The courses in Psychological and Brain Sciences have four purposes:

Psychology Degree Objectives

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.

Undergraduate Programs

Psychology Degree Objectives

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.

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, EEG, Transcranial Magnetic Stimulation, 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.

Psychology Major Requirements

Also see Requirements for a Bachelor's Degree. (http://e-catalog.jhu.edu/undergrad-students/academic-policies/requirements-for-a-bachelors-degree)

Note: Students who entered JHU prior to Fall 2018 may follow the old requirements as detailed in the catalog based on their year of entry to the institution or may follow these revised requirements.

General Requirement:

All classes taken for the major (including those for NQE credit) must be taken for a grade and be completed with a C- or better.

Specific Requirements:

- **Intro Level Course Requirement**: Three 100-level psychology courses. These are typically taken during Year 1 and Year 2.
- **Experimental Methods, Design & Analysis**: AS.200.200 Research Methods in Experimental Psychology and AS.200.201 Design & Analysis for Experimental Psychology should be taken as a two-course sequence in Fall and Spring of Year 2.
- **Upper Level Course Requirement**: Five upper level psychology courses (200- or 300-level), three of which must be at the 300-level. These are typically dispersed through Years 2-4.
- **Small Group Experience**: 3 credits of either research, internship, independent study or an additional 300-level psychology course with an enrollment cap of 19 students or less. Students who are interested in graduate work in psychology are encouraged to get involved in research/internship activity starting in Year 2 and to continue throughout their time at Hopkins.
- **9 NQE Credits**: Students must complete 9 additional NQE credits using courses not taught within the psychology department (AS.200.XXX) and not counting otherwise toward the psychology major.

Please note that not all courses offered by the Department of Psychological & Brain Sciences (AS.200.XXX) will fulfill the requirements of the Psychology major/minor (ex. AS.200.220 Discover Hopkins Health Studies: Application of Abnormal Psychology to Forensic Cases). Consult with Academic Advising and your psychology major advisor to ensure appropriate progress toward degree completion.

I. Required Courses Outside the Department

Nine credits of additional N, Q, or E courses * 9

* Courses instructed within the psychology department (AS.200.XXX) or counting toward the Psychology major may not be used for this requirement.

II. Required Courses Within the Department

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.200.200</td>
<td>Research Methods in Experimental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>AS.200.201</td>
<td>Design &amp; Analysis for Experimental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>AS.200.202</td>
<td>History of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.203</td>
<td>Personality Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.204</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.205</td>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.206</td>
<td>Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.207</td>
<td>Psychological Assessment</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.208</td>
<td>Legal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.209</td>
<td>Psychological Testing</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.210</td>
<td>Psychological Testing for Clinical Practice</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.211</td>
<td>Psychological Testing for Research Practice</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.212</td>
<td>Psychological Testing for Educational Practice</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.213</td>
<td>Psychological Testing for Clinical Research</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.214</td>
<td>Psychological Testing for Research Education</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.215</td>
<td>Psychological Testing for Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.216</td>
<td>Psychological Testing for Clinical Education</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.217</td>
<td>Psychological Testing for Research Education</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.218</td>
<td>Psychological Testing for Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.219</td>
<td>Psychological Testing for Clinical Education</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.220</td>
<td>Discover Hopkins Health Studies: Application of Abnormal Psychology to Forensic Cases</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.200.101</td>
<td>Introduction To Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.110</td>
<td>Introduction To Cognitive Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.132</td>
<td>Introduction to Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.133</td>
<td>Introduction to Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AS.200.141</td>
<td>Foundations of Brain, Behavior and Cognition</td>
<td>3</td>
</tr>
</tbody>
</table>

Research, internship, independent study, or a designated seminar course *
Five additional psychology courses distributed as follows: ** 15

- Two additional courses at the 200-400 level
- Three additional courses at the 300-400 level

* The 300-level seminar course must have a maximum 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.

** 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, independent study, and internships may not be used to satisfy these course requirements.

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

### III. Sample Program

A typical path toward degree completion might include the following sequence of courses (this sample is a suggestion, course requirements should be filled based upon your scheduling and plan of studies, with guidance from your Academic Advisor and/or Major Advisor):

**Freshman**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required 100-level Psychology course</td>
<td>3</td>
<td>Two Required 100-level Psychology course</td>
<td>6</td>
</tr>
<tr>
<td>NQE elective required for major</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS.200.200 Research Methods in Experimental Psychology</td>
<td>4</td>
<td>AS.200.201 Design Analysis for Experimental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>200- through 400-level Psychology course</td>
<td>3</td>
<td>200- through 400-level Psychology course</td>
<td>3</td>
</tr>
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<td></td>
<td>7</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>300- through 400-level Psychology course</td>
<td>3</td>
<td>300- through 400-level Psychology course</td>
<td>3</td>
</tr>
<tr>
<td>Small Group Experience or Independent Academic Work</td>
<td>3</td>
<td>NQE elective required for major</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
<td>6</td>
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</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>300- or 400-level Psychology course</td>
<td>3</td>
<td>NQE elective required for major</td>
<td>3</td>
</tr>
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<td></td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits: 44

### Restrictions

No courses taken during Sessions 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).

Most courses offered by Psychological & Brain Sciences (AS.200.XXX) through the Summer at Hopkins program will not count toward the Psychology major or minor. However, exceptions may include summer courses that are also offered and counted toward the major/minor during the Fall and Spring semesters. You may make an appointment with Dr. Stephen Drigotas, Director of Undergraduate Advising for Psychological & Brain Sciences, to ensure that your enrollments will be considered toward your academic progress in the manner you intend.

### 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 GPA of 3.5 or better in psychology courses
- Conduct honors research and give a public presentation of that research at a student or professional conference
- Receive the endorsement of their honors research mentor
- Two additional 300- or 600-level psychology courses, in addition to those required for the Psychology major. These courses cannot be an independent study, research or internship credits, or a readings course.
- Six credits of research beyond research credits counting toward the major.

Please see the Department of Psychological and Brain Sciences website for the application process details.

### 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. All classes taken for the minor must be taken for a grade and be completed with a C- or better. The minor requires successful completion of the following:

Select three of the following: 9

- AS.200.101 Introduction to Psychology
- AS.200.110 Introduction to Cognitive Psychology
- AS.200.132 Introduction to Developmental Psychology
- AS.200.133 Introduction to Social Psychology
- AS.200.141 Foundations of Brain, Behavior, and Cognition
One psychology course at any level

Two psychology courses at the 300 or 600 level *

* No course from the Carey Business School or School of Education 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.

Graduate Programs
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 sub-fields of psychology. Our core program for doctoral students emphasizes scientific methodology and provides rigorous research training. 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 graduate students will complete take AS.200.657 Advanced Statistical Methods during the first semester and AS.200.658 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
AS.200.613 Fundamentals of Biopsychology, AS.200.617 Fundamentals of Cognitive Psychology, AS.200.654 Psychological & Brain Sciences Core Topics A, and AS.200.655 Psychological & Brain Sciences Core Topics B offer an introduction to the fundamental principles and methods of the psychological & brain sciences. Students will read seminal and contemporary papers in topics that cover the breadth of the field. In addition, students become versed in the careful consideration of data and in formulating written and oral arguments.

First-Year Research Report
During the first year, the student, together with the faculty advisor, identifies a research project that will provide extended research experience. Normally, the student designs a study as part of a larger ongoing project. A project proposal must be submitted by April 15 of the first year; this proposal introduces the nature of the scientific problem, reviews the relevant literature, and describes the proposed study in detail, together with the anticipated data, means of analysis, and interpretations. A final written version of this report must be submitted by December 15 of the student’s second year; ideally, this “first year project” report includes all the information that would be appropriate for submission to a scientific journal.

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 written and oral portions of the advanced examination offer the student an opportunity to demonstrate both in-depth, focused knowledge in their specialty area of study, and also a breadth of knowledge outside of their area of expertise. The student must pass the advanced examination by the beginning of the third year of study.

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

Topical Seminars
The Department of Psychological and Brain Sciences offers topical seminars in which one or more faculty members leads seminars on topics of special interest, such as memory, cognitive development, neurophysiological aspects of behavior, vision sciences, and decision making. Through participation in these seminars, student are exposed to findings in subfields of psychology. 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
Graduate students serve as teaching assistants (TAs) to members of the department’s faculty. All graduate students are expected to TA a minimum of four semesters. Although there is some flexibility in TA assignments, students typically initiate their TA experience during the first semester of their second year, continuing consecutively through the second semester of the third year. The Department Chair, Director of Graduate Studies, Department Administrator, and Academic Program Coordinator collaborate to assess the instructional support needs of the department and assign these teaching duties.

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
Students complete a written literature review in preparation of the completion of their dissertation. The literature review is modeled on articles appearing in professional journals. Typically the review provides a background for the thesis plan, but for some students it may be prepared on a topic other than the one selected for the thesis. The literature review is evaluated by the same committee that will evaluate the thesis plan.

Thesis Plan
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 culminating piece of scholarly work. It establishes the start of 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 the Academic Program Coordinator for the Department of Psychological and Brain Sciences.

For current faculty and contact information go to http://krieger.jhu.edu/publichealth/people/

**Faculty**

**Chair**
Cynthia Moss
auditory information processing, spatial attention & perception, learning & memory, memory & sensorimotor integration

**Professors**
Susan Courtney-Faruqee
cognitive neuroscience, functional neuroimaging, working memory, attention

Howard Egeth
perception & cognition, attention & attentional selectivity, memory, eyewitness testimony, psychology & law

Lisa Feigenson
Director of Graduate Studies: cognitive development, numerical cognition

Michela Gallagher
Krieger-Eisenhower Professor: learning & memory, neurobiology of aging

Justin Halberda
Co-Director of Undergraduate Studies: cognitive & developmental psychology, reasoning, language acquisition

Patricia Janak
Bloomberg Distinguished Professor: behavioral & neurobiological mechanisms of associative learning, addiction

**Associate Professor**
Jonathan Flombaum
visual perception, attention, cognition

**Assistant Professors**
Marina Bedny
brain development & plasticity, cognitive neuroscience, concepts

Janice Chen
real-world memory, cognitive neuroscience, temporal structure in cognition

Chaz Firestone
perception, attention, visual cognition, foundations of cognitive science

Jason Fischer
visual scene understanding using fMRI, psychophysics, computational modeling

Christopher Honey
cognitive neuroscience, computational neuroscience, memory in neural circuits

Kishore Kuchibhotla
neural circuits; attention, learning & decision-making; audition; neural circuit dysfunction; computational modeling

Shreesh Mysore
neural circuits for behavior (attention, decision-making, etc), computational neuroscience, comparative approach to the design of neural circuits

**Teaching Faculty**

Jeff Bowen
Lecturer: close relationships, social psychology, self-regulation, mental representation, psycholinguistics

Stephen Drigotas
Teaching Professor & Co-Director of Undergraduate Studies: social psychology, interpersonal relationships, friendship networks, intergroup behavior, social dilemmas

Alison Papadakis
Associate Teaching Professor: clinical & adolescent psychology, developmental psychopathology of depression in adolescence

**Associate Faculty**
Kirsten (Kisi) Bohn
Assistant Research Professor: acoustic communication, vocal production, social behavior, neuroethology, evolution of vocal complexity

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

Chelsea Howe
Lecturer: forensics, abnormal psychology, dual diagnosis, therapy, assessment

Ann Jarema
Junior Lecturer: clinical psychology

Chris Kraft
Psychologist & Instructor; School of Medicine (Psychiatry & Behavioral Sciences, Center for Marital & Sexual Health); Senior Lecturer: human sexuality & behaviors

Meghan McGlaughlin
Junior Lecturer: clinical psychology

Rick Ostrander
Teaching Faculty: clinical & adolescent psychology

Tyler Rickards
Teaching Faculty: rehabilitation Neuropsychology, traumatic breaking injury, clinical psychology

Heather Roberts Fox
### Joint Faculty

**Marilyn Albert**  
Professor & Director (Division of Cognitive Neuroscience; School of Medicine): aging, cognition, memory

**Arnold Bakker**  
Associate Professor (Psychiatry; School of Medicine): psychiatric neuroimaging

**Greg Ball**  
Research Professor: biopsychology, behavioral neuroendocrinology, neuroethology

**Charles (Ed) Connor**  
Professor & Director (Mind/Brain Institute): neurophysiology of visual perception & object recognition

**Barry Gordon**  
Professor (Therapeutic Cognitive Neuroscience, Neurology & Cognitive Science); Director (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): functional organization of primate visual system, primate functional neuroanatomy

**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 & Lydia Todd Faculty Development Professor & Chair (Cognitive Science): language acquisition, cognitive development, spatial representation, acquisition of the lexicon

**Hey-Kyoung Lee**  
Associate Professor (Mind/Brain Institute): cellular/molecular mechanisms of synaptic plasticity underlying memory formation

**Michael E. McCloskey**  
Professor (Cognitive Science): language, vision, memory, cognitive neuropsychology, developmental cognitive deficits

**Guy McKhann**  
Professor (Mind/Brain Institute): patterns of cognitive decline after coronary artery bypass grafting

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

**Brenda C. Rapp**  
Professor (Cognitive Science): cognitive neuropsychology, attention, reading & writing

**Peter R. Rapp**  
Senior Investigative Chief (National Institute on Aging): Laboratory of Experimental Gerontology

### Teaching Faculty Emeritus

**Linda Gorman**  
Professor (Cognitive Science): cognitive neuropsychology, attention, reading & writing

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

### Courses

#### AS.200.101. Introduction To Psychology. 3.0 Credits.

Do we all see colors the same way? How did so many 'good' people support the Nazi party? Do crossword puzzles really stave off Alzheimer's Disease? This course tries to answer these questions and many others, providing a comprehensive overview of the scientific study of the mind. We'll explore topics such as perception, language, memory, decision-making, creativity, love, sex, art, politics, religion, dreams, drugs, brain damage and mental illness, grappling with deep and longstanding controversies along the way: differences between the sexes, the relationship between mind and brain, causes and consequences of racism, human uniqueness (or not) within the animal kingdom, nature vs. nurture, good and evil, consciousness. Appropriate for anyone wanting to know who and what we are as human beings (or who noticed that psychology is now on the MCAT).

**Prerequisites:** NA  
**Corequisites:** NA  
**Instructor(s):** C. Firestone  
**Area:** Natural Sciences, Social and Behavioral Sciences

#### AS.200.109. Discover Hopkins: Introduction to Clinical Psychology. 1.0 Credit.

Students will be exposed to the practice and science of Clinical Psychology. Students will learn about various clinical characteristics of psychiatric disorders and treatments available for these conditions. This class will emphasize critical thinking and analysis. It is designed to help students gain an understanding of the scientific strengths and limitations essential to becoming a good diagnostician, therapist, and researcher in the field.

**Prerequisites:** NA  
**Corequisites:** NA  
**Instructor(s):** L. Raifman  
**Area:** NA  
**NA.**
AS.200.110. Introduction to Cognitive Psychology. 3.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Flombaum
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.132. Introduction to Developmental Psychology. 3.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences
NA.

AS.200.141. Foundations of Brain, Behavior and Cognition. 3.0 Credits.
A survey of neuropsychology relating the organization of behavior to the integrative action of the nervous system. Cross-listed with Behavioral Biology and Neuroscience.
Prerequisites: NA
Corequisites: NA
Instructor(s): D. Smith
Area: Social and Behavioral Sciences
NA.

AS.200.163. Gamechangers: Conceptual Breakthroughs in Neuroscience. 3.0 Credits.
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. Note: This course does not count towards the Psychology major.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Egeth
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.167. Freshmen Seminar: Evolutionary Psychology. 1.0 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. Note: This course does not count towards the Psychology major.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Egeth
Area: Social and Behavioral Sciences
NA.

AS.200.168. Freshmen Seminar: Evolutionary Psychology. 1.0 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. Note: This course does not count towards the Psychology major.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Egeth
Area: Social and Behavioral Sciences
NA.
AS.200.200. Research Methods in Experimental Psychology. 4.0 Credits.
The goal of this course is to introduce how psychological scientists develop and test research questions about the mind and behavior. We will explore how empirical investigation differs from other ways of making discoveries and learning about the world, and how psychologists employ various methodologies to tackle their phenomena of interest. We will examine the relationships between research questions and research designs, the benefits and drawbacks of differing measurement and sampling approaches, the ethical implications of various research paradigms, and best practices in communicating research findings clearly and engagingly. You will have the opportunity to engage “hands-on” with the research process through interactive labs and demonstrations. Over the course of the semester, you will develop and receive feedback on a research proposal, which will serve as a foundation for the spring course “Design and Analysis for Experimental Psychology”.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Bowen
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.201. Design & Analysis for Experimental Psychology. 4.0 Credits.
The goal of this course is to expose you to the processes of data collection, analysis, and dissemination in psychology. This course is the follow-up to “Research Methods in Experimental Psychology,” and therefore will draw on the methodological principles and practices covered in the Fall semester. This course will cover a wide array of analytical techniques (i.e., statistics) that you will apply to data collected as part of a semester-long group research project. The course will also include extensive coverage of the R programming language for use in data management, analysis, and visualization. With your group members, you will collect primary research data, carry out appropriate statistical tests, compose individual research manuscripts, and collectively present a poster at an on-campus research symposium. In combination with the Fall course, this class will serve as strong preparation for those considering honors theses, joining research labs at Homewood and/or JHMI, conducting independent research projects, and ultimately pursuing careers/graduate work in experimental psychology.
Prerequisites: AS.200.200 (was AS.200.207)
Corequisites: NA
Instructor(s): J. Bowen
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.202. Forensic Psychology. 3.0 Credits.
The field of forensic psychology is focused on answering legal questions about the causes of human behavior. This survey course will explore the work that forensic psychologists do; their research, assessment, and clinical methods; and how their work influences lawyers, judges, and other legal practitioners. Specific topics will include mental capacity assessment, psychopathy, claims of mental distress, child custody evaluations, juvenile delinquency, forensic treatment, and forensic neuropsychological assessments.
Prerequisites: Students can only receive credit for AS.200.202 or AS.200.325, not both.
Corequisites: NA
Instructor(s): C. Howe
Area: Social and Behavioral Sciences

AS.200.204. Human Sexuality. 3.0 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. Please note that the use of electronic devices is not permitted during this class, in order to promote the full interactive potential of this engaging seminar-style offering. Open to Juniors & Seniors within the following majors/minors: Behavioral Biology; Biology; Cognitive Science; Medicine, Science & the Humanities; Molecular & Cellular Bio; Neuroscience; Psychological & Brain Sciences; Public Health; Sociology; Study of Women, Gender, & Sexuality.
Prerequisites: NA
Corequisites: Students may enroll in both AS.200.204 and AS.290.420, but cannot do so in the same semester.
Instructor(s): C. Kraft
Area: Social and Behavioral Sciences

AS.200.205. Discover Hopkins: Psychological Profiling. 1.0 Credit.
“Psychological Profiling” focuses on strengths and limitations of psychological methods employed by forensic professionals who assist police in criminal investigations. Clinical cases of serial offenders, spree killers, disgruntled employees, police profiling, and terrorists will be studied. Legal and ethical issues will be explored, especially racial profiling controversies. We anticipate visits to the FBI Behavioral Sciences Unit at Quantico, Virginia; Baltimore County Forensic Crime Lab (with emphasis on crime scene analysis), and the Baltimore Police Profiling Program. This course does not count towards the psychology major.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Raifman
Area: Social and Behavioral Sciences

AS.200.208. Animal Behavior. 3.0 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.
Prerequisites: AS.200.141 OR Permission of Instructor.
Corequisites: NA
Instructor(s): K. Porth-Bohn
Area: Natural Sciences, Social and Behavioral Sciences

AS.200.209. Personality. 3.0 Credits.
This is a survey course focused on theory and research on human personality. Topics include personality traits, motivation, unconscious processes, self-regulation, cognitive and behavioral aspects of personality, biological and evolutionary influences on personality, and dysfunctional manifestations of personality.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Howe
Area: Social and Behavioral Sciences

AS.200.211. Sensation & Perception. 3.0 Credits.
This course surveys how stimuli from the environment are transformed into neural signals, and how the brain processes those signals to interpret the objects and events in the world. A primary focus will be on the visual system, with additional coverage of hearing, touch, taste, and smell.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Fischer
Area: Natural Sciences, Social and Behavioral Sciences

AS.200.212. Abnormal Psychology. 3.0 Credits.
A survey of the major syndromes of psychological disorders. Research and theory about the mechanisms, development, and diagnosis of psychopathology are emphasized.
Prerequisites: NA
Corequisites: NA
Instructor(s): A. Papadakis
Area: Social and Behavioral Sciences

AS.200.220. Discover Hopkins Health Studies: Application of Abnormal Psychology to Forensic Cases. 1.0 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 shoplift 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. As part of this course, students will visit with doctors and lawyers (including Judges), view and analyze video and movies about forensic cases, and participate in mock trial exercises. Note: This course does not count towards the Psychology major.
Prerequisites: NA
Corequisites: NA
Instructor(s): K. Hill; L. Raifman; L. Williams
Area: Social and Behavioral Sciences

AS.200.222. Positive Psychology. 3.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Halberda
Area: Social and Behavioral Sciences

AS.200.240. Industrial and Organizational Psychology. 3.0 Credits.
This course provides a survey of the field of industrial and Organizational Psychology, a scientific discipline that studies human behavior in the workplace. The course focuses on understanding the psychological bases of work behaviors, cognitions, and emotions and practices that can be implemented to create a good fit between employees’ characteristics and work demands. A number of topics are addressed in the scientist-practitioner model, including the structure/characteristics of jobs, techniques for assessing and supporting employee performance, selecting and training a workforce, and the various mechanisms that influence employee motivation and attitudes, among other topics. Real-world applications and research are emphasized throughout the course.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.301. History Of Psychology. 3.0 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. Enrollment limited to Juniors and Seniors only. Sophomores with instructor approval. Recommended Course Background: two prior Psychology courses.
Prerequisites: NA
Corequisites: NA
Instructor(s): P. Hofer
Area: Humanities, Social and Behavioral Sciences

AS.200.302. Behavioral Assessment of Animal Models of Cognition and Neuropsychiatric Disorders. 3.0 Credits.
What does a rat exploring its environment tell us about memory? How can a mouse help us better understand schizophrenia? This course will focus on procedures that are routinely used to study behavior in animal models of cognition and neuropsychiatric disorders. The procedures discussed will include assessments that fall into 3 broad functional domains: motor function, affective or emotional states, and cognition. Throughout the course, we will read and discuss original research articles to illustrate and compare some of the measures and results from the various procedures. Postdoc Teaching Fellowship. This is designed to be an upper level course.
Prerequisites: Pre-reqs: AS.200.141 OR ( AS.080.305 AND AS.080.306 ) or permission of the instructor.
Corequisites: NA
Instructor(s): D. Smith
Area: Social and Behavioral Sciences
AS.200.304. Neuroscience of Decision Making. 3.0 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.200.141
Corequisites: NA
Instructor(s): V. Stuphorn
Area: Natural Sciences
NA.

AS.200.305. Advanced Seminar in Forensic Psychology. 3.0 Credits.
Forensic psychologists determine clinical diagnoses and offer expert opinions to assist court decision makers who must employ legal tests to make case determinations. This course will explore how forensic psychologists communicate with the courts via consultation, report writing, and expert testimony. Students will write forensic analyses on a variety of controversial, cutting edge forensic topics (e.g., for competence to stand trial, child abuse, civil commitment, compensation for mental injuries, sex offender commitment, insanity, fitness for duty, child custody).
Prerequisites: AS.200.202 AND AS.200.212
Corequisites: NA
Instructor(s): C. Howe
Area: Natural Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.307. Medical Psychology. 3.0 Credits.
Medical Psychology is a specialization within clinical psychology that focuses on the application of psychological theories, research, and techniques to physical health problems and health promotion. Students will learn about the consultation process and interventions used in medical psychology practice to improve the physical and psychological health of medical patients, including those with chronic conditions (e.g., chronic pain, heart disease) and those with acute illnesses and injuries. Enrollment limited to Junior & Senior Psychology Majors or with instructor approval.
Prerequisites: AS.200.212
Corequisites: NA
Instructor(s): R. Ostrander
Area: Social and Behavioral Sciences
NA.

AS.200.311. Sensory Representations in the Brain: Maps, Modules, & Distributed Coding. 3.0 Credits.
In this course we will explore the ways in which information from vision, hearing, touch, smell, and taste is encoded in the brain. We will compare and contrast different representation schemes and their computational advantages in order to uncover some overarching organizing principles of sensory processing in the brain. Class meetings will consist of lectures plus group discussions of classic papers in cognitive neuroscience, computational modeling, and neuropsychology. Enrollment limited to Juniors & Seniors.
Prerequisites: AS.200.211 OR AS.080.203 OR AS.050.203 OR AS.200.141 OR AS.020.312
Corequisites: NA
Instructor(s): J. Fischer
Area: Social and Behavioral Sciences
NA.

AS.200.313. Models of Mind and Brain. 3.0 Credits.
This is a seminar surveying computational approaches to understanding mental and neural processes, including sensory and conceptual representation, categorization, learning and memory. The course will also develop familiarity with computational tools such as numerical simulation, linear transformation and data visualization. Enrollment limited to Juniors and Seniors. Recommended Course Background: AS.110.106 / Calculus I OR AS.110.108 Calculus I, AS.050.101 / Cognition OR AS.200.211 / Sensation & Perception OR AS.080.105 / Introduction to Neuroscience OR other introductory coursework in cognitive & neural sciences.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Honey
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
NA.

AS.200.316. Thought and Perception. 3.0 Credits.
This year’s topic: Philosophical, Foundational, and Methodological Issues Connected to Bayesian Approaches in Cognitive Science. Bayesian probability theory and Bayesian decision theory aim to lay out how ideal reasoners update their beliefs in the light of new evidence and make decisions based on those beliefs. But what about such apparently non-ideal agents such as ourselves? The past few decades have witnessed a rising tide of Bayesian work on perception, higher cognition, neural coding, etc. It’s been accompanied by vigorous debate concerning the aims and claims of these approaches. Some see the prospect of a grand unified theory of the mind/brain; others demur. We’ll examine these debates and what one can learn from them regarding more generally about approaches to modeling the mind and the nature of rationality. Readings will be drawn both from the empirical and the philosophical literature. (This course meets jointly with AS.200.616 & AS.150.476)
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Firestone; S. Gross
Area: Humanities, Social and Behavioral Sciences
Writing Intensive.

AS.200.317. Interpersonal Relations. 3.0 Credits.
This course will investigate interpersonal processes ranging from attraction and courtship to relationship functioning and distress. Enrollment limited to Psychology majors, Psychology minors, and Behavioral Biology majors.
Prerequisites: AS.200.133
Corequisites: NA
Instructor(s): S. Drigotas
Area: Social and Behavioral Sciences
NA.

AS.200.320. The Interface of Psychology & Semantics: Procedural Matters. 3.0 Credits.
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.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Halberda
Area: Natural Sciences, Social and Behavioral Sciences
NA.
AS.200.321. Child and Adolescent Psychology. 3.0 Credits.
This course focuses on mental disorders in children and adolescents. The course begins with an exploration of the general models and theories for why psychopathology occurs in childhood. The second portion of the course provides a systematic review of the symptoms, course, risk factors, theories, and treatments for specific disorders, including mood disorders, anxiety disorders, autism, ADHD, eating disorders, and behavioral disorders.
Prerequisites: AS.200.212
Corequisites: NA
Area: Social and Behavioral Sciences
Instructor(s): A. Papadakis

AS.200.322. Clinical Neuropsychology. 3.0 Credits.
Clinical Neuropsychology is a clinical psychology specialty focused on assessment and treatment of acquired or developmental disorders of the nervous system, including dementia, neurodegenerative disorders, traumatic brain injury, learning disabilities, and neurodevelopmental disorders. This course will focus on research findings and techniques used by psychologists in the assessment, treatment, and rehabilitation processes. Recommended Course Background: AS.200.141 / Foundations of Behavior Cognition.
Prerequisites: AS.200.212
Corequisites: NA
Area: Social and Behavioral Sciences
Instructor(s): T. Rickards

AS.200.323. Psychology and Social Media. 3.0 Credits.
This course explores modern-day social media use (e.g., Facebook, Match.com) through multiple theoretical lenses within psychology. Through weekly student-led discussions and readings, it will accomplish 3 aims: 1) applying psychology of identity, motivation, and communication to social media (e.g., self-presentation, intergroup dynamics), 2) investigating clinical/health implications of social media use (e.g., addiction, loneliness), and 3) exploring social media as data-gathering environments (e.g., user experience research from already committed guest-speakers who work in social media industries).
Prerequisites: NA
Corequisites: NA
Area: Social and Behavioral Sciences
Instructor(s): J. Bowen

AS.200.324. Law, Psychology and Public Policy. 3.0 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. Recommended Course Background: Statistics & Regression Analysis
Prerequisites: NA
Corequisites: NA
Area: Social and Behavioral Sciences
Instructor(s): P. Hofer

AS.200.329. Real World Human Data: Analysis & Visualization. 3.0 Credits.
Experiments in human cognition typically involve careful manipulation and control of variables in order to answer specific questions about the mind or brain. However, digital devices now provide an ocean of incidental human data: information collected continuously about our behavior and physiological states as we go about our lives. These incidental datasets are often large and noisy, and pose different analysis and visualization challenges from more traditional manipulated experiments. In this course students will learn computational tools and qualitative approaches for exploring, visualizing and interpreting large human data. The course emphasizes computer-based analysis of open-source human behavioral and neuroimaging datasets. Analyses will be conducted in MATLAB. Instructor will grant approval as long as you have previous programming experience (roughly equivalent to material covered in an introductory-level programming course). Self-taught or real-world experience can be applicable in lieu of previous formal classroom instruction.
Prerequisites: NA
Corequisites: NA
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
Instructor(s): J. Chen

AS.200.332. Seminar in Theoretical Neuroscience. 3.0 Credits.
This course develops a theoretical understanding of the large-scale anatomical and functional organization of the mammalian cerebral cortex. We will discuss primary research readings and will implement essential concepts in numerical simulations. The theoretical principles to be explored will include: hierarchy; normalization; pattern completion; prediction; gradient-based learning; and conjunctive representation. We will consider the broader motivation for each of these computational principles, and we will ask how successfully they organize the empirical data about our brains. Specific questions include: What are the functional benefits of a hierarchical anatomical organization of the cerebral cortex? Do neocortical circuits generically implement a normalization operation? How and why is pattern completion implemented in the neocortex and the hippocampus? Can gradient-based representational learning occur in the cerebral cortex without external supervision or reinforcement signals? How is the flow of information between brain regions regulated? How can distinct cortical representations be “bound” into joint representations? Cal 1; Computational Science or some programming experience highly recommended. Instructor approval required.
Prerequisites: NA
Corequisites: NA
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
Instructor(s): C. Honey

AS.200.333. Advanced Social Psychology. 3.0 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
Corequisites: NA
Area: Social and Behavioral Sciences
Instructor(s): S. Drigotas
AS.200.334. Human Memory Psychology. 3.0 Credits.
This class will survey the behavioral and biological science of human memory. Historical perspectives as well as modern controversies will be discussed. Intersections with other fields such as law, education, medicine, and technology will be highlighted. The course will be a mixture of lectures and group discussions.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Chen
Area: Social and Behavioral Sciences
NA.

AS.200.335. How Does the Brain Predict the Future?. 3.0 Credits.
Have you ever wondered how you predict the beat will drop in a song or that a traffic light will change? A combination of evolution and experience have wired your brain to generate predictions about the future. In this course, you will learn about the factors which influence neural predictions. Understanding how the brain forms predictions is critical to understanding perception, movement, music, language, and cognition. Some examples include: hallucinations, how we walk, why we like pop music, how we converse, and how we make plans. We will read news articles and original research to strengthen scientific literacy and critical thinking. The content of our readings will encompass a variety of research methods (including behavioral assessment, fMRI, single electrode recordings, EEG, and ECoG). We will discuss key factors in neural predictions, such as: predictive domain (what is the objective of the prediction and where does it occur in the brain?), specificity (is the prediction very detailed or general?), timescale (when is something predicted to occur?), statistics (how probable is the predicted outcome?), consciousness (do you explicitly or implicitly know the prediction?), and reward (how much reward is associated with the predicted outcome?). Finally, we will talk about general theories of prediction, including predictive coding and Bayesian inference.
Prerequisites: AS.200.141 OR AS.080.306
Corequisites: NA
Instructor(s): K. Himberger
Area: Natural Sciences
NA.

AS.200.336. Foundations of Mind. 4.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Halberda; L. Feigenson
Area: Social and Behavioral Sciences
NA.

AS.200.339. Cognitive Development. 3.0 Credits.
How do children acquire knowledge about the world? In this 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, participate in class discussions, and complete short critical writing assignments and final literature review paper.
Prerequisites: NA
Corequisites: NA
Instructor(s): M. Kibbe
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.344. Behavioral Endocrinology. 3.0 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: ( AS.200.141 OR AS.080.306 ) OR ( AS.020.151 AND AS.020.152 ) OR ( AS.020.305 AND AS.020.306 ) or instructor's permission
Corequisites: NA
Instructor(s): K. Porth-Bohn
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.360. Tests & Measurements. 3.0 Credits.
Psychological tests and measures are used in several settings including research, clinical, business, forensic, school and other applied settings. This course will consider the methodological and practical issues involved in test construction, the evaluation of instruments, and the uses of psychological tests across settings and for different purposes. Examples of assessments that may be discussed are aptitude and achievement tests; personality and behavioral inventories; neuropsychological tests, observations and interviews; and tests for employment and forensic use. Enrollment limited to Junior & Senior Cognitive Science & Psychology Majors, or instructor approval.
Prerequisites: AS.200.201
Corequisites: NA
Instructor(s): R. Ostrander
Area: Social and Behavioral Sciences
NA.

AS.200.361. Sleep, Dreams, and Altered States of Consciousness. 3.0 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. Recommended Course Background: AS.200.101 OR AS.080.203 OR AS.050.203
Prerequisites: NA
Corequisites: NA
Instructor(s): R. Allen
Area: Natural Sciences, Social and Behavioral Sciences
NA.
AS.200.369. Neuroscience of Motivation & Reward. 3.0 Credits.
This course will explore the neurobiological bases of motivated behavior, including eating, drinking, and reproduction, tracing the history of our understanding from early neuroscientific studies to the modern day, with a focus on mammalian model systems. We will discuss innate motivated behaviors, and well as how learning can guide the expression of these behaviors. Neural mediation of processes such as reward and aversion will be considered in depth, as will applications of these findings to the understanding of addiction and other behavioral disorders. The course will be a mixed lecture/seminar format; we will read original research articles and scholarly reviews.
Prerequisites: AS.080.306 (students may enroll concurrently); AS.080.305; Students may not have taken AS.200.366.
Corequisites: NA
Instructor(s): P. Janak
Area: Natural Sciences
NA.

AS.200.376. Neuropsychopharmacology. 3.0 Credits.
Designed to provide information about how drugs affect the brain and behavior. The course focuses on biological concepts underlying structures and functions of the brain that relate to mental disorders. An introduction to neurobiology and brain function is presented as it applies to 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. Enrollment limited to juniors and seniors.
Prerequisites: (AS.080.305 AND AS.080.306) OR AS.020.306 AND AS.020.312) OR (AS.200.141 AND AS.020.306)
Corequisites: NA
Instructor(s): S. Sterbing-d’angelo
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.377. Neuroethology. 3.0 Credits.
A comparative and evolutionary approach to understanding the neural underpinnings of biologically relevant behaviors in vertebrate and invertebrate animals. Enrollment limited to Sophomores, Juniors, Seniors or by instructor approval. Recommended Course Background: AS.200.141
Prerequisites: NA
Corequisites: NA
Instructor(s): S. Sterbing-d’angelo
Area: Natural Sciences
NA.

AS.200.379. Research Seminar in Clinical Psychology. 3.0 Credits.
A small group exploration of current issues in clinical psychology, aimed at developing students’ empirical research skills. Following critical analysis of the empirical literature, students develop research proposals for novel research and/or conduct research and author research reports. Topics vary by semester. In the current offering, the topic will be stress, coping, emotion-regulation, peer relationships, and psychopathology among adolescents and emerging adults. Recommended Course Background: AS.200.212 Abnormal Psychology AND EN.553.111 Statistical Analysis I AND EN.553.112 Statistical Analysis II AND AS.200.207 Research Methods in Experimental Psychology. Enrollment limited to Junior & Senior Psychology majors & minors by instructor approval.
Prerequisites: AS.200.212
Corequisites: NA
Instructor(s): A. Papadakis
Area: Social and Behavioral Sciences
Writing Intensive.

AS.200.380. Neurobiology of Human Cognition. 3.0 Credits.
The complexity of human behavior surpasses even our closest primate relatives. Only humans communicate through language, build complex technology, devise legal system and wage war. What neurobiological capacities set humans apart from other animals? This course will explore the neurobiology of cognition, focusing on cognitive domains that are particularly developed in the human species: language, social cognition, number, executive function and concepts. The course format will consist of lectures and in class workshops.
Prerequisites: AS.200.141 OR AS.200.312 OR AS.080.105 OR AS.080.203 OR AS.050.203 OR AS.050.312
Corequisites: NA
Instructor(s): M. Bedny
Area: Natural Sciences, Social and Behavioral Sciences
NA.

AS.200.382. Models of Psychotherapy. 3.0 Credits.
This course reviews the major models of psychotherapy, including psychodynamic, cognitive, behavioral, interpersonal, and family therapy, with a focus on modern and empirically supported treatments. The application of the models through the analysis of clinical case studies is emphasized. Restricted to Junior & Senior Psychology Majors.
Prerequisites: AS.200.212
Corequisites: NA
Instructor(s): A. Papadakis
Area: Social and Behavioral Sciences
Writing Intensive.

AS.200.384. Spatial Orientation and Navigation: Behavior and Neural Mechanisms. 3.0 Credits.
A cross-disciplinary investigation of space representation and navigation in a broad range of animal species. Topics will include sonar orientation, landmark use, the role of dead reckoning, spatial memory, long-distance migration, and map-making.
Prerequisites: AS.200.141 OR (AS.080.305 AND AS.080.306) or equivalent.
Corequisites: NA
Instructor(s): C. Moss
Area: Natural Sciences
NA.
AS.200.385. Mind, Brain & Experience. 3.0 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.050.203 OR (AS.080.305 AND AS.080.306) OR AS.080.203
Corequisites: NA
Instructor(s): M. Bedny
Area: Natural Sciences, Social and Behavioral Sciences
Writing Intensive.

AS.200.386. Animal Cognition. 3.0 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 Instructor permission.
Corequisites: NA
Instructor(s): P. Holland
Area: Social and Behavioral Sciences

AS.200.388. Occupational Health Psychology. 3.0 Credits.
Occupational Health Psychology (OHP) concerns the application of psychology to improving the quality of work life, and to protecting and promoting the safety, satisfaction, health, and well-being of workers. This course will consider a broad range of topics in OHP including the role of work on well-being, job stress and burnout, diversity and work, safety climate, work-family balance, conflict, and counterproductive work behaviors. The emphasis will be on drawing connections between OHP theory and OHP practice and at the relationship between individual and organizational health and well-being. This class should be of interest to students interested in industrial/organizational psychology, social psychology, health psychology, clinical psychology, human factors, public health, preventive medicine, and industrial engineering.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.401. Careers in Psychology - Freshmen. 1.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.402. Careers in Psychology - Sophomore. 1.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.403. Careers in Psychology - Juniors. 1.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.404. Careers in Psychology - Seniors. 1.0 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.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Roberts Fox
Area: Social and Behavioral Sciences

AS.200.501. Psychological Research - Freshmen. 3.0 Credits.
S/U grading only.
Prerequisites: You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA

AS.200.502. Psychology Research-Freshmen. 0.0 - 3.0 Credits.
NA
Prerequisites: You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
AS.200.503. Psychological Research - Sophomores. 3.0 Credits.
S/U grading only
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.504. Psychology Research-Sophomores. 0.0 - 3.0 Credits.
Grading Satisfactory/ Unsatisfactory only
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.506. Psychological Readings. 0.0 - 3.0 Credits.
NA
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.509. Internship-Psychology. 1.0 Credit.
S/U grading only.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.510. Psychology Internship. 0.0 - 3.0 Credits.
Grading Satisfactory/ Unsatisfactory only.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.511. Psychological Research - Juniors. 3.0 Credits.
S/U grading only.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.512. Psychology Research-Juniors. 0.0 - 4.0 Credits.
Grading Satisfactory/ Unsatisfactory only.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.513. Psychological Research - Seniors. 3.0 Credits.
The student chooses some research problem with the advice and
approval of a faculty member. S/U grading only.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.514. Psychology Research-Seniors. 0.0 - 4.0 Credits.
NA
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.519. Seniors Honors Research. 3.0 Credits.
Seniors working on the honors thesis enroll with the approval of the
undergraduate coordinator.
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.520. Seniors Honors Research. 0.0 - 3.0 Credits.
NA
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.

AS.200.540. Independent Study-Seniors. 3.0 Credits.
NA
Prerequisites: You must request Independent Academic Work using
the Independent Academic Work form found in Student Self-Service:
Registration > Online Forms.
Corequisites: NA
Instructor(s): Staff
Area: NA
NA.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Department</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Instructor(s)</th>
<th>Area</th>
<th>Description</th>
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<tbody>
<tr>
<td>AS.200.541</td>
<td>Psychological and Brain Sciences</td>
<td>Independent Study - Juniors</td>
<td>3.0</td>
<td>You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.</td>
<td>NA</td>
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<tr>
<td>AS.200.542</td>
<td>Psychological and Brain Sciences</td>
<td>Independent Study - Sophomores</td>
<td>3.0</td>
<td>You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.</td>
<td>NA</td>
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<td>AS.200.595</td>
<td>Psychological and Brain Sciences</td>
<td>Internship</td>
<td>1.0</td>
<td></td>
<td>NA</td>
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<tr>
<td>AS.200.597</td>
<td>Psychological and Brain Sciences</td>
<td>Psychology Research</td>
<td>3.0</td>
<td>You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.</td>
<td>NA</td>
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<tr>
<td>AS.200.599</td>
<td>Psychological and Brain Sciences</td>
<td>Independent Study</td>
<td>1.0 - 3.0</td>
<td>You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.</td>
<td>NA</td>
<td>Staff</td>
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<tr>
<td>AS.200.613</td>
<td>Psychological and Brain Sciences</td>
<td>Fundamentals of Biopsychology</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>Staff</td>
<td>NA</td>
<td>This is a required course for all first year PhD students in the Department of Psychological and Brain Sciences. The course covers foundational concepts and methods in neurobiology and cognitive neuroscience.</td>
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<tr>
<td>AS.200.648</td>
<td>Psychological and Brain Sciences</td>
<td>Aging, Cognition, and Neurodegenerative Disorders I</td>
<td>NA</td>
<td>You must request Independent Academic Work using the Independent Academic Work form found in Student Self-Service: Registration &gt; Online Forms.</td>
<td>NA</td>
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<tr>
<td>AS.200.614</td>
<td>Psychological and Brain Sciences</td>
<td>Graduate Seminar: Functional Neuroimage</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>B. Anderson; K. Blacker</td>
<td>NA</td>
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<tr>
<td>AS.200.616</td>
<td>Psychological and Brain Sciences</td>
<td>Thought and Perception</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>C. Firestone; S. Gross</td>
<td>NA</td>
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<tr>
<td>AS.200.617</td>
<td>Psychological and Brain Sciences</td>
<td>Fundamentals of Cognitive Psychology</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>J. Flombaum</td>
<td>NA</td>
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<tr>
<td>AS.200.618</td>
<td>Psychological and Brain Sciences</td>
<td>Aging, Cognition, and Neurodegenerative Disorders II</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>M. Albert; M. Gallagher</td>
<td>NA</td>
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</table>
AS.200.649. Aging, Cognition, and Neurodegenerative Disorders II. NA Credit.
Second part of a two-semester course. 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. 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)
Prerequisites: NA
Corequisites: NA
Instructor(s): M. Albert; M. Gallagher
Area: NA
NA.

AS.200.654. Psychological & Brain Sciences Core Topics A. NA Credit.
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.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

AS.200.655. Psychological & Brain Sciences Core Topics B. NA Credit.
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.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

AS.200.657. Advanced Statistical Methods. NA Credit.
Topics in applied probability and statistical inference; analysis of variance; experimental design. Intended for graduate students. 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 EN.550.310 OR EN.550.311 OR EN.560.435 OR EN.550.420 OR EN.550.430 OR EN.560.348
Corequisites: NA
Instructor(s): J. Bowen
Area: Quantitative and Mathematical Sciences, Social and Behavioral Sciences
NA.

AS.200.658. Advanced Research Design and Analysis. NA Credit.
Second half of graduate statistics sequence, covering complex research design and analysis. Recommended Course Background: AS.200.657. Enrollment limited to seniors by instructor approval and graduate students.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Bowen
Area: Quantitative and Mathematical Sciences
NA.

AS.200.659. Quantitative Methods for Brain Sciences. NA Credit.
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. Enrollment is limited to undergraduate seniors and graduate students with instructor approval. Recommended Course Background: Probability & Statistics, Linear Algebra, MATLAB programming.
Prerequisites: NA
Corequisites: NA
Instructor(s): NA
Area: Quantitative and Mathematical Sciences
NA.

AS.200.661. Topics in Psychological & Brain Sciences. NA Credit.
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.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

AS.200.662. Psychological and Brain Sciences: Career Development. NA Credit.
NA
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

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.
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Egeth; J. Flombaum; J. Halberda
Area: NA
NA.

AS.200.680. Psychological & Brain Sciences Seminar. NA Credit.
NA
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.
A cross-disciplinary investigation of space representation and navigation in a broad range of animal species. Topics will include sonar orientation, landmark use, the role of dead reckoning, spatial memory, long-distance migration, and map-making. Contact instructor for enrollment approval.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Moss
Area: NA
NA.

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.
Prerequisites: NA
Corequisites: NA
Instructor(s): M. Gallagher
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Flombaum
Area: NA
NA.

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.
Prerequisites: NA
Corequisites: NA
Instructor(s): R. Haberman
Area: NA
NA.

AS.200.810. Research In Psychology. NA Credit.
Students plan and execute original research under guidance of advisers. Results are usually prepared in a form suitable for publication. Graduate students only.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): H. Egeth
Area: NA
NA.

AS.200.813. Research Seminar: Cognitive Development. NA Credit.
NA
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Halberda
Area: NA
NA.

AS.200.817. Cognitive Lunch. NA Credit.
NA
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): V. Stuphorn
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Halberda
Area: NA
NA.

AS.200.820. Directed Readings & Research. NA Credit.
Guided independent readings and research in special fields. Graduate Students only.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

AS.200.822. Research seminar: Naturalistic memory and perception. NA Credit.
Research seminar covering topics on human memory and perception in real-world settings.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Chen
Area: NA
NA.
Research seminar covering topics related to neural circuits for learning.
Prerequisites: NA
Corequisites: NA
Instructor(s): K. Kuchibhotla
Area: NA
NA.

Graduate students only.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Moss; M. Gallagher; P. Janak
Area: NA
NA.

AS.200.826. Research Seminar: Neuroplasticity and Development. NA Credit.
Graduate Students Only.
Prerequisites: NA
Corequisites: NA
Instructor(s): M. Bedny
Area: NA
NA.

AS.200.829. Research Seminar: Neural Circuits & Computations. NA Credit.
Graduate Students Only
Prerequisites: NA
Corequisites: NA
Instructor(s): S. Mysore
Area: NA
NA.

Graduate Students Only
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Moss
Area: NA
NA.

AS.200.832. Research Seminar: Neural Circuits & Behavior. NA Credit.
Graduate Students Only
Prerequisites: NA
Corequisites: NA
Instructor(s): P. Janak
Area: NA
NA.

Research seminar covering topics related to perception & mind.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Firestone
Area: NA
NA.

Research seminar covering topics on the behavioral and brain basis of perception in dynamic scenes.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Fischer
Area: NA
NA.

Research seminar covering topics on cognitive and systems neuroscience.
Prerequisites: NA
Corequisites: NA
Instructor(s): C. Honey
Area: NA
NA.

Research seminar covering topics on the behavioral neurophysiology of the hippocampal formation
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Knierim
Area: NA
NA.

Graduate students only. Permission Required.
Prerequisites: NA
Corequisites: NA
Instructor(s): S. Courtney-Faruqee
Area: NA
NA.

NA
Prerequisites: NA
Corequisites: NA
Instructor(s): S. Courtney-Faruqee
Area: NA
NA.

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

AS.200.849. Teaching Practicum. NA Credit.
All candidates are required to obtain special experience in various aspects of undergraduate teaching. Graduate students only.
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.

AS.200.850. Advanced Teaching Practicum. NA Credit.
NA
Prerequisites: NA
Corequisites: NA
Instructor(s): L. Feigenson
Area: NA
NA.
Cross Listed Courses

Cognitive Science

AS.050.339. Cognitive Development. 3.0 Credits.
This is a survey course in developmental psychology designed for individuals with some basic background in psychology or cognitive science, but little or none in development. The course is strongly theoretically oriented, with emphasis on issues of nature, and development psychology as well as relevant empirical evidence. The principle focus will be early development, i.e., from conception through middle childhood. The course is organized topically, covering biological and prenatal development, perceptual and cognitive development, the nature and development of intelligence, and language learning.
Prerequisites: NA
Corequisites: NA
Instructor(s): J. Yarmolinskaya
Area: Natural Sciences, Social and Behavioral Sciences

AS.050.358. Language & Thought. 3.0 Credits.
Have you ever wondered about the relationships between language and thought? Philosophers, linguists, psychologists, evolutionary theorists and cognitive scientists have too and this course will survey the current thinking on this matter. Classical papers such as those by Whorf and Sapir, more recent philosophical papers by people such as Fodor and Dennett, and recent empirical work by linguists and psycholingists on the relationship between language and thinking in development and in adults will be covered. Discussions will focus on the theoretically possible relationships between language and thought and the empirical data that speak to these. Juniors and seniors only. Freshmen and sophomores by permission of instructor only.
Prerequisites: NA
Corequisites: NA
Instructor(s): B. Landau
Area: Humanities, Natural Sciences, Social and Behavioral Sciences

AS.050.375. Probabilistic Models of the Visual Cortex. 3.0 Credits.
The course gives an introduction to computational models of the mammalian visual cortex. It covers topics in low-, mid-, and high-level vision. It briefly discusses the relevant evidence from anatomy, electrophysiology, imaging (e.g., fMRI), and psychophysics. It concentrates on mathematical modelling of these phenomena taking into account recent progress in probabilistic models of computer vision and developments in machine learning, such as deep networks. Also offered as AS.050.375. Co-listed with Computer Science as EN.601.485.
Prerequisites: NA
Corequisites: NA
Instructor(s): A. Yuille
Area: NA

The course gives an introduction to computational models of the mammalian visual cortex. It covers topics in low-, mid-, and high-level vision. It briefly discusses the relevant evidence from anatomy, electrophysiology, imaging (e.g., fMRI), and psychophysics. It concentrates on mathematical modelling of these phenomena taking into account recent progress in probabilistic models of computer vision and developments in machine learning, such as deep networks. Also offered as AS.050.375. Co-listed with Computer Science as EN.601.485.
Prerequisites: NA
Corequisites: NA
Instructor(s): A. Yuille
Area: NA

Neuroscience

AS.080.304. Neuroscience Learning and Memory. 3.0 Credits.
This course is an advanced survey of the scientific study of learning and memory. Different perspectives will be used to review the science of learning and memory including the cellular-molecular basis of synaptic plasticity, the functional circuitry involved in learning and memory and memory systems in the brain. The course is designed to provide a deep understanding of the issues and current debates in learning and memory research and focuses specifically on animal models of memory and memory impairment. This is an interactive lecture course with a strong emphasis on student participation.
Corequisites: NA
Instructor(s): A. Bakker
Area: Natural Sciences

Behavioral Biology

AS.290.420. Human Sexual Orientation. 3.0 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. Please note that the use of electronic devices is not permitted during this class, in order to promote the full interactive potential of this engaging seminar-style offering. Students may enroll in both AS.200.204 and AS.290.420, but cannot do so in the same semester. Enrollment is limited to Senior Majors & Minors in Behavioral Biology; Biology; Cognitive Science; Medicine; Science & the Humanities; Molecular & Cellular Bio; Neuroscience; Psychology; Public Health; Sociology; Study of Women, Gender, & Sexuality.
Prerequisites: NA
Corequisites: Students may enroll in both AS.200.204 and AS.290.420, but cannot do so in the same semester.
Instructor(s): C. Kraft
Area: Social and Behavioral Sciences

AS.110.106 OR AS.110.108
Corequisites: NA
Instructor(s): A. Yuille
Area: Quantitative and Mathematical Sciences

Corequisites: NA
Instructor(s): A. Bakker
Area: Natural Sciences

AS.290.420. Human Sexual Orientation. 3.0 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. Please note that the use of electronic devices is not permitted during this class, in order to promote the full interactive potential of this engaging seminar-style offering. Students may enroll in both AS.200.204 and AS.290.420, but cannot do so in the same semester. Enrollment is limited to Senior Majors & Minors in Behavioral Biology; Biology; Cognitive Science; Medicine; Science & the Humanities; Molecular & Cellular Bio; Neuroscience; Psychology; Public Health; Sociology; Study of Women, Gender, & Sexuality.
Prerequisites: NA
Corequisites: Students may enroll in both AS.200.204 and AS.290.420, but cannot do so in the same semester.
Instructor(s): C. Kraft
Area: Social and Behavioral Sciences

AS.050.375. Probabilistic Models of the Visual Cortex. 3.0 Credits.
The course gives an introduction to computational models of the mammalian visual cortex. It covers topics in low-, mid-, and high-level vision. It briefly discusses the relevant evidence from anatomy, electrophysiology, imaging (e.g., fMRI), and psychophysics. It concentrates on mathematical modelling of these phenomena taking into account recent progress in probabilistic models of computer vision and developments in machine learning, such as deep networks. Also offered as AS.050.375. Co-listed with Computer Science as EN.601.485.
Prerequisites: NA
Corequisites: NA
Instructor(s): A. Yuille
Area: NA