PSYCHOLOGY (PSYC)

PSYC 001 Introduction to Experimental Psychology
This course provides an introduction to the basic topics of psychology including our three major areas of distribution: the biological basis of behavior, the cognitive basis of behavior, and individual and group bases of behavior. Topics include, but are not limited to, neuropsychology, learning, cognition, development, disorder, personality, and social psychology.
For BA Students: Living World Sector
One-term course offered either term
Activity: Lecture
1.0 Course Unit

PSYC 005 Grit Lab: The Science and Practice of Passion and Perseverance
The aims of Grit Lab are two-fold: (1) equip you with generalizable knowledge about the science of passion and perseverance (2) to help you apply these insights to your own life. At the heart of this course are cutting-edge scientific discoveries about how to foster passion and perseverance for long-term goals. As in any undergraduate course, you will have an opportunity to learn from current research. But unlike most courses, Grit Lab encourages you to apply these ideas to your own life and reflect on your experience.
Taught by: Duckworth
Course usually offered in fall term
Also Offered As: OIDD 005
Activity: Lecture
1.0 Course Unit
Notes: There are no prerequisites to Grit Lab, and it is open to all enrolled undergraduate students. However, admittance does require completing an online, written application, which must be completed by the end of the day on December 2, 2020. Use the link after “Additional Course Information.” Since enrollment is by application only, accepted applicants will be administratively registered. No need to submit and advance request.

PSYC 006 The Pursuit of Happiness
What is happiness? Can it be successfully pursued? If so, what are the best ways of doing so? This interactive course will consider various ways of answering these questions by exploring theoretical, scientific, and practical perspectives on flourishing, thriving, and wellness. We will discuss approaches to happiness from the humanities and the sciences and then try them out to see how they might help us increase our own well-being and that of the communities in which we live.
Taught by: Pawelski
Course usually offered in fall term
Activity: Lecture
1.0 Course Unit

PSYC 097 Psych Abroad
Psych Abroad
Taught by: TBD
One-term course offered either term
Activity: Lecture
1.0 Course Unit

PSYC 109 Introduction to Brain and Behavior
Introduction to the structure and function of the vertebrate nervous system, including the physiological bases of sensory activity, perception, drive, motor control and higher mental processes. The course is intended for students interested in the neurobiology of behavior. Familiarity with elementary physics and chemistry will be helpful.
For BA Students: Living World Sector
One-term course offered either term
Also Offered As: BIBB 109, BIOL 109
Activity: Lecture
1.0 Course Unit

PSYC 111 Perception
How the individual acquires and is guided by knowledge about objects and events in their environment.
Taught by: Burge
Course usually offered in fall term
Also Offered As: VLST 211
Activity: Lecture
1.0 Course Unit

PSYC 127 Physiology of Motivated Behaviors
This course focuses on evaluating the experiments that have sought to establish links between brain structure (the activity of specific brain circuits) and behavioral function (the control of particular motivated and emotional behaviors). Students are exposed to concepts from regulatory physiology, systems neuroscience, pharmacology, and endocrinology and read textbook as well as original source materials. The course focuses on the following behaviors: feeding, sex, fear, anxiety, the appetite for salt, and food aversion. The course also considers the neurochemical control of responses with an eye towards evaluating the development of drug treatments for: obesity, anorexia/cachexia, vomiting, sexual dysfunction, anxiety disorders, and depression.
Taught by: Grill
One-term course offered either term
Also Offered As: BIBB 227
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

PSYC 149 Cognitive Neuroscience
The study of the neural systems that underlie human perception, memory and language; and of the pathological syndromes that result from damage to these systems.
For BA Students: Natural Science and Math Sector
Taught by: Epstein or Mackey or Arcaro
One-term course offered either term
Also Offered As: BIBB 249
Prerequisite: PSYC 001 OR COGS 001 OR PSYC 109
Activity: Lecture
1.0 Course Unit
PSYC 151 Language and Thought
This course describes current theorizing on how the human mind achieves high-level cognitive processes such as using language, thinking, and reasoning. The course discusses issues such as whether the language ability is unique to humans, whether there is a critical period to the acquisition of a language, the nature of conceptual knowledge, how people perform deductive reasoning and induction, and how linguistic and conceptual knowledge interact.
Taught by: Trueswell
One-term course offered either term
Also Offered As: LING 151
Prerequisite: PSYC 001 OR PSYC 207 OR COGS 001 OR LING 105
Activity: Lecture
1.0 Course Unit

PSYC 159 Memory
This course presents an integrative treatment of the cognitive and neural processes involved in learning and memory, primarily in humans. We will survey the major findings and theories on how the brain gives rise to different kinds of memory, considering evidence from behavioral experiments, neuroscientific experiments, and computational models.
Taught by: Schapiro
Also Offered As: BIBB 159
Activity: Lecture
1.0 Course Unit

PSYC 160 Personality and Individual Differences
This course provides an introduction to the psychology of personality and individual differences. Many psychology courses focus on the mind or brain; in contrast to those approaches of studying people in general, the focus in this course is on the question "How are people different from each other?" It will highlight research that take a multidimensional approach to individual differences and attempts to integrate across the biological, cognitive-experimental, and social-cultural influences on personality.
One-term course offered either term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

PSYC 162 Abnormal Psychology
The concepts of normality, abnormality, and psychopathology; symptom syndromes; theory and research in psychopathology and psychotherapy.
Taught by: Ruscio
One-term course offered either term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

PSYC 170 Social Psychology
An overview of theories and research across the range of social behavior from intra-individual to the group level including the effects of culture, social environment, and groups on social interaction.
For BA Students: Society Sector
One-term course offered either term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

PSYC 181 Intro to Developmental Psychology
The goal of this course is to introduce both Psychology majors and non-majors majors to the field of Developmental Psychology. Developmental Psychology is a diverse field that studies the changes that occur with age and experience and how we can explain these changes. The field encompasses changes in physical growth, perceptual systems, cognitive systems, social interactions and much more. We will study the development of perception, cognition, language, academic achievement, emotion regulation, personality, moral reasoning, and attachment. We will review theories of development and ask how these theories explain experimental findings. While the focus is on human development, when relevant, research with animals will be used as a basis for comparison.
Taught by: Brannon
One-term course offered either term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

PSYC 207 Introduction to Cognitive Science
How do minds work? This course surveys a wide range of answers to this question from disciplines ranging from philosophy to neuroscience. The course devotes special attention to the use of simple computational and mathematical models. Topics include perception, learning, memory, decision making, emotion and consciousness. The course shows how the different views from the parent disciplines interact and identifies some common themes among the theories that have been proposed. The course pays particular attention to the distinctive role of computation in such theories and provides an introduction to some of the main directions of current research in the field. It is a requirement for the BA in Cognitive Science, the BAS in Computer and Cognitive Science, and the minor in Cognitive Science, and it is recommended for students taking the dual degree in Computer and Cognitive Science.
For BA Students: Natural Science and Math Sector
Course usually offered in fall term
Also Offered As: CIS 140, COGS 001, LING 105, PHIL 044
Activity: Lecture
1.0 Course Unit
Notes: This counts as a Formal Reasoning course for College students.

PSYC 210 Functional Neuroanatomy Laboratory
A laboratory course designed to familiarize the student with the fundamental gross and histological organization of the brain. The mammalian brain will be dissected and its microscopic anatomy examined using standard slide sets. Comparative brain material will be introduced, where appropriate, to demonstrate basic structural-functional correlations.
Taught by: McLean
One-term course offered either term
Also Offered As: BIBB 310
Prerequisite: BIBB 109
Activity: Laboratory
1.0 Course Unit
PSYC 215 Data Science for studying Language and the Mind
Data Science for studying Language and the Mind is an entry-level course designed to teach basic principles of data science to students with little or no background in statistics or computer science. Students will learn to identify patterns in data using visualizations and descriptive statistics; make predictions from data using machine learning and optimization; and quantify the certainty of their predictions using statistical models. This course aims to help students build a foundation of critical thinking and computational skills that will allow them to work with data in all fields related to the study of the mind (e.g. linguistics, psychology, philosophy, cognitive science).
For BA Students: Natural Science and Math Sector
Taught by: Kane
Course usually offered in fall term
Also Offered As: LING 172
Activity: Lecture
1.0 Course Unit

PSYC 217 Visual Neuroscience
An introduction to the scientific study of vision, with an emphasis on the biological substrate and its relation to behavior. Topics will typically include physiological optics, transduction of light, visual thresholds, color vision, anatomy and physiology of the visual pathways, and the cognitive neuroscience of vision.
Taught by: Stocker
Course usually offered in spring term
Also Offered As: BIBB 217, VLST 217
Prerequisite: BIBB 109 or PSYC 149
Activity: Lecture
1.0 Course Unit

PSYC 225 Drugs, Brain, and Mind
The course will begin with a review of basic concepts in pharmacology including: routes of drug administration, drug metabolism, the dose response curve, tolerance and sensitization. Following a brief overview of cellular foundations of neuropharmacology (neuronal biology, synaptic and receptor function), the course will focus on several neurotransmitter systems and the molecular and behavioral mechanisms mediating the mind-altering, addictive and neuropsychiatric disorders, including depression, schizophrenia, and anxiety with an emphasis on their underlying neurobiological causes, as well as the pharmacological approaches for treatment.
For BA Students: Natural Science and Math Sector
Taught by: Kane
Course usually offered in fall term
Also Offered As: BIBB 270
Prerequisite: BIBB 109 OR PSYC 109
Activity: Lecture
1.0 Course Unit

PSYC 231 Evolution of Behavior: Animal Behavior
The evolution of behavior in animals will be explored using basic genetic and evolutionary principles. Lectures will highlight behavioral principles using a wide range of animal species, both vertebrate and invertebrate. Examples of behavior include the complex economic decisions related to foraging, migratory birds using geomagnetic fields to find breeding grounds, and the decision individuals make to live in groups. Group living has led to the evolution of social behavior and much of the course will focus on group formation, cooperation among kin, mating systems, territoriality and communication.
Taught by: Marc Schmidt and Yun Ding
Course usually offered in fall term
Also Offered As: BIBB 231, BIOL 231
Prerequisite: BIOL 102 OR BIOL 121
Activity: Lecture
1.0 Course Unit

PSYC 233 Neuroethology
In course, students will learn how neurobiologists study the relationship between neural circuitry and behavior. Behaviors such as bat echolocation, birdsong, insect olfaction, spatial navigation, eye movement and others will be used to explore fundamental principles of brain function that include brain oscillations, population codes, efference copy, sensorimotor maps and sleep replay. The course will also discuss the various methodologies that are used to address these questions. The reading material will be derived mostly from the primary literature.
Taught by: McLean
Course usually offered in spring term
Also Offered As: BIBB 233
Prerequisite: BIBB 109
Activity: Lecture
1.0 Course Unit

PSYC 235 Psychology of Language
This course describes the nature of human language, how it is used to speak and comprehend, and how it is learned. The course raises and discusses issues such as whether language ability is innate and unique to humans, whether there is a critical period for the acquisition of a language, and how linguistic and conceptual knowledge interact.
Taught by: Dahan
One-term course offered either term
Prerequisite: PSYC 151 OR LING 001
Activity: Lecture
1.0 Course Unit

PSYC 239 Neuroendocrinology
This course is designed to examine the various roles played by the nervous and endocrine systems in controlling both physiological processes and behavior. First, the course will build a foundation in the concepts of neural and endocrine system function. Then, we will discuss how these mechanisms form the biological underpinnings of various behaviors and their relevant physiological correlates. We will focus on sexual and parental behaviors, stress, metabolism, neuroendocrine-immune interactions, and mental health.
Taught by: Flanagan-Cato
One-term course offered either term
Also Offered As: BIBB 260
Prerequisite: BIBB 109
Activity: Lecture
1.0 Course Unit
**PSYC 247 Neuroscience and Society**
Cognitive, social, and affective neuroscience have made tremendous progress in the last two decades. As this progress continues, neuroscience is becoming increasingly relevant to all of the real-world endeavors that require understanding, predicting, and changing human behavior. In this course we will examine the ways in which neuroscience is being applied in law, criminal justice, national defense, education, economics, business, and other sectors of society. For each application area we will briefly review those aspects of neuroscience that are most relevant, and then study the application in more detail.
Taught by: Thompson-Schill
One-term course offered either term
Prerequisite: PSYC 109 OR PSYC 149 OR PSYC 159
Activity: Lecture
1.0 Course Unit

**PSYC 253 Judgment and Decisions**
Thinking, judgment, and personal and societal decision making, with emphasis on fallacies and biases. Prerequisite: One semester of Statistics or Microeconomics.
One-term course offered either term
Also Offered As: PPE 153
Activity: Lecture
1.0 Course Unit

**PSYC 265 Behavioral Economics and Psychology**
Our understanding of markets, governments, and societies rests on our understanding of choice behavior, and the psychological forces that govern it. This course will introduce you to the study of choice, and will examine in detail what we know about how people make choices, and how we can influence these choices. It will utilize insights from psychology and economics, and will apply these insights to domains including risky decision making, intertemporal decision making, and social decision making.
Taught by: Bhatia
Course usually offered in fall term
Also Offered As: PPE 313
Prerequisite: ECON 001
Activity: Lecture
1.0 Course Unit

**PSYC 266 Introduction to Positive Psychology (SNF Paideia Program course)**
An introduction to the study of positive emotions, positive character traits, and positive institutions. The positive emotions consist of emotions about the past (e.g., serenity, satisfaction, pride), about the future (e.g., hope, optimism, faith), and emotions about the present (pleasure and gratification). The distinction among the pleasant life, the good life, and the meaningful life is drawn. The positive traits include wisdom, courage, humanity, justice, temperance, and spirituality, and the classification of these virtues is explored. The positive institutions are exemplified by extended families, free press, humane leadership, and representative government.
Taught by: Connolly
Course usually offered in spring term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

**PSYC 272 Evolutionary Psychology**
This course introduces the field of evolutionary psychology, which is an approach to the study of human behavior. We will consider the theoretical underpinnings of the field, including evolutionary theory, development, kinship, and adaptations for social life, and will sample some of the recent empirical contributions to this growing area.
One-term course offered either term
Prerequisite: PSYC 001
Activity: Lecture
1.0 Course Unit

**PSYC 273 Neuroeconomics**
This course will introduce students to neuroeconomics, a field of research that combines economics, psychological, and neuroscientific approaches to study decision-making. The course will focus on our current understanding of how our brains give rise to decisions, and how this knowledge might be used to constrain or advance economic and psychological theories of decision-making. Topics covered will include how individuals make decisions under conditions of uncertainty, how groups of individuals decide to cooperate or compete, and how decisions are shaped by social context, memories, and past experience.
Taught by: Kable
Also Offered As: BIBB 273
Prerequisite: PSYC 001 OR COGS 001 OR PSYC 109 OR ECON 001
Activity: Lecture
1.0 Course Unit

**PSYC 275 Introduction to Political Psychology**
This course will explore psychological approaches to understanding political beliefs, attitudes, and actions at the levels of both individual citizens and national leaders. It will also explore the possibility that psychological science itself is not immune to the political debates swirling around it. Specific topics will include: the workings of belief systems (and their power to shape what we "see"), cognitive biases (and their power to cause miscalculations), sacred values and their role in stabilizing belief systems and social interaction, personality and ideology (the linkages between the personal and the political), and clashing conceptions of morality and distributive and corrective justice (striking variations among people in what they consider to be fair). We shall also explore some topics that have sparked controversy in the psychological research literature and that tend to polarize opinion along political lines, including work on intelligence and unconscious bias. Prerequisite: Note: Students who are more interested in business-related issues may want Wharton 276x which is a modified version of this course specifically for Wharton undergraduates.
Taught by: Tetlock
One-term course offered either term
Also Offered As: PPE 275
Prerequisite: PSYC 001 OR COGS 001
Activity: Lecture
1.0 Course Unit
Notes: NOTE: Students who are more interested in business-related issues may want Wharton 276x which is a modified version of this course specifically for Wharton undergraduates.
PSYC 280 Developmental Psychology: Social and Emotional Development
This course will cover theory and research related to the development of attachment, emotional regulation, peer and intimate relationships, personality, moral reasoning, and emotional and behavioral disorders. The course will emphasize the degree to which family, peer, and community contexts influence development from infancy into adulthood. Efforts will be made to integrate biological and environmental accounts of development across the lifespan.
Taught by: Jaffee
Course not offered every year
Prerequisite: PSYC 181
Activity: Lecture
1.0 Course Unit

PSYC 281 Cognitive Development
What infants and young children come to know about the world, and how they learn it. Topics will include changes in children's thinking, perceptual development, language acquisition, and current theories of cognitive development.
Taught by: Swingley
Course not offered every year
Prerequisite: PSYC 181
Activity: Lecture
1.0 Course Unit

PSYC 311 Research Experience in Perception
In this research course, students will begin by first replicating earlier experiments to measure human visual memory capacity. After several class discussions to discuss ideas, each student will design and conduct their own experiment to further investigate visual and/or familiarity memory. Prerequisite: One semester of Statistics, and one of the following: PSYC 111 or 149 or 151 or 217, or permission of instructor.
Taught by: Burge
One-term course offered either term
Also Offered As: VLST 212
Activity: Seminar
1.0 Course Unit
Notes: Dept permission required. Undergraduates only.

PSYC 351 Research Experience in Cognitive Psychology
Students will work in small groups to develop, empirically test, and report on a research question in the field of cognitive psychology. Through this process, students will learn how to conduct and report a psychological study, including the appropriate statistical tests. Class discussions will help students craft their projects, and in-class presentations will provide the opportunity to develop and refine presentation skills. Psychology majors only. Class size is limited to 16 students. Prerequisite: One semester of statistics.
Taught by: Weisberg
One-term course offered either term
Activity: Seminar
1.0 Course Unit
Notes: Dept permission required. Psych majors only.

PSYC 362 Research Experience in Abnormal Psychology
Prerequisite: PSYC 362, 301 is a two-semester course starting in the Fall. Class size limited to 8 students.
Taught by: Dr. Melissa Hunt
Activity: Seminar
1.0 Course Unit

PSYC 370 Research Experience in Social Psychology
In this course students will work in small groups to develop, empirically test, and report on a research question within one of the domains of social psychology. Depending on the nature of the project, students will employ survey, experimental, or observational research methodology, and learn how to conduct and report the appropriate statistical tests with Excel and/or SPSS (typically, correlations, t-tests, ANOVA and ANCOVA, multiple regression, factor analysis, and measures of reliability). Class discussions will help students craft their projects, and in-class presentations will provide the opportunity to develop and refine presentation skills. Psychology majors only. Class size is limited to 12 students. Prerequisite: PSYC 170 and one semester of statistics is required.
Taught by: Royzman
Activity: Seminar
1.0 Course Unit
Notes: Dept permission required. Psychology majors only.

PSYC 380 Research Exp Develop Psy
Activity: Seminar
1.0 Course Unit
PSYC 395 Psychoanalysis and Autobiography
Both psychoanalysis and autobiography are ways of re-telling a life. Psychoanalysis is often called "the talking cure" because, as patients tell the analyst more and more about their lives (their thoughts, dreams, memories, hopes, fears, relationships, jobs, and fantasies), they start to recognize themselves in new ways, and this can help them overcome conflicts, impasses, bad feelings, and even psychiatric illnesses that have kept them from flourishing. Autobiographers do something similar as they remember, re-examine, and re-tell their lives - though one very important difference is that they do so, not privately in a psychoanalyst's office, but publicly in books that anyone may read. This seminar is a comparative exploration of these different ways of a re-telling a life. We'll ask: What sorts of narratives do patients and autobiographers construct? What is the "truth" of such narratives? How complete can they be? What are the potential risks and benefits of re-telling one's life, either (aloud) in psychotherapy or (in writing) in an autobiography? What is the role of the analyst/reader in the construction of such narratives? What are the possibilities and limits of self-analysis? Students will come away from the course with a general understanding of 1) psychoanalytic theory and practice from Freud to the present, 2) the literary genre of autobiography, and 3) the meaning and importance of narrative in all of our lives. Seminar readings will include 1) famous psychoanalytic case-histories and other major works of clinical theory and metapsychology by such authors as Christopher Bollas, Muriel Dimen, Erik Erikson, Sigmund Freud, Kay Redfield Jamison, Deborah Luepnitz, Theodor Reik, and Roy Schafer, and 2) major autobiographical works by such authors as St. Augustine, James Baldwin, Alison Bechdel, Vladimir Nabakov, Friedrich Nietzsche, Annie Rogers, Lauren Slater, and Barbara Taylor. In addition to the required reading and regular participation in seminar discussion, students will write several very short essays, prepare and deliver a brief presentation to the class, and write/produce a hybrid creative-scholarly autobiographical project that will be due at the end of the semester. Like most courses affiliated with the Psychoanalytic Studies Minor, this seminar will be team-taught by a humanities scholar (Prof. Cavitch) and a practicing psychoanalyst (Dr. Moore), who designed the course together. Feel free to contact them if you have any questions about this seminar: cavitch@english.upenn.edu / markmoorephd@icloud.com.
Taught by: Cavitch
Course usually offered in fall term
Also Offered As: COML 397, ENGL 395, GSWS 389
Activity: Seminar
1.0 Course Unit

PSYC 399 Mentored Research
Individual research involving data collection. Students do independent empirical work under the supervision of a faculty member, leading to a written paper. Normally taken in the junior or senior year.
One-term course offered either term
Activity: Independent Study
1.0 Course Unit
Notes: Dept permission required

PSYC 400 Senior Honors Seminar in Psychology
Open to senior honors candidates in psychology. A two-semester sequence supporting the preparation of an honors thesis in psychology. Students will present their work in progress and develop skills in written and oral communication of scientific ideas. Prerequisite: Acceptance into the Honors Program in Psychology.
Taught by: Thompson-Schill
Activity: Seminar
0.5 Course Units
Notes: Dept permission required

PSYC 421 Neurobiology of Learning and Memory
This course focuses on the current state of our knowledge about the neurobiological basis of learning and memory. A combination of lectures and students seminars will explore the molecular and cellular basis of learning invertebrates and vertebrates from a behavioral and neural perspective.
Taught by: Gerstein
Course usually offered in fall term
Also Offered As: BIBB 442, BIOL 442, NGG 575
Prerequisite: BIBB 251 OR BIOL 251
Activity: Seminar
1.0 Course Unit

PSYC 429 Seminar in Sleep and Memory
Why do we sleep? This question has puzzled scientists for centuries, but one reason emerging from research in the area is that sleep is critical for forming, retaining, and transforming our memories. This seminar explores human and animal research in psychology and neuroscience that has shed light on how sleep carries out these functions. Topics will include the different stages of sleep and their roles in memory consolidation, the neural systems involved in representing memory at different timescales, and the role of dreams in processing memories.
Taught by: Schapiro
Course usually offered in spring term
Also Offered As: BIBB 429
Prerequisite: PSYC 159 or PSYC 149 or PSYC 109
Activity: Seminar
1.0 Course Unit

PSYC 434 Computational Neuroscience Lab
This course will focus on computational neuroscience from the combined perspective of data collection, data analysis, and computational modeling. These issues will be explored through lectures as well as Matlab-based tutorials and exercises. The course requires no prior knowledge of computer programming and a limited math background, but familiarity with some basic statistical concepts will be assumed. The course is an ideal preparation for students interested in participating in a more independent research experience in one of the labs on campus. For the Spring 2019 semester, the course will focus on the topic of visual memory.
Taught by: Nicole Rust
Course usually offered in spring term
Also Offered As: BIBB 334
Prerequisite: BIBB 109
Activity: Laboratory
1.0 Course Unit

PSYC 435 Psycholinguistics
Taught by: Dahan
Prerequisite: PSYC 151 OR PSYC 235 OR LING 001
Activity: Seminar
1.0 Course Unit
PSYC 439 Neuroendocrinology Seminar
This course is designed to examine the various roles played by the nervous and endocrine systems in controlling both physiological processes and behavior. First, the course will build a foundation in the concepts of neural and endocrine system function. Then, we will discuss how these mechanisms form the biological underpinnings of various behaviors and their relevant physiological correlates. We will focus on sexual and parental behaviors, stress, metabolism, neuroendocrine-immune interactions, and mental health.
Taught by: Flangan-Cato
One-term course offered either term
Also Offered As: BIBB 460
Prerequisite: PSYC 109
Activity: Seminar
1.0 Course Unit

PSYC 440 Sleep and Sleep Disorders
This class will provide an introduction to sleep and sleep disorders, focusing on current research in the field. Students will learn about the neurobiology of sleep/wake regulation, the relationship between sleep and memory and how sleep is related to physical and mental health. Sleep disorders, including sleep apnea, insomnia, and narcolepsy will be covered in terms of pathophysiology, assessment and treatment.
Taught by: Gehrmann
Course usually offered summer term only
Prerequisite: PSYC 001
Activity: Online Course
1.0 Course Unit

PSYC 447 Neurological Insights into Cognition and Behavior
Our modern understanding of the brain began with very humble foundations. Long before transgenic mice, MRI scans, and neuronal recordings, most knowledge about brain function was based on clinical observations of human patients with neurological lesions. This advanced seminar will focus on the cognitive neuroscience of perception, emotion, language, and behavior – through the unique perspective of real-life patients – to illustrate fundamental concepts of brain function. Tuesday classes will explore different cognitive neuroscience topics through student presentations and discussion. Thursday classes will involve observing medical history taking and examination of a patient with cognitive deficits pertinent to the Tuesday topic, with opportunity for students to interact with the patient. Pre-requisites: Instructor permission required and PSYC 109 OR PSYC 149 OR PSYC 159
Taught by: Gottfried
Course usually offered in spring term
Prerequisite: PSYC 109 OR PSYC 149 OR PSYC 159
Activity: Seminar
1.0 Course Unit
Notes: Juniors and Seniors only. Permission of instructor required. Must submit a statement (up to 300 words) describing your interest in taking this seminar.

PSYC 449 Seminar in Cognitive Neuroscience
Topics vary each semester.
Taught by: Thompson-Schill or Mackey
Prerequisite: PSYC 001
Activity: Seminar
1.0 Course Unit

PSYC 453 Seminar in Decision Making: Judgment and Decisions
This seminar will be a series of engaging discussions on a variety of topics that are important to the field of behavioral decision theory. We'll cover issues such as constructed preferences, loss aversion, nudging, emotions, well-being, other-oriented decisions, intuitive predictions, unethical choices, and more. Students will be asked to present papers and generate ideas for potential research projects each week. Grades will be based on class contributions and a paper that is either a literature review or a careful and detailed proposal for a research project.
Taught by: Mellors
One-term course offered either term
Prerequisite: PSYC 253 OR PSYC 265
Activity: Seminar
1.0 Course Unit
Notes: Undergraduates only.

PSYC 462 Seminar in Abnormal Psychology
Topics vary each semester.
Prerequisite: PSYC 162
Activity: Seminar
1.0 Course Unit
Notes: Undergraduates only. 462-601 is an LPS course.

PSYC 466 Seminar in Positive Psychology
This intensive, discussion-based seminar focuses on the key research that has shaped Positive Psychology. This seminar will equip students with useful insight and critical analysis about Positive Psychology by emphasizing scientific literacy. The workload for this seminar requires intensive reading. To excel in this seminar, students must be willing to enthusiastically read, dissect, and critique ideas within Positive Psychology. This requires students to articulate various ideas in verbal and written form.
Taught by: Connolly
Course not offered every year
Activity: Seminar
1.0 Course Unit

PSYC 470 Seminar in Social Psychology
Topics vary each semester.
One-term course offered either term
Prerequisite: PSYC 170
Activity: Seminar
1.0 Course Unit
Notes: Undergraduates only.

PSYC 472 Behavioral Biology of Women
A course that explores female behavior focusing on evolutionary, physiological, and biosocial aspects of women's lives from puberty, through reproductive processes such as pregnancy, birth, lactation to menopause and old age. Examples are drawn from traditional and modern societies and data from nonhuman primates are also considered.
Taught by: Apicella
One-term course offered either term
Prerequisite: PSYC 272 OR BIOL 102 OR ANTH 104 OR ANTH 143
Activity: Seminar
1.0 Course Unit
**PSYC 473 Neuroeconomics**
This course will review recent research that combines psychological, economic and neuroscientific approaches to study human and animal decision-making. A particular focus will be on how evidence about the neural processes associated with choices might be used to constrain economic and psychological theories of decision-making. Topics covered will include decisions involving risk and uncertainty, reinforcement learning, strategic interactions and games, and social preferences.

Taught by: Joseph Kable
One-term course offered either term
Also Offered As: BIBB 473, NGG 706
Prerequisite: PSYC 149 OR PSYC 253 OR PSYC 265
Activity: Seminar
1.0 Course Unit

**PSYC 474 PSYC 474-301: Being Human; PSYC 474-601: Cultural Psychology**
Prerequisite: Undergraduates only. PSYC 474 and 601 are LPS courses.
Taught by: Platt (PSYC 474-301), Abiola (PSYC 474-601)
Prerequisite: PSYC 001
Activity: Seminar
1.0 Course Unit

**PSYC 478 Capstone: Social Psychology**
Social psychology explores how an individual's judgements and behaviors can be influenced or determined by others and their social context. Prerequisite: As a PPE Capstone, this is an integrative senior seminar (open to others by departmental permission).
Taught by: Royzman
Course not offered every year
Also Offered As: PPE 477
Activity: Seminar
1.0 Course Unit

**PSYC 479 Neural Systems and Behavior**
This advanced course will investigate neural processing at the systems level. Principles of how brains encode information will be explored in both sensory (e.g. visual, auditory, olfactory, etc.) and motor systems. Neural encoding strategies will be discussed in relation to the specific behavioral needs of the animal. Examples will be drawn from a variety of different model systems.

Taught by: Medina/Schmidt
Course usually offered in spring term
Also Offered As: BIBB 479, BIOL 451
Prerequisite: BIOL 251 OR BIBB 251
Activity: Lecture
1.0 Course Unit

**PSYC 480 Seminar in Developmental Psychology**
PSYC 480-301 (Brannon): The field of educational neuroscience is an emerging field with the goal of joining knowledge gained from the disciplines of neuroscience, cognitive science, developmental psychology, and education. This interdisciplinary course will focus on how scientific exploration of the mind and brain can inform educational practices.
PSYC 480-302 (Connolly): This advanced discussion-based seminar will focus on approaches to success in domains of modern life such as social living and academia. The first portion of this seminar will be a psychology book club where we read various books written by psychology researchers. This will contribute to an ongoing discussion about scientific communication, and the presentation of psychological research to various audiences. From there, students will focus on a specific area of interest, and write a literature review based on contemporary empirical research critiquing their given topic. Students must understand the workload for this seminar requires intensive reading culminating in a large written assignment.

Taught by: Weisberg, Brannon, or Connolly
Prerequisite: PSYC 001
Activity: Seminar
1.0 Course Unit

Notes: Undergraduates only.

**PSYC 482 Inside the Criminal Mind**
This seminar explores the development of antisocial behavior including psychopathy, aggression, and violence. At its core, this course examines what increases the risk that children will develop behavior problems and go onto more chronic and extreme forms of violence and psychopathic personality that results in harm to others. We will examine psychiatric diagnoses associated with these antisocial behaviors in both childhood and adulthood and how they link to other relevant forms of psychopathology (e.g., substance use, ADHD). We will explore research elucidating the neural correlates of these behaviors, potential genetic mechanisms underlying these behaviors, and the environments that increase risk for these behaviors. Thus, there will be a focus on neurobiology and genetics approaches to psychiatric outcomes, as well as a social science approach to understanding these harmful behaviors, all while considering development across time. We will also consider ethical and moral implications of this research.

Taught by: Waller
Prerequisite: PSYC 162 AND PSYC 181
Activity: Seminar
1.0 Course Unit

Notes: Undergraduates only.
PSYC 490 The Science of Behavior Change
The objective of this 14-week discussion-based seminar for advanced undergraduates is to expose students to cutting-edge research from psychology and economics on the most effective strategies for changing behavior sustainably and for the better (e.g., promoting healthier eating and exercise, encouraging better study habits, and increasing savings rates). The weekly readings cover classic and current research in this area. The target audience for this course is advanced undergraduate students interested in behavioral science research and particularly those hoping to learn about using social science to change behavior for good. Although there are no pre-requisites for this class, it is well-suited to students who have taken (and enjoyed) courses like OIDD 290: Decision Processes, PPE 203/PSYC 265: Behavioral Economics and Psychology, and MKTG 266: Marketing for Social Impact and are interested in taking a deeper dive into the academic research related to promoting behavior change for good. Instructor permission is required to enroll in this course. Please complete the application if interested in registering for this seminar: http://bit.ly/bcfg-class-2020. The application deadline is July 31, 2020. Prerequisite: Permission of instructor required.
Taught by: Katherine Milkman and Angela Duckworth
One-term course offered either term
Also Offered As: OIDD 490
Activity: Seminar
1.0 Course Unit
Notes: Undergraduates only. Please complete the application form via the link in the "Additional Course Information" above to be considered for admission.

PSYC 492 Social Cognition
Activity: Seminar
1.0 Course Unit

PSYC 511 Prob Models of Perception
Activity: Lecture
1.0 Course Unit

PSYC 521 Judgment & Decisions
Activity: Seminar
1.0 Course Unit

PSYC 525 Controversies in Psychology and Neuroscience
In this seminar, we will discuss several recent controversies in psychology and neuroscience, for example: "p-hacking," replicability, methodological terrorists, neural activity in dead salmon and failures to control the false positive rate in neuroimaging, "voodoo correlations" and double dipping, whether Tic-Tacs can improve self-control and whether reading "old" makes you walk slower. Our goal is not just to engender ennui and/or schadenfreude, but also to ask what we can learn from these discussions about how to do science in the most rigorous, reproducible manner possible.
Activity: Seminar
1.0 Course Unit

PSYC 539 Theoretical and Computational Neuroscience
This course will develop theoretical and computational approaches to structural and functional organization in the brain. The course will cover: (i) the basic biophysics of neural responses, (ii) neural coding and decoding with an emphasis on sensory systems, (iii) approaches to the study of networks of neurons, (iv) models of adaptation, learning and memory, (v) models of decision making, and (vi) ideas that address why the brain is organized the way that it is. The course will be appropriate for advanced undergraduates and beginning graduate students. A knowledge of multi-variable calculus, linear algebra and differential equations is required (except by permission of the instructor). Prior exposure to neuroscience and/or Matlab programming will be helpful.
For BA Students: Natural Science and Math Sector
Taught by: Vijay Balasubramanian
Course usually offered in spring term
Also Offered As: BE 530, BIBB 585, NGG 594, PHYS 585
Activity: Lecture
1.0 Course Unit

PSYC 541 Sleep and Memory
Why do we sleep? This question has puzzled scientists for centuries, but one reason emerging from research in the area is that sleep is critical for forming, retaining, and transforming our memories over time. This seminar explores human and animal research in psychology and neuroscience that has shed light on how sleep carries out these functions. Topics will include the different stages of sleep and their roles in memory consolidation, the neural systems involved in representing memory at different timescales, and the role of dreams in processing memories.
Activity: Seminar
1.0 Course Unit

PSYC 547 Foundations of Social, Cognitive, and Affective Neuroscience
Activity: Lecture
1.0 Course Unit
PSYC 549 A Neuroscience Perspective of Artificial Intelligence
This seminar course asks what would be required to achieve Strong Artificial Intelligence, also referred to as Artificial General Intelligence (AGI), in light of what we know about the emergence of life and mind in the universe. Specifically, we will consider the question whether it is possible for machines to become self-aware by asking what Natural Intelligence is, and considering what it implies about whether and how AGI can be achieved. To grapple with this question, in Part I of the course we will examine what is known about the emergence of Natural Intelligence in the universe. This study includes the phenomena of: (1a) Abiogenesis, (1b) The Universal Role of Entropy and Information in Evolution, (1c) Signal Transduction, intracellular signaling, and Mechanism of Stimulus-Response Coupling in Unicellular Organisms; (2a) The Evolution of the Metazoa during the Cambrian Explosion, (2b) The Consequences of Motility and Predator - Prey Dynamics in the Metazoa for the Evolution of Complex Nervous Systems and Behaviors; (3a) The Implications of Invertebrate Navigation by Dead Reckoning for Understanding Insect Behavior, (3b) Insect Behavior in Relation to Robotics; (4a) Origin of the Vertebrates and the Evolution of the Vertebrate Nervous System, (4b) The Mammalian Neocortex; (5) Molecular Mechanisms of Synaptic Plasticity; (6) The Evolution of the Hominins and the Hominin Brain; (7) Higher-Order Thinking and Epistemology; (8a) Meta-awareness as the Foundation of Human Consciousness, (8b) The Fluidity of Mind Embodiment, (8c) Theories and Philosophy of Human Consciousness. (9a) Other Minds: The Atypical Nervous System of the Ctenophore and The Nervous System and Mind of the Octopus, (9b) Animal intelligence. (10a) The History and Trajectory of AI, (10b) Superintelligence, Human Cognitive Fluidity and the Existence of a Global Network of Human Superintelligence.
Taught by: Di Rocco
Prerequisite: PSYC 109 OR PSYC 149
Activity: Seminar
1.0 Course Unit

PSYC 551 Eye Movements in Perception, Language and Cognition
In this course, we examine how the recording of eye movements can provide a moment-by-moment record of perceptual, cognitive and linguistic processes. Four areas of research will be discussed: (1) task-based scene perception; (2) language processing in both reading and spoken language; (3) category learning, and (4) decision making. In all of these domains, eyetracking research has led to a greater understanding of how attention and information selection supports real-time cognitive processes. Students will have access to eyetracking systems, giving them hands-on experience in designing, running, and analyzing eyetracking experiments. By the end of the semester, students will have collected pilot eyetracking data. Projects will be done individually or within small research teams. Requirements: Weekly readings; class presentations and discussion; and a paper.
Taught by: Trueswell
Course usually offered in fall term
Activity: Hybrid Course
1.0 Course Unit

PSYC 557 Neuroscience, Ethics & Law
How does the neuroscience of human decision-making and emotion impact our understanding of ethics and law? What can neuroscience tell us about why people find actions moral or immoral, worthy of praise or punishment? What, if anything, can it tell us normatively about morality, agency and responsibility? And what other insights might neuroscience offer regarding other morally and legally relevant phenomena such as stereotyping and bias, the causes of antisocial behavior and the detection of deception?
Taught by: Farah
Also Offered As: LAW 557
Activity: Seminar
1.0 Course Unit

PSYC 552 Anxiety Disorders, OCD, and PTSD: Theory, Diagnosis, and Evide
Schizophrenia is the same as "split personality"... or is it? People with mental illness are frequently violent... or are they? "Shock" therapy is barbaric...or is it? The "answers" to these questions as portrayed by the media often reinforce common myths and stereotypes about psychopathology, its treatments, and its treatment providers. These myths can have a tremendous impact on individuals and society. This course was designed to help students develop awareness of popular myths and stereotypes depicted in the media about psychopathology, treatment and providers; the ability to identify and understand the sources and impact of media representations of psychopathology; and knowledge about current empirical research on media depictions of psychopathology and their relationship to stigma. By the end of the course, students should be able to identify the many forms of media in which psychopathology is depicted; recognize common myths; critique the common and specific ways in which particular mental disorders are inaccurately or stereotypically portrayed in the media; evaluate the potential impact of psychopathology depictions on individuals and society; and describe current efforts to assess and reduce the stigmatization of mental health through the media.
Activity: Seminar
1.0 Course Unit

PSYC 573 Seminar in Neuroeconomics
This seminar will review recent research that combines economic, psychological, and neuroscientific approaches to study decision-making. The course will focus on our current state of knowledge regarding the neuroscience of decision-making, and how evidence concerning the neural processes associated with choices might be used to constrain or advance economic and psychological theories of decision-making. Topics covered will include decisions involving risk and uncertainty, decisions that involve learning from experience, decisions in strategic interactions and games, and social preferences.
Taught by: Kable
Course not offered every year
Activity: Seminar
1.0 Course Unit

PSYC 579 Exp Methods Perception
Activity: Lecture
1.0 Course Unit

PSYC 600 Proseminar in General Psychology
Choice of half or full course units each sem. covering a range of subjects and approaches in academic psychology.
One-term course offered either term
Activity: Seminar
1.0 Course Unit
Notes: Dept permission required
PSYC 609 Systems Neuroscience
This course provides an introduction to what is known about how neuronal circuits solve problems for the organism and to current research approaches to this question. Topics include: vision, audition, olfaction, motor systems, plasticity, and oscillations. In addition, the course aims to provide an overview of the structure of the central nervous system. A number of fundamental concepts are also discussed across topics, such as: lateral inhibition, integration, filtering, frames of reference, error signals, adaptation. The course format consists of lectures, discussions, readings of primary literature, supplemented by textbook chapters and review articles.
Taught by: Yale Cohen, Christopher Pierce
Course usually offered in spring term
Also Offered As: NGG 573
Activity: Lecture
1.0 Course Unit
Notes: Fulfills the Brain requirement

PSYC 611 Applied Regression and Analysis of Variance
An applied graduate level course in multiple regression and analysis of variance for students who have completed an undergraduate course in basic statistical methods. Emphasis is on practical methods of data analysis and their interpretation. Covers model building, general linear hypothesis, residual analysis, leverage and influence, one-way anova, two-way anova, factorial anova. Primarily for doctoral students in the managerial, behavioral, social and health sciences. Permission of instructor required to enroll.
Taught by: Rosenbaum
Course usually offered in fall term
Also Offered As: BSTA 550, STAT 500
Activity: Lecture
1.0 Course Unit

PSYC 612 Introduction to Nonparametric Methods and Log-linear Models
An applied graduate level course for students who have completed an undergraduate course in basic statistical methods. Covers two unrelated topics: loglinear and logit models for discrete data and nonparametric methods for nonnormal data. Emphasis is on practical methods of data analysis and their interpretation. Primarily for doctoral students in the managerial, behavioral, social and health sciences. Permission of instructor required to enroll.
Taught by: Rosenbaum
Course usually offered in spring term
Also Offered As: STAT 501
Activity: Lecture
1.0 Course Unit

PSYC 671 Violence: A Clinical Neuroscience Approach
Developed for both Psychology and Criminology graduate students, this interdisciplinary course outlines a clinical neuroscience approach to understanding violence in which the tools of neuroscience-neuroanatomy, neurophysiology, neurocognition, neuroendocrinology, neuropsycharmacology, molecular and behavioral genetics- are used to help inform the etiology and treatment of violence. Clinical components include psychopathy, proactive and reactive aggression, homicide domestic violence, conduct disorder, oppositional defiant disorder, antisocial personality disorder, crime, and delinquency as well as their comorbid conditions (schizophrenia, drug abuse, hyperactivity).
The interaction between social, psychological, and neurobiological processes in predisposing to violence will be highlighted, together with neurodevelopmental perspectives on violence focusing on prospective longitudinal and brain imaging research. Key implications for the criminal justice system, neuroethics, forensics psychology, and intervention will also be outlined.
Taught by: Raine
Course usually offered in fall term
Also Offered As: CRIM 671
Activity: Lecture
1.0 Course Unit
Notes: Graduate students only.

PSYC 675 Language and Cognition
This is a seminar on how language relates to perception and cognition. The seminar pays particular attention to the question of whether and how language might affect (and be affected by) other mental processes, how different languages represent the mental and physical world, and how children acquire language-general and language-specific ways of encoding human experience. The course incorporates cross-linguistic, cognitive and developmental perspectives on a new and rapidly changing research area.
Taught by: Papafragou, Trueswell
Course usually offered in spring term
Also Offered As: LING 675
Activity: Seminar
1.0 Course Unit

PSYC 698 Laboratory Rotation
Lab rotation for psychology grad students.
One-term course offered either term
Activity: Lecture
3.0 Course Units
Notes: Dept permission required. Open only to psychology dept graduate students.

PSYC 699 Individual Research for First-Year Graduate Students
Two terms. student must enter first term.
Activity: Independent Study
3.0 Course Units

PSYC 703 Special Topics in Psychology
One-term course offered either term
Activity: Seminar
1.0 Course Unit
PSYC 704 Research Methods and Statistical Procedures for Social and Clinical Sciences
This course has three primary objectives: 1) developing criteria and strategies for strong inference of causal relationships in social and clinical psychology research; 2) examining the array of research designs employed in the social/clinical sciences together with the threats to internal and external validity associated with each; 3) learning and applying statistical analytical methods appropriate for questions in the social/clinical sciences. The course will employ a seminar format and a project-oriented approach to learning. Students will be encouraged to utilize examples from their own research programs in applying the design and analysis concepts covered in the course.
One-term course offered either term
Activity: Seminar
1.0 Course Unit

PSYC 705 Neuroethics
Neuroscience is increasingly affecting all aspects of human life, from the relatively familiar medical applications in neurology and psychiatry, to new applications in education, business, law, and the military. Today's neuroscience graduate students will be among the scientists, citizens, and policymakers who will lead society through the maze of decisions regarding the appropriate uses of neuroscience. This course provides a survey of the key ethical, legal, and social issues at the intersection of neuroscience and society. It will include a combination of traditional classroom lectures, discussion and debates, as well as an online component coordinated with a course at Wisconsin's Neuroscience and Public Policy graduate program.
Taught by: Farah
One-term course offered either term
Activity: Seminar
1.0 Course Unit
Notes: Dept permission required.

PSYC 709 Special Topics in Clinical Psychology
A developmental approach to the study of psychopathology focuses on how psychological processes from normal to abnormal developmental trajectories. In this seminar we will cover theory, methods, and key constructs in the study of developmental psychopathology. Readings will include seminal empirical papers and chapters.
One-term course offered either term
Activity: Seminar
1.0 Course Unit
Notes: Graduate students only.

PSYC 711 Basic Problems in Developmental II
One-term course offered either term
Activity: Seminar
1.0 Course Unit

PSYC 712 Regression & Anova II
One-term course offered either term
Activity: Seminar
1.0 Course Unit

PSYC 744 Brain Development & Society
Activity: Seminar
1.0 Course Unit

PSYC 745 Special Topics in Cognitive Neuroscience
One-term course offered either term
Activity: Seminar
1.0 Course Unit

PSYC 747 Contemporary Research Issues in Social, Cognitive and Affective Neuroscience
Activity: Seminar
1.0 Course Unit

PSYC 810 Psychodiagnostic Testing
Course usually offered in fall term
Activity: Seminar
1.0 Course Unit

PSYC 811 Psychodiagnostic Interviewing
Course usually offered in fall term
Activity: Seminar
1.0 Course Unit

PSYC 815 Introductory Practicum
Course usually offered in spring term
Activity: Seminar
1.0 Course Unit

PSYC 820 Advanced Practicum
Intensive studies of single individuals including interviews, tests, and experiments; also clinical experience at appropriate community agencies.
One-term course offered either term
Activity: Seminar
1.0 Course Unit

PSYC 999 Individual Study and Research
One-term course offered either term
Activity: Independent Study
0.5 Course Units