diverge toward pathological or typical outcomes. Class participation, presentations, and written papers will be required in this course.

**Prerequisites: AS.200.132**
Area: Social and Behavioral Sciences
Writing Intensive.

**AS.200.325. Law Psychology: Clinical Application. 3 Credits.**
Introduction to legal standards governing criminal forensic psychology assessments, e.g., competence to stand trial, criminal responsibility, mitigation of death penalty, negation of mens rea, and other criminal law forensic applications. Cross-listed with Behavioral Biology.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

**AS.200.326. Law, Psychology and Public Policy. 3 Credits.**
An introduction to applications of psychological research in policy analysis. Special emphasis is given to the use and misuse of psychology in Supreme Court advocacy and decision making in the areas of children’s rights, adult sexuality, and educational and employment opportunity. Students should be familiar with statistics and regression analysis prior to taking this course.
Instructor(s): P. Hofer
Area: Social and Behavioral Sciences
Writing Intensive.

**AS.200.327. Personality and its Measurement. 3 Credits.**
Advanced intensive writing and discussion course using a text and original articles. Besides (co)leading class discussions, students will review a personality test of their choice, create and analyze their own personality test, and create a research proposal on a personality topic of their choosing. There will be no exams. Topics to be covered include a broad survey of personality tests, reliability and validity, test construction methods, the structure of affect/mood, the five-factor model, and the following personality-related topics: the person-situation debate; the idiographic/nomothetic debate; stability and change in personality over time; evolution, genetics, and biology of personality; effects of culture and geography on personality; intelligence and genius; the self and personal narratives; implicit motives and the dynamic unconscious; and self-regulation and psychopathology. For more information, please contact Dr. Jennifer Neemann at dr_jen@comcast.net or 410-516-4887.

**Prerequisites: AS.200.207**
Instructor(s): J. Neemann
Area: Social and Behavioral Sciences
Writing Intensive.

**AS.200.328. Theory & Methods in Clinical Psychology. 3 Credits.**
A critical examination of the methods of observation, description, reasoning, inference, measurement and intervention that underlie the clinical practice of psychology and psychiatry. Cross listed with Behavioral Biology. Junior and senior Psychology, Behavioral Biology and Cognitive Science majors only OR instructor approval.
Instructor(s): D. Edwin
Area: Social and Behavioral Sciences
Writing Intensive.

**AS.200.330. Financial Market: Winners, Losers, and Protector’s Decisions. 3 Credits.**
The recent world financial crisis has arguably been the most important event of the new millennium. Understanding the financial crisis requires knowledge of: “What happened & how the crisis unfolded?” “Why did it happen?” “How was the crisis eventually managed?” “Further, who were hurt?” “Who succeeded well?” And finally, “what policy decisions intended to protect markets by government officials succeeded to forestall further damage. Taking a behavioral finance focus, the course offers an analysis of heuristic decision errors that lead to bubbles and crashes in markets, and in the failure of market models to avoid them.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

**AS.200.332. Counseling Psychology. 3 Credits.**
This course provides an introduction to the field of counseling psychology. Professional identity and development, history, theories and processes of counseling are surveyed, as are a variety of specializations and settings in which counseling is practiced. Discussions, demonstrations, and exercises will give students an opportunity to explore counseling psychology as a career path.
Recommended Course Background: AS.200.101
Instructor(s): C. Gasser
Area: Social and Behavioral Sciences.

**AS.200.333. Advanced Social Psychology. 3 Credits.**
The class is designed as a seminar including discussion of primary readings of social psychology articles ranging in topics from interpersonal relationship to behavior in large groups. Rising junior & senior Psychology majors only.
**Prerequisites: AS.200.133**
Instructor(s): S. Drigotas
Area: Social and Behavioral Sciences.

**AS.200.334. Advanced Psychopathology. 3 Credits.**
This is an advanced, discussion-based course covering the developmental, biological, environmental, and cultural bases of attentional, mood, psychotic, anxiety, trauma-based, eating, somatic, and personality disorders. Case formulations in class and review papers will be required.
**Prerequisites: AS.200.212**
Instructor(s): J. Neemann
Area: Social and Behavioral Sciences
Writing Intensive.

**AS.200.336. Foundations of Mind. 4 Credits.**
An interdisciplinary investigation into the innateness of concepts: perception, number, language, and morality, physics discussed. Evidence from animals, infants, patients, brains. Students collect data in sections investigating claims from the readings. Cross-listed with Cognitive Science and Philosophy.
Instructor(s): J. Halberda; L. Feigenson
Area: Social and Behavioral Sciences.
AS.200.339. Counseling/Mental Health. 3 Credits.
Priority to Psychology Majors This course examines important mental health issues in the context of contemporary clinical practice. It explores major theories of counseling and psychotherapy through readings, case narratives, accounts of clinical processes, and research studies of clinical effectiveness. Cross-listed with Behavioral Biology Area: Social and Behavioral Sciences.

AS.200.341. Positive Psychology. 3 Credits.
THIS COURSE IS GRADED S/U AND DOES NOT COUNT TOWARD THE PSYCHOLOGY MAJOR. The course will review the growing field of positive psychology and will review the research on positive human attributes such as optimism, happiness, hope, resiliency, self-esteem, altruism, empathy, and forgiveness. This course will explore the research on how such positive attributes are developed and how they relate to psychological and physical well-being.
Instructor(s): J. Neemann
Area: Social and Behavioral Sciences.

AS.200.342. Motivation. 3 Credits.
Current biological, behavioral, and cognitive research and theory concerning the motivation of behavior are examined. Both human and non-human animal research is reviewed. Topics include the role of genetics, arousal, biological regulatory systems, incentives, expectancies, attributions, social processes and self-actualization in the general of behavior. Recommended Course Background: AS.200.101 and AS.200.146 or instructor permission.
Instructor(s): H. Petri
Area: Social and Behavioral Sciences.

AS.200.343. Motivation. 3 Credits.
Current biological, behavioral, and cognitive research and theory concerning the motivation of behavior are examined. Both human and non-human animal research is reviewed. Topics include the role of genetics, arousal, biological regulatory systems, incentives, expectancies, attributions, social processes and self-actualization in the general of behavior. Recommended Course Background: AS.200.101 and AS.200.146 or instructor permission.
Instructor(s): H. Petri
Area: Social and Behavioral Sciences.

AS.200.344. Behavioral Endocrinology. 3 Credits.
An examination of the effects of hormones on behavior in non-human and human animals. Topics will include the effects of hormones on sexual differentiation, reproductive behavior, parental behavior, homeostasis and biological rhythms, regulation of body weight, learning and memory. Cross-listed with Behavioral Biology and Neuroscience.
Prerequisites: Prereqs: ( AS.200.141 OR AS.080.305 ) OR (AS.020.151 AND AS.020.152) OR ( AS.020.305 AND AS.020.306 ) or instructor’s permission
Instructor(s): F. Madison; G. Ball
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.345. Advanced Positive Psychology. 3 Credits.
Advanced Positive Psychology is a research seminar course where students will initiate, develop, and conduct a research study on a topic in the field of Positive Psychology. With the guidance of the instructor, students will learn how to develop research questions and hypotheses and will conduct a research study to address the research questions posed. Students will work in teams and will learn more about the field of positive psychology by conducting a study on a specific topic in the field.
Prerequisites: AS.200.207 AND AS.200.341 AND INSTRUCTOR’S CONSENT
Area: Social and Behavioral Sciences.

AS.200.354. Winners, losers, & market protectors-decision-making in the financial crisis. 3 Credits.
The recent world financial crisis has arguably been the most important event of the new millennium. The course will initially answer: “What happened?” “Why did it happen?” “How was the crisis temporarily fixed?” “Who was hurt?” “Who succeeded?” Thereafter, the focus shifts to an analysis of the quality of decisions made by the market protectors who chose to intervene with policies to protect markets, and a comparison of investors who made winning compared with losing investment decisions. The final segment considers whether behavioral economic/cognitive psychological research best explains those decisions, and ways to lessen the risk inherent in current volatile recovering financial markets. In sum, the course will review the recent financial crisis by evaluating strategic investment decisions of the market protectors, winners, and losers.
Area: Social and Behavioral Sciences.

AS.200.355. Psych of Decision Making. 3 Credits.
This course will apply insights from cognitive psychology decision-making research to the stock market. The course investigates whether investors can beat the market benchmarks by exploiting marketplace investor sentiment. Juniors and seniors only. Recommended Course Background: six credits of Psychology course work.
Area: Social and Behavioral Sciences.

AS.200.356. Special Topics in Applied Forensic Psychology. 3 Credits.
This course applies historical and current legal tests of insanity to special crimes in order to distinguish those defendants qualifying for special treatment under the insanity test from those that do not. In class, emphasis is placed upon presentation of the legal/psychiatric criteria, forensic argument, and diagnostic formulation. Topics include the application of insanity defense to: political assassination crimes, religious vs. delusional thinking in abortion doctor murder cases, student mass killing in high schools & universities, sex crimes, and crimes involving the "Stockholm syndrome" defense.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

AS.200.358. Decision Making in Neuro-Economic Terms. 3 Credits.
Is there a “tightwad (risk averse) brain” separate and distinct from a “spendthrift (risk seeking)” brain? f-MRI study of decision making in neural terms has located brain regions that exhibit clues concerning spending and investing behavior. Students will survey current cognitive neuroscience & psychology research to identify neuro-behavioral insights about consumer spending, and reactions to financial gains vs. losses in the financial markets. Students will assess whether there is a neurological basis for pathological consumer behavior, investment behavior, and gambling addiction, as well as consider de-biasing techniques to counteract these problems.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

AS.200.359. The Psychology of Financial Crisis. 3 Credits.
The 2007-8 financial crisis, considered the most severe of its kind since the Great Depression, is our primary focus. The course will initially answer two critical questions: “What happened to bring about the financial crisis?” “Who was hurt and who succeeded well?” We will then study specific crisis decisions to determine if a behavioral finance analysis contributes to a better understanding of decision making under conditions of uncertainty.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.
AS.200.360. Forensic Psychology Soup to Nuts. 3 Credits.
The course is based upon an integrative strategy that focuses upon: (1) scientific research underlying forensic psychology expertise, (2) the formulation of expert opinions, and (3) the presentation of expert witness testimony court cases. The course syllabus identifies examples from insanity defense that raises research questions answered by studies from psychology that focus on: battered spouse syndrome, sleep disorders/criminal behavior, pedophilia, settled psychosis, and the application of death penalty to juveniles or mentally ill persons.
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences.

AS.200.361. Tests & Measurements. 3 Credits.
This course will consider the methodological, theoretical, legal, and ethical problems involved in test construction, the evaluation of instruments, and the uses of psychological tests in various settings and for different purposes.
Prerequisites: AS.200.207, Junior and Senior Psychology, Behavioral Biology and Cognitive Science majors only or Instructor permission.
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences.

AS.200.363. Mind, Brain & Experience. 3 Credits.
How do nature and nurture shape the human mind? How does experience contribute to the development of visual perception, language and social reasoning? This course explores insights into these age-old questions from neuroscience and psychology. Studies of infant behavior reveal rich knowledge about objects and people in the first months of life. At the same time, experience has profound effects on behavior and neurobiology. For example, temporary absence of vision (i.e. blindness) during development permanently alters visual perception and the visual cortex. Key evidence also comes from studies of naturally occurring variation in human experience (e.g. blindness, deafness, socioeconomic and cultural differences). We will discuss what such studies of cognitive and neural function tell us about the origins of human cognition. This is a writing intensive course with weekly lectures and seminar style discussion of primary sources. Students will be required to write weekly responses to readings and a term paper.
Prerequisites: AS.200.141 OR AS.050.105 OR AS.080.105 OR AS.050.203 OR AS.020.312 OR AS.200.386 OR (AS.080.305 AND AS.080.306) OR AS.080.203
Instructor(s): M. Bedny
Area: Natural Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.364. Advanced Topics in Cognitive Development. 3 Credits.
How do children acquire knowledge about the world? In this seminar course, we will explore how children understand the world, looking at concepts of objects, number, space, and other people. Students will read both empirical and theoretical writing on these topics and complete writing assignments. Classes will primarily be discussion-based.
Instructor(s): M. Kibbe
Writing Intensive.

AS.200.368. Altered States of Consciousness. 3 Credits.
Sleep, dreaming, resting and arousal to waking represent very different states of consciousness which differ dramatically both psychologically and physiologically. This course focuses on cognitive, psychological, physiological, biological and genetic aspects characterizing each of these states with some reference to other altered states. The course includes a focus on the major pathologies affecting sleep-wake states. Clinical cases will be considered. These inform about both psychological and biological aspects of these states. The relative biological functions of each state will be evaluated with particular attention to the mystery of why we have and apparently need REM and NREM sleep. Actual physiological recordings of sleep states will be reviewed and the student will learn how these are obtained and how to evaluate these. The circadian rhythms, ontogeny and evolution of these sleep-wake states will also be covered. This will include a review of information learned from non-human animal sleep. The change from sleep to full awakening reflects change toward increasing brain organization supporting consciousness. Understanding of the neurobiology of these states will be used to explore some of the more modern and scientific concepts of human self-awareness or consciousness.
Prerequisites: AS.080.203 OR AS.050.203 OR AS.200.101 or permission required.
Instructor(s): R. Allen
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.370. Functional Human Neuroanatomy. 3 Credits.
Cross-listed with Behavioral Biology and Neuroscience.
Instructor(s): S. Courtney-Faruee
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.372. Psychology Of Aging. 3 Credits.
We will examine what current research can tell us about changes in mental abilities as we grow older, what biological changes in the brain during aging cause cognitive decline, and finally, how scientists are meeting the challenge of maintaining the functions of the mind into advanced old age.
Instructor(s): M. Gallagher
Area: Natural Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.376. Psychopharmacology. 3 Credits.
Designed to provide information about how drugs affect the brain and behavior. The course focuses on the interaction of various classes of drugs with the individual neurotransmitter systems in the brain. A brief historic review is followed by a discussion of clinical relevance. Cross-listed with Behavioral Biology and Neuroscience.
Instructor(s): H. Advanikar; L. Gorman
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.386. Animal Cognition. 3 Credits.
Examine relations between brain, mind, and behavior in nonhuman animals, focusing on topics such as learning, memory, attention, decision-making, navigation, communication, and awareness. We will take a variety of approaches, including behavioral, computational, evolutionary, neurobiological, and psychological perspectives.
Prerequisites: (AS.200.141 OR AS.200.208 OR AS.290.101) OR permission of instructor.
Instructor(s): P. Holland
Area: Social and Behavioral Sciences.
AS.200.387. The Social Brain/The Visual Brain. 3 Credits.
We tend to feel that we are thinking the hardest in social situations. In contrast, we barely feel the complicated processing that produces our vivid and salient visual experiences; in fact, we cannot even access most of this processing directly. This course will explore the relationship between visual perception and social cognition, especially the ways that the visual system supplies crucial raw materials for more elaborate social processing, and the ways that our social agendas may, in turn, influence vision. Topics will include what we find physically attractive in mates (and why); the quick formation of social impressions; the neural, cognitive, and evolutionary basis of aesthetic perception; and the extent to which perception might be socially constructed (i.e. whether vision can be influenced from the 'top-down'). All readings will come from primary scientific literature, and students should have some experience reading this kind of material. Limited to juniors, seniors, and graduate students.

AS.200.391. Sex Differences in the Brain, Behavior and Cognition. 3 Credits.
This course is designed to address the increasing gap in our knowledge on sex differences in the brain and cognitive abilities and how hormones play a pivotal role. Dean’s Teaching Fellowship. Recommended Course Background: AS.200.101 or AS.020.151
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.401. Careers in Psychology - Freshmen. 1 Credit.
An introduction to the varied career paths offered across the field of psychology, hosting a diverse representation of speakers from various Johns Hopkins institutions and the local Baltimore community.
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences.

AS.200.402. Careers in Psychology - Sophomore. 1 Credit.
An introduction to the varied career paths offered across the field of psychology, hosting a diverse representation of speakers from various Johns Hopkins institutions and the local Baltimore community.
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences.

AS.200.403. Careers in Psychology - Juniors. 1 Credit.
An introduction to the varied career paths offered across the field of psychology, hosting a diverse representation of speakers from various Johns Hopkins institutions and the local Baltimore community.
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences.

AS.200.404. Careers in Psychology - Seniors. 1 Credit.
An introduction to the varied career paths offered across the field of psychology, hosting a diverse representation of speakers from various Johns Hopkins institutions and the local Baltimore community.
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences.

AS.200.501. Psychological Research - Freshmen. 3 Credits.
S/U grading only.
Instructor(s): Staff.

AS.200.502. Psychology Research-Freshmen. 0 - 3 Credit.
Instructor(s): Staff.

AS.200.503. Psychological Research - Sophomores. 3 Credits.
S/U grading only
Instructor(s): Staff.

AS.200.504. Psychology Research-Sophomores. 0 - 3 Credit.
Grading Satisfactory/ Unsatisfactory only.
Instructor(s): Staff.

AS.200.505. Psych Readings - Fr. 3 Credits.
Instructor(s): Staff.

AS.200.506. Psychological Readings. 0 - 3 Credit.
Instructor(s): Staff.

AS.200.507. Psych Readings-Sophs. 3 Credits.
Instructor(s): Staff.

AS.200.509. Internship-Psychology. 1 Credit.
S/U grading only.
Instructor(s): Staff.

AS.200.510. Psychology Internship. 0 - 3 Credit.
Grading Satisfactory/ Unsatisfactory only.
Instructor(s): Staff.

AS.200.511. Psychological Research - Juniors. 3 Credits.
S/U grading only.
Instructor(s): Staff.

AS.200.512. Psychology Research-Juniors. 0 - 3 Credit.
Grading Satisfactory/ Unsatisfactory only.
Instructor(s): Staff.

AS.200.513. Psychological Research - Seniors. 3 Credits.
The student chooses some research problem with the advice and approval of a faculty member. S/U grading only.
Instructor(s): Staff.

AS.200.514. Psychology Research-Seniors. 0 - 3 Credit.
Instructor(s): Staff.

AS.200.517. Psych Readings - Srs. 3 Credits.
Instructor(s): Staff.

AS.200.519. Seniors Honors Research. 3 Credits.
Seniors working on the honors thesis enroll with the approval of the undergraduate coordinator.
Instructor(s): Staff.

AS.200.520. Seniors Honors Research. 0 - 3 Credit.
Instructor(s): Staff.

AS.200.538. Indep Study - Sophomores. 3 Credits.
Instructor(s): Staff.

AS.200.539. Indep Study - Juniors. 3 Credits.
Instructor(s): Staff.

AS.200.540. Independent Study-Seniors. 0 - 3 Credit.
Instructor(s): Staff.

AS.200.541. Independent Study - Juniors. 3 Credits.
Instructor(s): Staff.

AS.200.542. Independent Study - Sophomores. 3 Credits.
Instructor(s): Staff.

AS.200.595. Internship. 1 Credit.
Instructor(s): Staff.

AS.200.597. Psychology Research. 3 Credits.
Instructor(s): Staff.

AS.200.599. Independent Study. 3 Credits.
Instructor(s): Staff.

This is a journal club examining recent literature in the field related
to the hippocampus and the medial temporal lobe memory system.
Discussions are heavily based on animal models and theoretical
accounts of the hippocampus’ role in learning and memory. Graduate
students only.
Instructor(s): J. Knierim; M. Yassa
Area: Natural Sciences, Social and Behavioral Sciences.

AS.200.604. Graduate Seminar on Topics in Working Memory.
Instructor(s): L. Gmeindl; R. Rosenberg.

AS.200.605. Topics in Attention and Cognition.

AS.200.606. The Semantics & Psychology.

Graduate course designed to address the increasing gap in our
knowledge on sex differences in the brain and cognitive abilities, and
how hormones play a pivotal role. Advanced undergraduates may
attend with permission.

This seminar will survey recent theory and research
concerning the functional organization of prefrontal cortex for working
memory, decision making, and cognitive control. Graduate students
only.

An introduction to the fundamental principles of cognitive and
physiological psychology. Required course of first-year graduate
students. Graduate students only.
Instructor(s): S. Courtney-Faruqee
Area: Natural Sciences, Social and Behavioral Sciences.

Graduate students only or permission required.

Graduate student only.
Instructor(s): B. Anderson; K. Blacker.

AS.200.616. Thought and Perception.
Graduate students only. This class will meet jointly with AS.200.316 and
Professor Gross’ AS.150.476.
Instructor(s): J. Flombaum; S. Gross
Writing Intensive.

AS.200.621. The Interface of Psychology & Semantics:
Procedural Matters.
Often, languages are described as sets of expressions. But in acquiring
a language, a child acquires a procedure that generates expressions. If
Linguistic expressions pair pronunciations with mental representations,
then one task shared by linguists and psychology is to specify the forms
of these representations. This seminar explores this relationship in
detail.

Instructor(s): P. Holland.

AS.200.627. Graduate Seminar: Memory.
Instructor(s): S. Courtney-Faruqee.

Instructor(s): A. Shelton.

AS.200.632. Topics: Spatial Cognition.
Graduate students only.
Instructor(s): A. Shelton.

AS.200.639. Grad Seminar - Memory.

AS.200.640. Review of Recent Literature in Biopsychology.
Instructor’s approval required.

AS.200.642. Neural Circuits/Behavior.

This two-semester course will provide an overview of clinical,
neuropsychological, imaging and neuropathological approaches
to the study of cognitive systems altered in aging, AD and other
neurodegenerative disorders. It will consider research using animal
models as well as human subjects and clinical populations. The
course is intended for graduate students and is open to advanced
undergraduates only with permission of the professor.

AS.200.649. Aging, Cognition, and Neurodegenerative Disorders II.
Second part of a two-semester course. Course will provide an overview
clinical, neuropsychological, imaging and neuropathological
approaches to the study of cognitive systems altered in aging, AD
and other neurodegenerative disorders. It will consider research using
animal models as well as human subjects and clinical populations.
The course is intended for graduate students and is open to advanced
undergraduates only with permission of the professor. Predoctoral
and Postdoctoral students from A&S, SPH and SOM students
participating in the NIA Training Program on Age-Related, Cognitive
and Neuropsychiatric Disorders are required to take this course; meets
concurrently with PH.330.802(01)
Instructor(s): M. Albert.


AS.200.654. Psychological & Brain Sciences Core Topics A.
This course is designed to introduce students to core topics in
psychological and brain sciences. Students will read seminal and
contemporary papers in topics that cover the breadth of the field.
Graduate students in Psychological and Brain Sciences.
Instructor(s): L. Feigenson.

AS.200.655. Psychological & Brain Sciences Core Topics B.
This course is designed to introduce students to core topics in
psychological and brain sciences. Students will read seminal and
contemporary papers in topics that cover the breadth of the field.
Graduate Students in Psychological & Brain Sciences.
Instructor(s): S. Courtney-Faruqee.

AS.200.661. Topics in Psychological & Brain Sciences.
An introduction to postdoctoral activities (e.g., grant applications,
journal article submission, meeting presentations, the politics of
psychology and American science) for Ph.D. candidates in psychology.
Instructor(s): S. Courtney-Faruqee.

AS.200.662. Psychological and Brain Sciences: Career Development.
Instructor(s): S. Courtney-Faruqee.

How do children acquire knowledge about the world? In this seminar
course, we will explore how children understand the world, looking
at concepts of objects, number, space, and other people. Students
will read both empirical and theoretical writing on these topics and
complete writing assignments. Classes will primarily be discussion-
based.
Instructor(s): M. Kibbe.
This seminar will cover advanced topics in vision from the perspectives of several disciplines. Topics include human visual psychophysics, perception and cognition, and computational vision. Graduate students only. Cross-listed with Neuroscience.
Instructor(s): H. Egeth; J. Flombaum; J. Halberda; S. Yantis.

Instructor(s): S. Courtney-Faruqee.

AS.200.801. Research Seminar: Learning and Memory.
This laboratory meeting is for graduate students studying learning and memory mechanisms, alterations with age or neurologic disease, and advanced neuroimaging methods. Meetings will focus on experimental design, presentation of data, analytical techniques. Undergraduates allowed to add the course with permission as Satisfactory/Unsatisfactory only. Recommended Course Background: AS.200.370 or AS.200.141 or AS.080.305/AS.080.306 or AS.020.306.
Instructor(s): M. Yassa.

AS.200.804. Topics in Neurocognitive Aging.
This seminar will cover advanced topics in neurocognitive aging. Topics will include animal models of memory loss in normal aging and in Alzheimer’s disease (AD), including both behavioral and neurobiological findings. Special attention will be given to the relation between such findings and the effects of aging and AD on memory and the brain in man. Similar comparative analysis in other cognitive domains (e.g. attentional processes) will also be considered.
Instructor(s): M. Gallagher.

AS.200.805. Topics in Attention and Cognition.
Instructor(s): J. Flombaum.

Guided independent readings. The class is designed as a seminar including discussion of primary research articles of cognitive aging. Specific topics include human imaging and animal models of memory, aging, and neurodegenerative disease.
Instructor(s): R. Haberman.


AS.200.810. Research in Psychology.
Students plan and execute original research under guidance of advisers. Results are usually prepared in a form suitable for publication. Graduate students only.
Instructor(s): Staff.

Instructor(s): H. Egeth.

Instructor(s): L. Feigenson.

Instructor(s): J. Halberda.

Instructor(s): P. Holland.

Instructor(s): S. Courtney-Faruqee.

Instructor(s): V. Stuphorn.

Instructor(s): J. Halberda.

Guided independent readings and research in special fields. Graduate Students only.
Instructor(s): Staff.

Graduate students only.
Instructor(s): G. Ball.

Graduate students only.
Instructor(s): E. Fortune.

Graduate students only.
Instructor(s): M. Gallagher.

Graduate Students Only.

Graduate only.
Instructor(s): S. Yantis.

AS.200.830. Readings in Psychology.
Graduate students only. Permission Required.
Instructor(s): S. Courtney-Faruqee.

Graduate students only. Permission Required.
Instructor(s): S. Courtney-Faruqee.

Instructor(s): S. Courtney-Faruqee.

AS.200.848. Current Advances in Psychological and Brain Sciences.
Introduces advanced research topics to graduate students (as well as faculty) through a series of speakers and discussions.
Instructor(s): J. Flombaum.

AS.200.849. Teaching Practicum.
All candidates are required to obtain special experience in various aspects of undergraduate teaching. Graduate students only.
Instructor(s): Staff.

AS.200.850. Advanced Teaching Practicum.
Instructor(s): J. Halberda; S. Courtney-Faruqee.

Cross Listed Courses

Cognitive Science

AS.050.102. Language and Mind. 3 Credits.
Introductory course dealing with theory, methods, and current research topics in the study of language as a component of the mind. What it is to “know” a language: components of linguistic knowledge (phonetics, phonology, morphology, syntax, semantics) and the course of language acquisition. How linguistic knowledge is put to use: language and the brain and linguistic processing in various domains. This course is restricted to freshmen and sophomores. Juniors and seniors must seek instructor approval to enroll. Cross-listed with Neuroscience and Psychology.
Instructor(s): A. Omaki
Area: Natural Sciences, Social and Behavioral Sciences.
AS.050.204. Visual Cognition. 3 Credits.
Vision is central to our daily interactions with the world: we can effortlessly navigate through a city, comprehend fast movie trailers, and find a friend in a crowd. While we take the visual experience for granted, visual perception involves a series of complicated cognitive processes beyond just opening our eyes. The goal of this course is to provide an introduction to visual cognition, including existing theoretical frameworks and recent research findings. We will explore questions such as: How do we see the stable world when our eyes are constantly moving? What is the relationship between seeing and knowing? Do infants see the world the same way as adults do? What are the neural mechanisms underlying visual perception?
Instructor(s): S. Park
Area: Natural Sciences, Social and Behavioral Sciences.

AS.050.319. Visual Cognition. 3 Credits.
Vision is central to our daily interactions with the world: we can effortlessly navigate through a city, comprehend fast movie trailers, and find a friend in a crowd. While we take the visual experience for granted, visual perception involves a series of complicated cognitive processes beyond just opening our eyes. The goal of this course is to introduce students to the field of visual cognition, including existing theoretical frameworks and recent research findings. We will explore questions such as: How do we see the visual world? Do we see and remember correctly what’s in the physical world? How many items can we keep track of and remember at a time? How is the visual system structured and what are the neural mechanisms underlying visual perception? Meets with AS.050.619.
Prerequisites: AS.200.101 OR AS.050.101 OR AS.080.203 OR AS.050.203
Instructor(s): S. Park
Area: Natural Sciences, Social and Behavioral Sciences.

AS.050.303. Mind, Brain and Beauty. 3 Credits.
What underlies our aesthetic response to art, music, and other facets of human experience? Do identifiable properties of objects and events evoke consistent aesthetic responses, or is beauty mostly in the eye of the beholder? Examining such questions from cognitive science, neuroscience, and philosophical perspectives, this course explores relevant research and theory in the visual, auditory, and tactile domains. Several researchers will discuss their ongoing studies with the class, and students will also have the opportunity to participate in demonstration experiments that illustrate phenomena under discussion.
(Same as AS.050.603) Recommended Course Background: One or more courses in one of these: Cognitive Science, Neuroscience, Philosophy, or Psychology or permission of instructor.
Instructor(s): M. McCloskey
Area: Natural Sciences, Social and Behavioral Sciences.

AS.050.312. Cognitive Neuroimaging Methods in High-Level Vision. 3 Credits.
This course is an advanced seminar and research practicum course. It will provide the opportunity to learn about fMRI methods used in the field of vision science and for students to have hands-on experience to develop, design and analyze a research study on topics in the cognitive neuroscience field of high-level vision. In the first part of the course students will read recent fMRI journal papers and learn about common fMRI designs and analysis methods; in the second part of the course students will conduct a research study as a group to address a research question developed from readings. Students are expected to write a paper in a journal article format at the end of the course and to present their results in front of the class. Research topics will vary but with special focus on topics in object, scene and space recognition. Cross-listed with Neuroscience and Psychology. Instructor’s permission required.
Prerequisites: AS.050.204 OR AS.050.319 OR AS.050.315 OR AS.200.312 OR AS.050.203 OR AS.080.203 or equivalent; instructor's permission required.
Instructor(s): S. Park
Area: Natural Sciences, Social and Behavioral Sciences.

AS.080.330. Brain Injury & Recovery. 3 Credits.
This course investigates numerous types of brain injuries and explores the responses of the nervous system to these injuries. The course’s primary focus is the cellular and molecular mechanisms of brain injury and the recovery of function. Discussions of traumatic brain injury, stroke, spinal cord, and tumors, using historical and recent journal articles, will facilitate students’ understanding of the current state of the brain injury field. Cross-listed with Psychological and Brain Sciences and Behavioral Biology.
Prerequisites: AS.080.305 AND AS.080.306 OR AS.020.312 AND AS.020.306 OR AS.200.141 AND AS.200.376
Area: Natural Sciences
Writing Intensive.
Sociology

**AS.230.302. Class Stratification & Personality. 3 Credits.**

230.302 (S) CLASS, STRATIFICATION, AND PERSONALITY (3) Kohn Limit

30 Juniors/Seniors only or instructor's consent

An intensive examination of the research literature, much of it based on survey research carried out by the instructor and his international collaborators, on the relationships of social class and social stratification with personality. The course will examine the links between people’s positions in the class structure and the stratification hierarchy of their society and their more proximate conditions of life, particularly their job conditions, and how these conditions, in turn, affect (and are affected by) such basic dimensions of personality as intellectual flexibility, self-directedness of orientation, and feelings of well-being or distress. The research has been conducted principally in the United States, Japan, Poland when it was socialist, Poland and Ukraine during their transitions from socialism to nascent capitalism, and (in the instructor’s current research) China during its very different transformation. Cross-listed with Psychological & Brain Sciences

Instructor(s): M. Kohn

Area: Social and Behavioral Sciences

Writing Intensive.

Behavioral Biology

**AS.290.420. Human Sexual Orientation. 3 Credits.**

This course will examine the historical and current theories of sexual orientation and sexual variation development by examining the biological, psychological and social contributing factors that influence the development of sexual orientations and variations along with treatment and modification of problematic sexual behaviors. Limited to Juniors and Seniors with PBS, Neuroscience, Public Health, Behavioral Biology, and Biology majors, or Juniors and Seniors with PBS or Women’s Studies minors.

Instructor(s): C. Kraft

Area: Social and Behavioral Sciences

Writing Intensive.