

Psychological & Brain Sciences

Psychological & Brain Sciences allows students to examine, in depth, the study of behavior in the following areas:

- Aging and development
- Biological bases of behavior
- Clinical and psychopathology
- Cognition
- Cognitive neuroscience
- Learning and memory
- Personality
- Sensation and perception
- Social interactions

The Department of Psychological & Brain Sciences at Washington University has particular strengths in the following areas:

- Aging
- Behavioral economics
- Human development
- Diversity science
- Cognitive neuroscience
- Emotion
- Judgment and decision-making
- Learning and operant conditioning
- Neuropsychology
- Personality and individual differences
- Adult psychopathology
- Sensory processes in vision and audition
- Social theories of self and social processes
- Human emotion

There are also many opportunities for undergraduates in this department:

- Research involvement with faculty members
- Supervised internships with community service agencies
- Practicum in Applied Behavior Analysis: Autism Spectrum Disorder
- Study abroad
- Concentrations within the major
- Senior honors
- Membership in Psi Chi, the national honor society in psychology

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Faculty

Chair

Jeffrey M. Zacks
Professor
PhD, Stanford University

Associate Chair

Denise P. Head
PhD, University of Memphis

Endowed Professors

Deanna M. Barch
Gregory B. Couch Professor of Psychiatry
PhD, University of Illinois at Urbana-Champaign

John Baugh
Margaret Bush Wilson Professor in Arts & Sciences
PhD, University of Pennsylvania
(African and African-American Studies; Anthropology; Education; English)

Pascal R. Boyer
Luce Professor of Collective and Individual Memory
PhD, University of Paris
(Anthropology)

Henry L. Roediger III
James S. McDonnell Distinguished University Professor
PhD, Yale University

Rebecca A. Treiman
Burke and Elizabeth High Baker Professor of Child Developmental Psychology
PhD, University of Pennsylvania

Professors

Richard A. Abrams
PhD, University of Michigan

Ryan Bogdan
PhD, Harvard University

Todd Braver
PhD, Carnegie Mellon University

Julie M. Bugg
PhD, Colorado State University

Brian D. Carpenter
PhD, Case Western Reserve University

Ian G. Dobbins
PhD, University of California, Davis

Leonard Green
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Lori Markson

PhD, University of Arizona

Mark A. McDaniel

PhD, University of Colorado

Kathleen B. McDermott

PhD, Rice University

Mitchell Sommers

PhD, University of Michigan

Michael J. Strube

PhD, University of Utah

Endowed Associate Professor

Joshua Jackson

Saul and Louise Rosenzweig

Associate Professor of Personality Science

PhD, University of Illinois at Urbana-Champaign

Associate Professors

Andrew Butler

PhD, Washington University

Tammy English

PhD, University of California, Berkeley

Patrick Hill

PhD, University of Notre Dame

Calvin Lai

PhD, University of Virginia

Alan J. Lambert

PhD, University of Illinois at Urbana-Champaign

Renee J. Thompson

PhD, University of Illinois at Urbana-Champaign

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PhD, Northwestern University

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PhD, Princeton University

Seanna Leath

PhD, University of Michigan, Ann Arbor

Zachariah Reagh

PhD, University of California, Irvine

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Emily Willroth

PhD, University of California, Berkeley

Affiliated Faculty

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(Romance Languages and Literatures)

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Robert Carney

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(Psychiatry)

Maurizio Corbetta

MD, University of Pavia

(Neurology)

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PhD, International Academy of Philosophy, Liechtenstein

(Medicine)

Hillary Elfenbein

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(Business)

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PhD, University of Hawaii

(Psychiatry)

Robert Fucetola

PhD, Washington University

(Neurology)

Kirsten Gilbert

PhD, Yale University

(Psychiatry)

Brian Gordon

PhD, University of Illinois

(Radiology)

Jason Hassenstab

PhD, Fordham University

(Neurology)

Andrew Heath

DPhil, Oxford University

(Psychiatry)

Tamara Hershey

PhD, Washington University

(Psychiatry)

Barry Hong

PhD, Saint Louis University
(Psychiatry)

Brett Hyde

PhD, Rutgers University
(Philosophy)

Brenda Kirchhoff

Research Scientist
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(Psychological & Brain Sciences)

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Ilya Monosov

PhD, Brown University
(Neuroscience)

Alvitta Ottley

PhD, Tufts University
(Computer Science and Engineering)

John Pruett

PhD, Washington University
(Psychiatry)

Marcus E. Raichle

MD, University of Washington
(Radiology)

Christopher Rozek

PhD, University of Wisconsin–Madison
(Education)

Lawrence Snyder

MD, PhD, University of Rochester
(Neurobiology)

David Van Essen

PhD, Harvard University
(Anatomy and Neurobiology)

James V. Wertsch

Marshall S. Snow Professor in Arts & Sciences
PhD, University of Chicago
(Anthropology; International and Area Studies; Education)

Denise E. Wilfley

Scott Rudolph University Professor of Psychiatry
PhD, University of Missouri

David Wozniak

PhD, Washington University
(Psychiatry)

Research Professor

Joel Myerson

PhD, Arizona State University

Research Assistant Professor

Alexander Hatoum

PhD, University of Colorado Boulder

Lecturers

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PhD, Washington University

Emily Cohen-Shikora

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Shelly Cooper

PhD, Washington University

Emma Covey Johnson

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(Psychiatry)

Erin Lawton

PhD, Washington University

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PhD, University of California, Los Angeles

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PhD, University of Missouri-Columbia

Professors Emeriti

David A. Balota

PhD, University of South Carolina

Janet M. Duchek

PhD, University of South Carolina

Stanley Finger

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PhD, Washington University

Martha Storandt

PhD, Washington University

Desirée A. White

PhD, Washington University

Majors

The Major in Psychological & Brain Sciences

The field of psychology encompasses a large and diverse area of study that is empirical, theoretical, and practical. As the science concerned with the study of behavior, psychology includes such areas as the biological bases of behavior; brain-behavior interactions; learning; memory; cognition; motivation; emotion; sensation and perception; the study of social interactions, persuasion and attitudes; aging and development; personality; clinical, psychopathology and health psychology; and leisure and work experiences. Psychology is a valuable multipurpose discipline in which to major. It has relevance for those considering careers in law, medicine, the health professions, education, and business. In addition, it provides important skills and knowledge for those who may not be planning additional schooling.

Total units required: 34 units, of which at least 25 must be at the 300 level or above

Required courses:

- Psych 100B Introduction to Psychology is a prerequisite for all upper-level courses (300 level and above). Exemption from Psych 100B Introduction to Psychology is possible in the following circumstances:
 - Completion of an equivalent course transferred from another institution, if approved by the director of undergraduate studies.
 - An Advanced Placement (AP) psychology test score of 5, an International Baccalaureate (IB) score of 6 or 7, or a British A-Level grade of A. (**Note:** The AP, IB, or British A-Level earns an exemption from Psych 100B Introduction to Psychology but no units of credit toward the major.)
- Psych 300 Introduction to Psychological Statistics
 - Math 2200, Math 3200, or DAT 120 may substitute for Psych 300 Introduction to Psychological Statistics but earn no units of credit toward the major. No AP math course can substitute for Psych 300 Introduction to Psychological Statistics.
- Psych 301 Experimental Psychology or Psych 3011 Experimental Psychology

Core requirements: At least one course from each of the following five categories:*

Social/Personality:

Code	Title	Units
Psych 305	Health Psychology	3
Psych 315	Introduction to Social Psychology	3
Psych 353	Psychology of Personality	3
Psych 367	Positive Psychology: The Science of Happiness	3
Psych 395	Prejudice, Stereotyping, & Discrimination	3
Psych 396	Psychological Dynamics of Empathy	3
Psych 4099	Human Evolutionary Psychology	3

Mental Health/Affective:

Code	Title	Units
Psych 3195	Abnormal Child Psychology	3
Psych 354	Psychopathology and Mental Health	3
Psych 3501	Psychotherapy: Introduction to Practice and Research	3
Psych 3645	Understanding Emotions	3
Psych 367	Positive Psychology: The Science of Happiness	3
Psych 4765	Inside the Disordered Brain: Biological Bases of the Major Mental Disorders	3

Biological/Neurological Bases of Behavior:

Code	Title	Units
Psych 330	Sensation and Perception	3
Psych 3401	Biological Psychology	3
Psych 345	Genes, Environment, and Human Behavior	3
Psych 3604	Cognitive Neuroscience	3
Psych 4046	Developmental Neuropsychology (Writing Intensive)	3
Psych 4182	Perception, Thought and Action	3
Psych 4765	Inside the Disordered Brain: Biological Bases of the Major Mental Disorders	3

Behavior and Cognition:

Code	Title	Units
Psych 360	Cognitive Psychology	3
Psych 361	Psychology of Learning	3
Psych 358	Language Acquisition	3
Psych 380	Human Learning and Memory	3
Psych 4099	Human Evolutionary Psychology	3
Psych 433	Psychology of Language	3

Lifespan Development:

Code	Title	Units
Psych 219	The Infant Mind: Sophomore Seminar	3
Psych 321	Developmental Psychology	3
Psych 325	Psychology of Adolescence	3
Psych 326	Introduction to the Psychology of Aging	3

Psych 358	Language Acquisition	3
Psych 4046	Developmental Neuropsychology (Writing Intensive)	3
Psych 427	Social Gerontology	3

* If a course falls into more than one category, it can be used to fulfill only one of those categories (i.e., no double-counting).

Elective courses: An additional 9 units of Psychology & Brain Sciences (P&BS) course work

6-Units Rule: No more than 6 units from the following course types may be used to satisfy the minimum requirements for the P&BS major:

- 100-/200-level courses (other than Psych 100B Introduction to Psychology)
- Psych 333 Independent Study in Psychological & Brain Sciences
- Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences
- Psych 498 Study for Honors and Psych 499 Study for Honors
- Approved School of Continuing & Professional Studies psychology classes
- Approved psychology study abroad courses from a non-psychology study abroad program
- Cross-listed courses not home-based in P&BS
- Approved transfer credits (students transferring from another college should refer to the Transfer Credit section below)

The Major in Psychological & Brain Sciences: Cognitive Neuroscience

How does the brain think? Cognitive neuroscience refers to the scientific study of the linkage between mental functions and the operation of the brain and nervous system. The goal of cognitive neuroscience is to provide an understanding of psychological processes such as attention, memory, thinking, and emotion in terms of physical principles and biological components. At the same time, cognitive neuroscience aims to provide an understanding of the psychological constraints on how the brain functions, computes, and generates behavior. Students who pursue the undergraduate major in cognitive neuroscience will gain a strong foundation in how to study the brain and mind at various levels of analysis, including cellular biology, brain systems, cognitive and affective function, and neural computation. In addition, they will gain an appreciation of the relation between healthy cognitive and brain function and its breakdown in various disease states and disorders. The cognitive neuroscience major provides excellent preparation for a career in health and medical professions, scientific research, computer fields, education, and law.

Total units required: 36-37 units/12 courses (plus prerequisites)

Prerequisites outside of Psychological & Brain Sciences (7 units):

Code	Title	Units
Math 132	Calculus II	3
Biol 2960	Principles of Biology I	4
Total Units		7

Note: Each of these prerequisites has its own prerequisites: Math 132 Calculus II requires Math 131; for Biol 2960 Principles of Biology I, taking Chem 111A and Chem 112A (concurrently) is strongly recommended. These courses are biology and pre-med prerequisites as well, and they are typically completed during a student's first year. They may alternatively be satisfied through AP credit or any other mechanism approved by the respective department or the College. These prerequisites do not earn credit toward the P&BS:CN major.

Core requirements(19 units):

Code	Title	Units
Psych 100B	Introduction to Psychology	3
Psych 300	Introduction to Psychological Statistics	3
Psych 301	Experimental Psychology	4
or Psych 3011	Experimental Psychology	
Psych 3401	Biological Psychology	3
or Psych 344	Principles of the Nervous System	
Psych 360	Cognitive Psychology	3
Psych 3604	Cognitive Neuroscience	3
Total Units		19

Note: The first three requirements (i.e., Psych 100B Introduction to Psychology, Psych 300 Introduction to Psychological Statistics, and Psych 301 Experimental Psychology/Psych 3011 Experimental Psychology) are the same as those for the regular P&BS major. Psych 344 Principles of the Nervous System is home-based in Biology; students should register under the cross-listed Psych L33 course designation, not Biol 3411 Principles of the Nervous System.

Exemption from Psych 100B Introduction to Psychology is possible in the following circumstances:

- Completion of an equivalent course transferred from another institution, if approved by the director of undergraduate studies.
- An AP psychology test score of 5, an IB score of 6 or 7, or a British A-Level grade of A. (**Note:** The AP, IB, or British A-Level earns an exemption from Psych 100B Introduction to Psychology but no units of credit toward the major.)

Math 2200, Math 3200, or DAT 120 may substitute for Psych 300 Introduction to Psychological Statistics but earn no units of credit toward the major. No AP math course can substitute for Psych 300 Introduction to Psychological Statistics.

Additional Biological & Cognitive Distributions (two courses — one each from Distribution A and B lists):

*Distribution A eligible courses:**

Code	Title	Units
Psych 321	Developmental Psychology	3
Psych 330	Sensation and Perception	3
Psych 358	Language Acquisition	3
Psych 361	Psychology of Learning	3
Psych 380	Human Learning and Memory	3
Psych 4099	Human Evolutionary Psychology	3
Psych 4182	Perception, Thought and Action	3
Psych 433	Psychology of Language	3

Distribution B eligible courses:

Code	Title	Units
Psych 345	Genes, Environment, and Human Behavior	3
Biol 3058	Physiological Control Systems	2
Biol 3151	Endocrinology	3
Biol 328	Principles in Human Physiology	4
Biol 3421	Introduction to Neuroethology	3
Biol 3422	Genes, Brains and Behavior	3
Biol 363	The Neuroscience of Movement: You Think, So You Can Dance?	3
Physics 350	Physics of the Brain	3

Computation requirement (one course):*

Code	Title	Units
CSE 131	Introduction to Computer Science	3
Psych 4175	Applied Statistical Analysis with R	3
Psych 4631	Introduction to Computational Cognitive Science	3
Psych 5007	Statistics and Data Analysis in MATLAB	2

With prior approval, another course involving a significant computational/programming component may be substituted.

Capstone/Depth requirement (three courses):*

Capstone/Depth eligible courses:

Code	Title	Units
Psych 4046	Developmental Neuropsychology (Writing Intensive)	3
Psych 4048	Neuropsychology of Dementia	3
Psych 4175	Applied Statistical Analysis with R	3
Psych 4182	Perception, Thought and Action	3
Psych 4413	Advanced Cognitive Neuroscience (Writing Intensive) (or Psych 4412 Advanced Cognitive Neuroscience)	3
Psych 4450	Functional Neuroimaging Methods	3
Psych 4512	Neurobiology of Learning & Memory	3
Psych 4631	Introduction to Computational Cognitive Science	3

Psych 4746	Biological Pathways to Psychopathology: From Genes and the Environment to Brain and Behavior	3
Psych 4765	Inside the Disordered Brain: Biological Bases of the Major Mental Disorders	3
Psych 488	The Cognitive Neuroscience of Film	3
Biol 404	Laboratory of Neurophysiology	4
Biol 4030	Biological Clocks	3
Biol 4580	Principles of Human Anatomy and Development	3
Biol 4582	The Physiology and Biophysics of Consciousness (by approval)	2
Phil 4212	Philosophy of Neuroscience	3

Additional Capstone/Depth eligible courses: With prior approval, FYP 3001 Ampersand: Research in Mind, Brain, Behavior (two consecutive semesters must be completed) or Psych 333 (all 3 units must be completed in one semester and in one lab to be considered for approval) can satisfy up to 3 units of the Capstone/Depth requirement.

The Honors Program in Psychology (Psych 498/Psych 499; 3 units total) and Psych 444B (3 units) can satisfy up to 6 units of the Capstone/Depth requirement.

In total, no more than 6 units of the above may be applied to the Capstone/Depth requirement.

* If a course falls into more than one category, it can be used to fulfill only one of those categories (i.e., no double-counting).

Acceptance into the Psychological & Brain Sciences: Cognitive Neuroscience Major

Acceptance into the major is contingent upon an application and then approval by the major committee. As part of this application, the student will meet with an appropriate advisor who will carefully review the requirements and oversee the student's progress. A brief, one-page statement from the student about why they feel the cognitive neuroscience major is appropriate for them will be requested as part of the application.

Washington University students will be considered for admission to the cognitive neuroscience major no sooner than during their third semester (sophomore year). Decisions are based on the student's statement and academic record as well as the interview with the major advisor.

Additional Information

Transfer Credit: If accepted by the College of Arts & Sciences, transfer credits will be evaluated by the director of undergraduate studies in the P&BS department for their applicability toward either major in P&BS.

Senior Honors Program in Psychological & Brain Sciences

Senior Honors: The primary goal of the honors program in P&BS is to provide students who have achieved a superior academic record with the opportunity to conduct a comprehensive empirical investigation under the direction of a faculty member.

To be admitted into the honors program, students must meet the following requirements:

- Have overall and P&BS grade point averages of at least 3.65
- Complete both Psych 300 and Psych 301 (or Psych 3011)
- Have an approved honors research advisor

Concentrations in Psychological & Brain Sciences

To augment either of the P&BS majors, the department offers concentrations for students who wish to engage more intensively with a specific area within the discipline. A concentration is meant as an enrichment of the major, and students can pursue one of our six concentrations in psychology.

A concentration requires 12 units, which include required and elective courses (one of which must be at the 400 level) and an approved research assistantship (Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences) or an approved internship, practicum, or honors thesis.

A concentration will be a valuable experience for students planning on graduate study in psychology or related fields or for those who have a particular interest or want to gain expertise in one of the approved concentrations. Each concentration will have a member of the faculty as the contact person who will meet with and advise students in the concentration.

Courses taken for a concentration may be used to fulfill no more than one of the core categories or distribution requirements of a P&BS major. No more than 3 units of course work taken for a concentration may be applied to the P&BS major. None of the units for a concentration can be counted for any other major or minor (i.e., there is no double-counting). For students pursuing the cognitive neuroscience major, the cognitive neuroscience concentration is not an option.

The Six Concentrations Cognition in Children

This concentration allows students to acquire deeper knowledge of cognitive and social-cognitive processes that occur during infancy and early childhood. The courses for this concentration consider child development more generally and then explore in more depth the development of cognitive, conceptual, linguistic, and social abilities.

Advisor/coordinator: Professor Lori Markson

Course work required:

Code	Title	Units
Psych 321	Developmental Psychology	3

Electives (must include two courses, at least one of which is at the 400 level):

Code	Title	Units
Psych 219	The Infant Mind: Sophomore Seminar	3
Psych 358	Language Acquisition	3
Psych 4046	Developmental Neuropsychology (Writing Intensive)	3
Psych 4099	Human Evolutionary Psychology	3
Psych 4591 or Psych 4592	The Development of Social Cognition Development of Social Cognition (Writing Intensive)	3

Research mentorship: Prior approved research mentorship with a relevant faculty member and successful completion of a research paper (i.e., Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences or Psych 498 Study for Honors/Psych 499 Study for Honors)

Relevant faculty: Lori Markson and Rebecca Treiman (other potential faculty mentors may be approved)

Cognitive Neuroscience

This concentration allows students to acquire deeper knowledge of the relation between mind and brain. The courses for the concentration consider the neurobiological basis of psychological function at a more general level and then explore, in greater depth, specialized topics related to how higher cognitive processes (e.g., memory, attention, perception, emotion) emerge from brain function.

Advisor/coordinator: Professor Todd Braver

Course work required:

Code	Title	Units
Psych 3604	Cognitive Neuroscience	3

Electives (must include two courses, at least one of which is at the 400 level):

Code	Title	Units
Psych 330	Sensation and Perception	3
Psych 3401	Biological Psychology	3
Psych 345	Genes, Environment, and Human Behavior	3
Psych 4046	Developmental Neuropsychology (Writing Intensive)	3
Psych 4048	Neuropsychology of Dementia (Neuropsychology of Dementia)	3
Psych 4182	Perception, Thought and Action	3
Psych 4413	Advanced Cognitive Neuroscience (Writing Intensive) (or Psych 4412 Advanced Cognitive Neuroscience)	3
Psych 4450	Functional Neuroimaging Methods	3

Psych 4746	Biological Pathways to Psychopathology: From Genes and the Environment to Brain and Behavior (Biological Pathways to Psychopathology)	3
Psych 4765	Inside the Disordered Brain: Biological Bases of the Major Mental Disorders (Inside the Disordered Brain)	3
Psych 488	The Cognitive Neuroscience of Film	3

Research mentorship: Prior approved research mentorship with a relevant faculty member and successful completion of a research paper (i.e., Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences or Psych 498 Study for Honors/Psych 499 Study for Honors)

Relevant faculty: Deanna Barch, Ryan Bogdan, Todd Braver, Ian Dobbins, Denise Head, Wouter Kool, Kathleen McDermott, Zachariah Reagh, and Jeff Zacks (other potential faculty mentors may be approved)

Reading, Language and Language Acquisition

This concentration provides students with a deep and broad knowledge of linguistic development. The courses take an in-depth look at the development of written and spoken language.

Advisor/coordinator: Professor Rebecca Treiman

Course work required:

Code	Title	Units
Ling 170D	Introduction to Linguistics	3

Electives (must include two courses, at least one of which is at the 400 level):

Code	Title	Units
Psych 234	Introduction to Speech, Language, and Hearing Sciences	3
Psych 358 or Psych 358W	Language Acquisition	3
Psych 433	Psychology of Language	3
Psych 4351 or Psych 4352	Reading and Reading Development (Writing Intensive)	3

Research mentorship: Prior approved research mentorship with a relevant faculty member and successful completion of a research paper (i.e., Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences or Psych 498 Study for Honors/Psych 499 Study for Honors)

Relevant faculty: Rebecca Treiman, Lori Markson, Mitchell Sommers, and Kristin Van Engen (other potential faculty mentors may be approved)

Lifespan Development

Many introductory courses in developmental psychology focus on the changes that occur from birth to adolescence. The concentration in lifespan development provides students with an understanding of the cognitive and physiological changes that occur over the lifespan, with a primary focus on older adulthood. A major goal of the concentration is to provide students with an understanding of the similarities and differences in development at different stages of the lifespan.

Advisor/coordinator: Professor Mitchell Sommers

Course work required:

Code	Title	Units
Psych 326 & Psych 427	Introduction to the Psychology of Aging and Social Gerontology	6

Electives (must include one of the following courses):

Code	Title	Units
Psych 321	Developmental Psychology	3
Psych 4048	Neuropsychology of Dementia (Neuropsychology of Dementia)	3
Psych 4301	Contemporary Topics in Cognitive Development	3

Research mentorship or internship experience: Students can complete this aspect of the concentration with either a prior approved research mentorship or an approved internship related to older adults (i.e., Psych 225 Internship in Psychology, Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences, or Psych 498 Study for Honors/Psych 499 Study for Honors). Successful completion of a paper is required in all cases.

Relevant faculty for research mentorship: Mitchell Sommers, Brian Carpenter, Sandra Hale, Denise Head, Lori Markson, and Rebecca Treiman (other potential faculty mentors may be approved)

Possible internships: Prior approved internship related to older adults and successful completion of a paper. Options may include work in an assisted-living facility or another community-based program designed to assist older adults. Other internships are available; consult Dr. Denise Head for opportunities.

Experimental Psychopathology

This concentration allows students to acquire more advanced knowledge of the ways in which psychologists study mental disorders. Current research demonstrates the importance of integrating psychological and biological variables to better understand the classification, etiology, and treatment of a wide variety of mental disorders, including schizophrenia, mood disorders, anxiety disorders, substance use disorders, and eating disorders. Students who pursue this concentration will develop a broad-based appreciation for conceptual and methodological issues that are central to research in psychopathology.

Advisor/coordinator: Professor Deanna Barch

Course work required:

Code	Title	Units
Psych 354	Psychopathology and Mental Health	3

Electives (must include two courses, at least one of which is at the 400 level):

Code	Title	Units
Psych 345	Genes, Environment, and Human Behavior	3
Psych 3501	Psychotherapy: Introduction to Practice and Research	3
Psych 4541	Personality and Psychopathology	3
Psych 4557	Biopsychosocial Aspects of Eating Disorders and Obesity	3
Psych 4746	Biological Pathways to Psychopathology: From Genes and the Environment to Brain and Behavior (Biological Pathways to Psychopathology)	3
Psych 4765	Inside the Disordered Brain: Biological Bases of the Major Mental Disorders (Inside the Disordered Brain)	3

Research mentorship: Prior approved research mentorship with a relevant faculty member and successful completion of a research paper (i.e., Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences or Psych 498 Study for Honors/Psych 499 Study for Honors)

Relevant faculty: Deanna Barch, Ryan Bogdan, Josh Jackson, Renee Thompson, and Denise Wilfley (other potential faculty mentors may be approved)

Personality and Individual Differences

This concentration allows students to acquire deeper knowledge of how and why individuals differ from one another and the ways in which individual (e.g., personality) and group (e.g., gender) differences influence behavior, emotion, experience, identity, and psychopathology. The core course for the concentration (Psych 353) considers personality more generally. The seminars explore, in depth, specific aspects of personality and individual differences, including biological bases of individual differences (i.e., genetics), the interpersonal processes associated with personality and personality judgment, individual differences in self and identity, group differences, and personality pathology.

Advisor/coordinator: Professor Tammy English

Course work required:

Code	Title	Units
Psych 353	Psychology of Personality	3

Electives (must include two courses, at least one of which is at the 400 level):

Code	Title	Units
Psych 345	Genes, Environment, and Human Behavior	3
Psych 3645	Understanding Emotions	3
Psych 367	Positive Psychology: The Science of Happiness	3
Psych 413	Contemporary Topics in Social Psychology	3
Psych 4541	Personality and Psychopathology	3
Psych 4555	Emotion Regulation	3
Psych 4557	Biopsychosocial Aspects of Eating Disorders and Obesity	3

Research mentorship: Prior approved research mentorship with a relevant faculty member and successful completion of a research paper (i.e., Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences or Psych 498 Study for Honors/Psych 499 Study for Honors)

Relevant faculty: Tammy English, Patrick Hill, Josh Jackson, Michael Strube, Jesse Sun, Renee Thompson, and Emily Willroth (other potential faculty mentors may be approved)

Minors

The Minor in Psychological & Brain Sciences

Units required: 15

Required course:

Code	Title	Units
Psych 100B	Introduction to Psychology	3

Elective courses:

Four additional courses (i.e., a minimum of 12 units of additional course work) in P&BS, all of which must be at the 300 level or above

Additional Information

Students may receive exemption from the Psych 100B Introduction to Psychology requirement only if they have an AP psychology score of 5, an IB score of 6 or 7, or a British A-Level grade of A. For exemption, no credit will be given; therefore, five applicable courses must be completed. No more than 3 units of an approved cross-listed course originating outside of P&BS, an approved psychology course taken in the School of Continuing & Professional Studies, an approved psychology course taken at another university, or an independent study-type course (e.g., Psych 333) may count toward the minor. (Transfer students must complete at least 9 advanced units of home-based P&BS courses at Washington University.)

For those students who have a broad or general interest in P&BS, we recommend taking several courses from the five core areas of psychology (i.e., Social/Personality; Mental Health/Affective; Biological/Neurological Bases of Behavior; Behavior and Cognition; and Lifespan Development).

For those students who want to concentrate in a more specialized area, courses can reflect such specialization. For example, a student interested in the helping professions or counseling may wish to select from such courses as Psych 353 Psychology of Personality, Psych 354 Psychopathology and Mental Health, Psych 361 Psychology of Learning, and Psych 321 Developmental Psychology. A student wishing to pursue a specialization in experimental psychology/neuroscientific bases of behavior may select from such courses as Psych 3401 Biological Psychology, Psych 361 Psychology of Learning, Psych 330 Sensation and Perception, Psych 360 Cognitive Psychology, and Psych 3604 Cognitive Neuroscience and may also consider doing independent study (Psych 333).

Courses

Visit online course listings to view semester offerings for L33 Psych.

L33 Psych 100B Introduction to Psychology

Survey and analysis of concepts, theory, and research covering the areas of biological psychology, human development, learning, memory, social psychology, and mental disorders and their treatment. This is a general survey course designed to introduce students to the diversity of areas, approaches, and theories that comprise the study of mind and behavior. Psych 100B is required of all majors and is prerequisite to all upper-level courses in Psychology. Open to freshmen. Note: For first-year students with AP/IB exemption and for first-year students and sophomores concurrently enrolled in Psych 100B who are interested in exploring a few areas of psychology within a seminar format, see Psych 102 First-Year Opportunity: Contemporary Issues in Psychology.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 102 First-Year Opportunity: Contemporary Issues in Psychology

This seminar enables students to explore several of the ideas and issues in contemporary psychology. Each week a different issue is discussed, and students familiarize themselves with critical aspects of the issue and discuss and critically evaluate the pros and cons of each side. Open to First-Year students who are concurrently enrolled in or who have completed (or are exempt from) Psych 100B/1000. Also open to Sophomores who are concurrently enrolled in Psych 100B/1000. Sections are limited to 15 students

Credit 1 unit. A&S: FYO A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 105 First-Year Opportunity: Psychology of Young Adulthood

This course will cover selected topics relevant to the developmental, social, personal, and cognitive issues that young adults confront during their college years. Material will be drawn mainly from the field of psychology, and the emphasis will be on the scientific basis of concepts and on empirically supported strategies for growth and development. The knowledge gained may contribute to academic success, personal development, and a more rewarding social and academic experience over the course of college and beyond. This 1-unit course is only open to first-year students. Credit/no credit only.

Credit 1 unit. A&S: FYO

L33 Psych 107 The Science of #Slaying It! in College

You have spent the last 12 or so years "slaying it" as a student. You likely have developed lots of effective strategies for succeeding in school. Recently, our understanding of what those successful strategies are has greatly expanded. But, how do we know what skills are particularly helpful to do well academically? From psychological research! In this class students will learn about the psychological research that has illuminated which strategies are most helpful when studying, when in the classroom, and when asking for help. We will focus on how to most effectively study but will discuss other strategies as well. Students will also be asked to apply these skills in the other classes that they're taking this semester, with the hope that they develop and refine the skills they already have and continue slaying it as a student. Prerequisite: open only to freshmen and sophomores. Permission of instructor required. Credit/No Credit option only.

Credit 1 unit.

L33 Psych 109 First-Year Opportunity: Research in Psychology

Weekly presentations by various members of the psychology faculty; introduces students to research areas and current issues. Attendance at all lectures required. Open to freshmen and sophomores only. Prerequisite: Psych 100B. Credit/no credit only.

Credit 1 unit. A&S: FYO A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 111 First-Year Opportunity: Mindfulness Science & Practice

Mindfulness is a term that is becoming increasingly used in popular culture to refer to a set of skills associated with increased attentional focus, successful stress-management, and improved health, sleep, and emotional well-being. This course will expose students to the various facets of mindfulness from both an applied and scientific perspective, by teaching mindfulness skills through a set of easy-to-learn practices and exercises, and by surveying of empirical research regarding mindfulness effects on cognition, emotion, brain function, and health. The goal of the seminar will be to provide practical skills that can contribute to personal development, emotional well-being, and academic success, while also developing critical thinking skills in learning how to read and evaluate primary scientific literature on mindfulness. Open to first-year students only.

Credit 1 unit. A&S: FYO

L33 Psych 185 First-Year Seminar: Race and Racism

This first-year seminar aims to introduce students to theoretical and empirical research on race and racism. It will provide an overview of historical, sociological, political, epidemiological, and especially social psychological perspectives on racial bias. We will examine mechanisms that contribute to prejudice, stereotyping and discrimination. We will review how bias uniquely affects particular groups, including Native, Asian, Latino, white and Black Americans. We end the course with discussions about interracial interactions.

Credit 3 units. A&S: FYS A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 219 The Infant Mind: Sophomore Seminar

What goes on inside the mind of an infant? In this course we will explore a variety of hot topics concerning how babies experience the world around them. We will cover topics such as temperament (Do babies get mad?), language and communication (How do infants learn words and what if a baby is exposed to more than one language?), the effects of poverty on the developing brain (Does it matter?), social categories and relationships (Do babies notice differences across people?), and morality (Do babies have a sense of justice?). We will also discuss how to put child development research into practice, for example, by considering research relevant to policies concerning vaccination, early childhood education, and whether screen time is okay for babies.

Students will have ample opportunity to interact with children at a local childcare center, where they can experience first-hand the research they are learning about in class. If you are curious about the developing mind, human nature, or considering a career in a field that involves children (e.g., education, medicine, public policy) this course is for you. PREREQ: Sophomore standing, and is open to students from all majors. Enrollment is restricted to 20 sophomores or permission of instructor. Credit 3 units. A&S IQ: SSC BU: BA EN: S

L33 Psych 221 First-Year Seminar: Introduction to Memory Studies

This course focuses on memory not only as an individual phenomenon but also how our memories for historical events can be determined by the groups to which we belong. We will survey such topics as experimental methods and findings in the study of individual memory; questions of accuracy and vividness of memory; false and illusory memories; eyewitness memory reports that are used in trials; methods to greatly enhance learning and memory; and people with extraordinary memories. We then transition to the study of collective memory, or how our memories and identities are shaped by the groups to which we belong. The topics will include transmission of memories and identity through narratives; shared historical memories; battles over how the past is to be remembered; and revision of the memories of the past to meet concerns of the present. We also consider how memory is used in political arguments. Enrollment is restricted to 19 first-year students.

Credit 3 units. A&S: FYS A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 225 Internship in Psychology

This course provides an opportunity for students to gain practical, applied experience in a non-academic, community service agency. For a description of prerequisites, course goals, agency selection, registration policies, and course requirements, students should obtain a copy of "Internships in Psychology," which is available in room 207B of Somers Family Hall or on the Psychological & Brain Sciences website (<http://psychweb.wustl.edu/undergraduate>). This course can be taken only once, and it is open to junior and senior Psychological & Brain Sciences majors only. Credit/no credit only. Prerequisite: Permission of instructor.

Credit 3 units.

L33 Psych 234 Introduction to Speech, Language, and Hearing Sciences

This course provides an introduction to the fields of speech-language pathology, audiology, the education of hearing-impaired children, and speech and hearing sciences. Normal speech and hearing processes as well as communication disorders are discussed. Selected research topics in speech and hearing sciences will also be presented.

Same as L12 Educ 234

Credit 3 units. BU: BA, SCI EN: S

L33 Psych 235 Practicum in Applied Behavior Analysis: Autism Spectrum Disorder

An opportunity to be trained in applied behavior analytic techniques and to work with a child with autism spectrum disorder. Training and supervision will be arranged and coordinated by the family of the child and/or their consultant/agency. Students must complete the minimum number of hours of training and therapy, and attend regular therapy meetings. In addition, there is a required seminar for discussion of assigned readings and presentations on autism and therapy. Completion of a paper in the second semester also is required. For further information and petition form, pick up the practicum brochure from the department. Credit/no credit only. Enrollment through the practicum coordinator only.

Credit variable, maximum 3 units.

L33 Psych 246 Mindfulness in Psychology and Eastern Philosophies: Sophomore Seminar

This course explores the concept of mindfulness in psychology and in Eastern philosophies. We will discuss the scientific literature on mindfulness, as well as mindfulness as presented by Buddhist scholars. We will engage in several different mindfulness practices throughout the semester. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: LCD, SSC Arch: SSC Art: SSC EN: S

L33 Psych 261 Applying the Science of Learning

This course is intended to cover the science of human learning, with special focus on areas, theory, and research that have potential to improve how students learn. Thus, the course will provide selective coverage of theoretical and empirical work in the science of learning that can inform and improve student learning. The applicability of these themes to the students in this course will be explicitly developed through students' explicit translation of the experimental findings from the literature to their own learning challenges. The course will be organized around three major integrated goals. First, the relevant basic theory and findings in select topics in the science of learning will be covered. Second, the implications of this work for improving learning outcomes in authentic educational contexts will be considered. Third, together we will develop concrete techniques and examples of how the principles that emerge can be adopted to significantly enhance outcomes of lifelong learning challenges. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 300 Introduction to Psychological Statistics

Descriptive statistics including correlation and regression. Inferential statistics including nonparametric and parametric tests of significance through two-way analysis of variance. Course emphasizes underlying logic and is not primarily mathematical, though knowledge of elementary algebra is essential. Psych 300 is required of all P&BS majors. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: NSM, AN Arch: NSM Art: NSM

L33 Psych 301 Experimental Psychology

This course provides training in the logic and techniques of psychological research so as to provide students with experience in the design of psychology experiments and the interpretation of results. Topics include experimental design and control, library research, quantitative treatment of data, graphical presentation of results, and clarity of scientific writing. Lectures focus on general principles of experimentation, whereas the laboratory sections provide an introduction to a range of psychological phenomena through hands-on experience in experimentation. Each student also completes an independent research project. Declared psychology & brain sciences majors will have priority. Limited to 15 students per section. Prerequisites: Psych 100B and Psych 300.

Credit 4 units. A&S IQ: NSM Arch: NSM Art: NSM BU: SCI

L33 Psych 3011 Experimental Psychology

Psych 3011 is limited to students who have not taken Psych 300 and who want to enroll in Psych 300 and Experimental Psychology concurrently. Therefore, students who enroll in Psych 3011 must also register for Psychology 300. Psych 3011 fulfills the Psychology 301 requirement for the major. Topics in the two courses (i.e., Psych 300 and Psych 3011) will be coordinated in order to integrate the concepts from Statistics with those from Experimental Psychology. Experimental Psychology provides training in the logic and techniques of psychological research so as to provide students with experience in the design of psychology experiments and the interpretation of results. Topics include experimental design and control, library research, quantitative treatment of data, graphical presentation of

results, and clarity of scientific writing. Lectures focus on general principles of experimentation, while the laboratory component provides an introduction to a range of psychological phenomena through hands-on experience in experimentation. Each student also completes an independent research project of their own design under supervision of a faculty member. Enrollment limited to 15 students. Declared psychology & brain sciences majors will have priority. Prerequisites: Psych 100B and concurrent enrollment in Psych 300.

Credit 4 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA, SCI

L33 Psych 304 Educational Psychology

This is a course in psychological concepts relevant to education that is organized around four basic issues: (1) how humans think and learn; (2) how children, adolescents, and adults differ in their cognitive and moral development; (3) the sense in which motivation and intention explain why people act as they do; and (4) how such key human characteristics as intelligence, motivation, and academic achievement can be measured. Offered fall and spring semesters.

Same as L12 Educ 304

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 305 Health Psychology

Review and discussion of psychobiological approaches to health, as well as psychological aspects of physical illness. Topics: stress and coping, psychosocial factors in the etiology and progression of chronic illness, and psychological sequelae of chronic illness. There will be an emphasis on research methodology and results. PREREQ: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 315 Introduction to Social Psychology

An introduction to the scientific study of social influence. Topics include person perception, social cognition, attitudes, conformity, group behavior, aggression, altruism, prejudice and psychology's interface with law, health, and climate change. Prerequisite: Psych 100B/1000.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 3195 Abnormal Child Psychology

This course will familiarize students with current perspectives on the nature, causes, assessment, treatment, and prevention of child psychiatric disorders and related family dysfunction. Theoretical perspectives and research findings will be discussed pertaining to anxiety, depression, conduct disorder, attention-deficit/hyperactivity disorder, autism, learning impairments, and parent-child conflict. PREREQ: Psych 100B

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 321 Developmental Psychology

This course concentrates on the cognitive and social development of the person from conception to adolescence. Topics covered include: infant perception, attachment, cognitive development from Piagetian and information processing perspectives, aggression and biological bases of behavior. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 3211 Music Cognition

An introduction to modern research on music perception and cognition. The course covers four main topics: the perception of key, the psychoacoustics of dissonance, the relationship between attention and musical meter, and the process by which melodies establish, fulfill, and deny expectations. Students read and discuss research from both cognitive science and music theory, in addition to completing several projects.

Same as L27 Music 3221

Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: HUM

L33 Psych 325 Psychology of Adolescence

This course concentrates on brain, cognitive, and social development during adolescence. This period of development is marked by transition and change. Special topics will include the vulnerability of the adolescent brain and the development of sexual orientation. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 326 Introduction to the Psychology of Aging

Study of the processes of aging in the individual in terms of their behavioral effects. Age changes in biological functions, sensation, perception, intelligence, learning, memory and creativity are studied to understand the capacities and potentials of the mature and older person. Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 330 Sensation and Perception

What's involved in seeing and hearing? This course will cover perception from the physical stimuli (light and sound) that impinge upon the sensory receptors through the higher-level percepts that the stimuli generate. Demonstrations and illusions will be used as we learn about the anatomy and physiology of the sensory systems and study the brain mechanisms that are involved in vision and audition. Prerequisite: Psych 100B/1000.

Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA, SCI

L33 Psych 333 Independent Study in Psychological & Brain Sciences

Prerequisites: Psych 100B and permission of a member of the faculty of the department (or other approved supervisor) who agrees to supervise the student's work. Credit to be arranged. A maximum of 6 units may be applied toward the major. The electronic Petition for Supervision of Independent Study form is available online. Students will be enrolled only after their form is approved by the faculty supervisor and forwarded to the undergraduate coordinator. Credit/no credit only. Credit variable, maximum 3 units.

L33 Psych 3401 Biological Psychology

An introduction to biological mechanisms underlying behavior. Topics will include the physiology of nerve cells, anatomy of the nervous system, control of sensory and motor activity, arousal and sleep, motivation and higher mental processes. Prerequisite: Psych 100B.

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

L33 Psych 344 Principles of the Nervous System

This course will provide a broad introduction to neuroscience, starting at the level of cellular and molecular neuroscience, and ultimately ending at systems and theoretical neuroscience, with emphasis on the organization of the mammalian central nervous system. Topics will include neuronal structure, the action potential, information transmission between neurons, sensory/motor systems, emotion, memory, disease, drugs, behavior, and network dynamics.

A fundamental goal of this course is to provide students with the ability to approach complex problems using the scientific method and to understand the limits of knowledge. This course will also expose students to some of the neuroscience community at Washington University. Prerequisites: Biol 2960, Biol 2970 recommended, Biol 3058 recommended or Psych 3401 and permission of instructor. (Biology Major Area B)

Same as L41 Biol 3411

Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: SCI

L33 Psych 345 Genes, Environment, and Human Behavior

This class will examine how genetic influences impact various dimensions of human behavior, ranging from traits (e.g., personality) to psychiatric disorders. Topics to be covered include methods used to study genetic influence, how genetic predispositions interact with the environment, and ethical implications. Modern methods for gene-identification, such as genomewide association studies, polygenic risk scores and epigenetic experiments will be examined in detail. Emphasis will be placed on understanding core concepts (e.g., what is identity-by-descent) as well as application (e.g., calculate heritability, interpretation of results from published studies). Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: SCI EN: S

L33 Psych 3501 Psychotherapy: Introduction to Practice and Research

This is an introductory course in psychotherapy: The treatment of psychological problems through the application of interventions grounded in psychological theory and focusing on behavior or mental processes. Students become familiar with the more popular schools of psychotherapy, including their historical context, characteristic techniques, theoretical underpinnings and current research support. Students also gain an appreciation of the problems and solutions in researching psychotherapy, as well as emerging variations on psychotherapy procedures. Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: SSC BU: BA EN: S

L33 Psych 353 Psychology of Personality

Review of basic theoretical orientations to the understanding of personality and complex human behavior. Overview of related techniques, procedures and findings of personality assessment and personality research. Discussion of critical issues in evaluation of personality theories. Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 354 Psychopathology and Mental Health

This is an introductory course in psychopathology or the scientific study of mental health disorders. The course will include definitions, theories, and classification of psychopathological behavior. Content will focus on symptoms, classification, prevalence, etiology, and treatment of mental health disorders, including mood, anxiety, eating, schizophrenia spectrum, substance use, and personality disorders. Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA

L33 Psych 357 Introduction to Clinical Psychology

A survey of clinical psychology. Emphasis is placed on historical and recent developments in the field (e.g., managed care), as well as the consideration of the roles, functions and techniques of clinical psychologists including psychological testing and psychotherapy. Prerequisites: Psych 100B and either Psych 353 or Psych 354.
Credit 3 units. A&S IQ: SSC Art: SSC BU: BA EN: S

L33 Psych 358 Language Acquisition

This course examines the development of language skills in children, asking how children so rapidly learn their first language. Topics include; biological bases of language development; development of phonology, syntax, and morphology; language development in atypical populations; childhood bilingualism; and development of written language skills. Prerequisites: Psych 100B and Ling 170D.
Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 358W Language Acquisition

This course examines the development of language skills in children, asking how children so rapidly learn their first language. Topics include: biological bases of language development; development of phonology, syntax and morphology; language development in atypical populations; childhood bilingualism; and development of written language skills. Prerequisites: Psych 100B and Ling 170D and junior or senior standing. Writing-intensive.
Credit 3 units. A&S IQ: SSC, WI EN: S

L33 Psych 360 Cognitive Psychology

Introduction to the study of thought processing from an information-processing approach. Emphasis will be placed on theoretical models that are grounded in empirical support. Topics include pattern recognition, attention, memory, reasoning, language processes, decision making, and problem solving. Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA

L33 Psych 3604 Cognitive Neuroscience

A general introduction to the underlying principles and mechanisms of brain function that give rise to complex human cognitive behavior. Emphasis will be placed on how emerging methods and approaches from both neuroscience and cognitive psychology have been integrated to yield new insights into the organization and structure of higher mental processes. Topics include perception, attention, memory, language, and executive control. Prerequisite: Psych 100B/1000.
Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: SCI

L33 Psych 361 Psychology of Learning

The experimental analysis of behavior is presented with examination of operant and Pavlovian conditioning, aversive control, theories of reinforcement, choice behavior, behavioral economics, and so on. Theoretical and experimental approaches to the study of behavior as developed in the laboratory are emphasized. Consideration is given to applications from the laboratory to everyday behavior. Prerequisite: Psych 100B. Enrollment limited to 30.
Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: SCI

L33 Psych 3645 Understanding Emotions

Emotions both shape and are shaped by our subjective experiences, physiology, behaviors, cognitions, social interactions, and health. Their complexity and significance make the study of emotions particularly exciting and challenging. This course offers an overview of theory and research on emotions with content stretching across psychological disciplines, including personality, social, clinical, developmental, and neuropsychology. Course content will include definitions of emotions, physiological changes associated with emotions, and individual differences in emotional experience. The course will also examine how culture, cognitions, and relationships affect and are affected by emotions and how emotion is related to physical and mental health. Prerequisite: Psych 100B.
Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 367 Positive Psychology: The Science of Happiness

Historically, the field of psychology has placed a lot of attention on what's wrong with people and what we can do to treat disorders of the mind. More recently, the field has broadened its scope to give more attention to what's right with people and what we can do to optimize our potential for psychological health. This course focuses on this latter development by examining scientific research relevant to the pursuit of happiness and well-being. Topics include the nature and measurement of happiness, the biological basis of positive emotions, an overview of positive trait theories, self-esteem, gratitude, mindset,

the mind-body connection, physical activity, emotional intelligence, resilience, prosocial behavior, decision-making, willpower, mindfulness meditation, and the characteristics of successful relationships.
Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 380 Human Learning and Memory

A survey of issues related to the encoding, storage and retrieval of information in humans. Topics include memory improvement strategies, people with extraordinary memories, memory illusions and distortions, among other topics. Limited to 25 students. Prerequisite: Psych 100B/1000.

Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA

L33 Psych 386 Psychology of Black Women

This course is designed to provide a critical analysis of the distinctive experiences of Black women through a psychological lens. In this course, we will explore topics relating to Black women's experiences in home, school, and community contexts, such as identity development, socialization experiences, and media portrayals of Black girls and women. The class will also consider how Black women draw on individual strengths and cultural assets to support their personal well being. We will employ Black Feminist Theory and other culturally relevant frameworks to guide our inquiry into the psychological experiences of Black women from an assets-based perspective. This course will heavily center the narratives of Black women. PREREQ: L33 Psych 100B

Credit 3 units. A&S IQ: SSC, SC Arch: SSC Art: SSC EN: S

L33 Psych 3865 Community Psychology

Community psychology goes beyond an individual focus and integrates social, cultural, economic, political, environmental, and international influences to promote positive change, health, and empowerment at individual and systemic levels. In this course, we will focus on identifying the root causes of various social problems and become familiar with community-defined priorities for addressing them. We will discuss how to use psychology as a scientific foundation to better understand social determinants of health and wellness, and discuss best practices on how to build collaborative relationships with community members, groups, and organizations to solve social problems.

Credit 3 units. A&S IQ: SSC EN: S

L33 Psych 3885 The Mental Health Crisis in Higher Education

During the last decade, college campuses have seen unprecedented increases in the proportion of students suffering from mental health problems. Many institutions have responded by increasing the number of mental health counselors available in student health centers, making the accommodations at disability resource centers more robust, and providing safe spaces for students to process incidents and events that have triggered them. Are such interventions improving the well-being of today's students, or might they actually be further encumbering students' psychological health? This discussion-based course will explore arguments made on all sides of this provocative debate and examine research on the nature of today's college students and what resources and services most contribute to their psychological health and well-being. Enrollment is limited to 15 students. Prerequisite: at least 6 units of advanced home-based psychology courses.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 395 Prejudice, Stereotyping, & Discrimination

This course will trace prejudice, stereotyping, and discrimination from its ordinary origins in social cognition to its most extreme consequences in war and genocide. Topics include prejudice, the causes of stereotyping and discrimination, the development of

prejudice in children, subtle and overt prejudice and stereotyping, group conflict, the role of social norms, the experience of being a target of discrimination, and interventions to reduce prejudice and discrimination. Areas covered include racism, sexism, ageism, homophobia, ableism, colorism, and religious discrimination.
Prerequisite: Psych 100B.

Credit 3 units. A&S IQ: SSC, SC, SD Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 396 Psychological Dynamics of Empathy

In this course, we will explore the antecedents and consequences of empathic motivation, defined broadly. Along the way, we consider answers to several interesting questions: Why are some people generally more empathic than others? Are there cultural differences in levels of this trait? To what extent is empathy an "emotional" or "cognitive" phenomenon? We will also consider the conditions under which empathy is associated with prosocial outcomes (e.g., reducing racial prejudice) but with recognition that empathy has a "darker" side, one that can ironically exacerbate people's preexisting biases. The approach to empathy will be highly interdisciplinary as we consider research and theory within several fields within psychology (e.g., social, personality, cognitive) as well as areas that draw from other scholarly disciplines (e.g. social neuroscience, social anthropology). Prerequisite: Psych 100B/1000.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 4046 Developmental Neuropsychology (Writing Intensive)

Discussion will focus on early development and disorders affecting the brain, such as cerebral palsy, sickle cell disease, and autism. Writing Intensive. Open only to advanced undergraduates, and declared psychology majors will be given preference. Limited to 15 students. Prerequisites: Psych 100B and one of the following: Psych 321, Psych 360, Psych 3604, Psych 4604, or Psych 3401.

Credit 3 units. A&S IQ: NSM, WI Art: NSM

L33 Psych 4048 Neuropsychology of Dementia

The primary goal of this course is to acquaint students with the basic features of common dementia subtypes, such as Alzheimer's disease, frontotemporal dementias, vascular dementia, Lewy body disease, Huntington's disease and Parkinson's disease. The course will cover the clinical manifestations (cognitive and behavioral symptoms, course, prognosis), neuroanatomical signatures, pathophysiology, intervention and treatment, and current research directions. Students will gain a detailed understanding of the major dementia subtypes as manifestations of underlying brain pathology and anatomical patterns of brain damage. Upon completion of the course, the student should be able to (1) identify and distinguish the most common dementia subtypes based on knowledge of clinical presentation and disease mechanisms; (2) understand how underlying brain changes may be linked to specific clinical manifestations; (3) understand how therapeutic strategies are linked to pathophysiology; (4) engage in scholarly discussion about the topics; and (5) read and critique empirical research papers. Prerequisite: Psych 326 and either Biol 3411, Psych 344, or Psych 3401.

Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA

L33 Psych 4075 Advanced Research Methods & Design

This course is an advanced foray into research design and methods used in psychological science. This course is project-based, writing-intensive, and will be supplemented heavily with readings and discussions of topics of broad importance to psychological research (e.g., reliability, validity, signal detection theory, philosophy of science). These readings will enhance students' abilities to think critically about psychological research design and methods, as both a consumer and creator of psychological research. During the course of the semester they will complete two original research projects (e.g., an observation

study and an experimental study). Together with their classmates they will devise research questions, design studies to test their research questions, collect data, and statistically analyze their results. Individually, students will write-up, and then revise, each research project in an APA-style paper. The writing requirements for this course build on the skills students acquired in Experimental Psychology and will further their abilities to communicate scientific ideas more skillfully, clearly and accurately. Prerequisite: L33 Psych 301 or 3011. Credit 3 units. A&S IQ: NSM, WI Arch: NSM Art: NSM BU: BA

L33 Psych 4099 Human Evolutionary Psychology

How did evolution by natural selection shape the way human beings think and behave? Does evolution explain human cooperation and friendship, human morality, reproductive decisions and social interactions? What sex differences in cognition or behavior are caused by evolution? This course introduces the concepts and findings of evolutionary psychology, mostly through reading of primary sources -- articles from psychology and biology journals -- and discussion and presentation of empirical cases. Prerequisites: At least 6 units of upper-level, home-based Psychology course work, or Anthro 3383. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 413 Contemporary Topics in Social Psychology

Consideration of selected contemporary topics in social psychology. Participation in a research project of appropriate scope. Prerequisite: Psych 315. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC

L33 Psych 4175 Applied Statistical Analysis with R

This course is designed to introduce R as both a means of applied statistical analysis as well as a window into data organization and programming. The goal of the course is to teach the tools needed to take a raw dataset and not only perform a statistical test in R, but also to learn how to arrange the dataset to perform a variety of tests, to choose the appropriate test, and to visualize the results. Students will gain practical knowledge of how to use statistics in research. Please note that this is an introductory course and knowledge of R prior to enrollment is not expected. Prerequisite: Psych 300, graduate standing, or permission of instructor. Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM

L33 Psych 4182 Perception, Thought and Action

This course focuses on current topics in visual perception, visual attention, and the control of action. Readings consist of recent journal articles. Class meetings emphasize presentation and discussion of the material in the readings. Limited to 15 students. Prerequisites: Psych 100B/1000 and one of the following: Psych 301/3010, Psych 330/3300, Psych 3401, Psych 344/3440, Psych 360/3600, Psych 361/3610, Psych 3604, Psych 380/3800, Psych 433/4330, or Psych 4604. Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA

L33 Psych 4226 The Psychology of Social Stigma

This seminar aims to introduce students to theoretical and empirical social psychological research on prejudice and social stigma. The topics covered will include examinations of why individuals stigmatize by exploring cognitive, evolutionary, self and system justification explanations. The course will examine the effects of stigmatization for low-status groups (stereotype threat, dis-identification, compensation and health outcomes). We will explore the role of stigma in intergroup interactions as well as variations in the experience of stigma. Finally, we will examine high-status groups' perceptions of bias (e.g., perceptions of anti-white discrimination). Prerequisite: Social Psychology (Psych 315) or Prejudice (Psych 395). Credit 3 units. A&S IQ: SSC, SC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 427 Social Gerontology

This course provides an introduction to aging and growing old, from an interdisciplinary perspective. Specific attention is paid to demographics, physical health and illness, mental health, interpersonal relations, work issues, living arrangements, ethics, and death and dying. Prerequisites: junior or senior standing and completion of 6 advanced units in Psych. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4301 Contemporary Topics in Cognitive Development

Cognitive Developmental topics include: Piagetian abilities (e.g., conservation, formal reasoning), basic cognitive abilities (e.g., processing speed), executive functions (e.g., working memory), and other current topics (e.g., processing facial stimuli). Prerequisite: Psych 321 or 360. Credit 3 units.

L33 Psych 4302 Cognitive Psychology Applied to Education

This course is intended to cover topics in the cognitive psychology of human memory, conceptual learning and comprehension with special focus on areas, theory and research that have potential application to education. Thus, the course provides selective coverage of theoretical and empirical work in cognitive psychology that provides potential to inform and improve educational practice. The applicability of these themes are explicitly developed and evaluated through the primary research literature using educationally oriented experimental paradigms. The course is of interest and benefit to education majors and to psychology majors interested in cognitive psychology and its applications. Prerequisites: junior/senior status; 9 units in psychology and Psych 100B or junior/senior status; 9 units in Education and Psych 100B. Credit 3 units. A&S IQ: SSC EN: S

L33 Psych 4305 Psychological Science: Fact and Fiction

Skeptical analysis of psychological science as practiced and popularized in the media. Analysis of discrepancies between media and scientific claims regarding areas such as repressed memory, brain imaging, heritability, and psychotherapy. Additional examination of scientific career demands such as peer review, journal publication, and research funding. These topics are interwoven with a review of common errors in reasoning particularly with respect to probabilistic reasoning and the public misperception of the practice and principles of scientific psychology. Prerequisite: Psych 100B, junior or senior standing, and the completion of 6 units of advanced home-based psychology courses. Credit 3 units. A&S IQ: SSC, WI Arch: HUM Art: SSC EN: S

L33 Psych 433 Psychology of Language

This course surveys current research and theory in psycholinguistics, covering the biological bases, cognitive bases and learning of language. We consider studies of normal children and adults, the performance of individuals with various types of language disorders, and computer simulations of language processes. Topics range from the perception and production of speech sounds to the management of conversations. Each student carries out an original research project on some aspect of psycholinguistics. Prerequisites: Ling 170D and Psych 100B. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4351 Reading and Reading Development

This seminar surveys current research on reading and spelling skills and their development. Students will read and discuss journal articles that examine the cognitive and linguistic processes involved in reading, reading disorders, and educational issues. Prerequisite: Permission of instructor and previous course work in experimental psychology or psychology of language.

Credit 3 units. A&S IQ: SSC EN: S

L33 Psych 4352 Reading and Reading Development (Writing Intensive)

This writing-intensive seminar surveys current research on reading and spelling skills and their development. Students read and discuss articles and chapters that examine the cognitive and linguistic processes involved in reading, reading disorders, and educational issues. Prerequisites: Psych 100B and Ling 170D and junior or senior standing.

Credit 3 units. A&S IQ: SD, WI EN: S

L33 Psych 4355 Personality Development Across the Life Span

This seminar examines how individual differences develop over the lifespan. Or, in other words, how we become who we are. The scope of the class covers a multitude of individual differences constructs (e.g., happiness, intelligence, goals), but a particular focus will be on personality traits. Questions that will be examined include: How early in the lifespan does one's personality emerge? How much do parents matter in shaping who you become? Does your personality change across the lifespan? Readings will cover theories of development at different life stages and empirical research from childhood to older adulthood. PREREQ: Psych 100B and Psych 353

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC BU: BA EN: S

L33 Psych 4412 Advanced Cognitive Neuroscience

An intensive, case-study based approach to the underlying principles and mechanisms of brain function that give rise to complex human cognitive behavior. Emphasis will be placed on understanding and evaluating cutting-edge neuroscience research that has yielded new insights into the organization and structure of higher mental processes. Students will develop critical thinking via a strong class participation component. Topics include perception, attention, memory, language, emotion, and executive control. Declared Psychology majors will be given priority over others to enroll. PREREQ: Psych 100B/1000, and either Psych 3401 or Psy 344/Bio 3411 or Psych 3604.

Credit 3 units. A&S IQ: NSM Art: NSM

L33 Psych 4413 Advanced Cognitive Neuroscience (Writing Intensive)

This course presents an intensive, case-study based approach to the underlying principles and mechanisms of brain function that give rise to complex human cognitive behavior. Emphasis will be placed on understanding and evaluating cutting-edge neuroscience research that has yielded new insights into the organization and structure of higher mental processes. Students will develop critical thinking and writing skills via a strong class participation component and a writing-intensive format. Topics include perception, attention, memory, language, emotion, and executive control. Writing Intensive. Declared psychology majors will be given priority over others to enroll. Prerequisite: Psych 3401, Psych 344/Biol 3411, or Psych 3604.

Credit 3 units. A&S IQ: NSM, WI Arch: NSM Art: NSM

L33 Psych 444B Independent Study for the Major in Psychological & Brain Sciences: Cognitive Neuroscience

Students in this course must be accepted into the Psychological & Brain Sciences (P&BS) Cognitive Neuroscience major. Also required is the permission of a member of the faculty of the department (or another approved supervisor) who agrees to supervise the student's work. In addition to the approved research in the area of cognitive neuroscience, an APA-style research paper must be satisfactorily completed to obtain credit. Petition for Supervision of P&BS 444B forms are available in Somers Family Hall, room 207B. Students will be enrolled only after they have completed the petition and returned it to the Undergraduate Coordinator in Psychology, room 207B.

Credit 3 units. A&S IQ: SSC EN: S

L33 Psych 444C Independent Study for a Concentration in Psychological and Brain Sciences

Students in this course must be accepted into a concentration in Psychological & Brain Sciences (P&BS). Written permission (Petition for Supervision of P&BS 444C) from a member of the faculty of the department (or another approved supervisor) who agrees to supervise the student's work is also required. In addition to the approved research for the concentration, an APA-style research paper must be satisfactorily completed to obtain credit. Petition for Supervision of P&BS 444C forms are available in Somers Family Hall, room 207B. Students will be enrolled only after they have completed both the Petition for a Concentration in P&BS and the Petition for Supervision of P&BS 444C and returned them to the Undergraduate Coordinator in room 207B.

Credit 3 units.

L33 Psych 4450 Functional Neuroimaging Methods

In this course, you will learn neuroimaging methods in the context of accurate, reproducible, and open science. There is no substitute for wrestling with data yourself, and so this is a hands-on course. Students will need to bring a laptop on which to install Matlab and conduct analyses. Some background in neuroimaging or programming will be helpful but is not required. Topics covered include experimental design, accounting for artifacts, single-subject models, and group models. By the end of the course, students will have used a computer script to analyze an fMRI dataset and have a good understanding of preprocessing and statistical analyses in fMRI. Limited to 24 students. Prerequisite: Psych 3604, Psych 4413, or graduate standing.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4512 Neurobiology of Learning & Memory

The brain is the most complex object in the known universe, and among its most incredible attributes is its ability to acquire and store vast amounts of information to guide behavior. Over a lifetime, our experiences shape our brains and our behavior, ultimately making each of us unique. What "information" is encoded by the brain? How is it stored? How is it retrieved? How does this occur at different spatial and temporal scales? Does stored information change over time? How do learning and memory change across the lifespan, and with neurological disorders? Can you trust your memories?

Credit 3 units. A&S IQ: NSM BU: BA

L33 Psych 4541 Personality and Psychopathology

This course is an advanced seminar in the study of personality disorders. It will cover a range of conceptual and methodological issues involved in scientific efforts to understand ways in which pathological personality features disrupt people's lives. Students will learn about the similarities and distinctions between normal and pathological features of personality as well as the role that personality may play with regard to the causes and treatment of other kinds of mental disorder. A laboratory component of the class will focus on the development of practical skills in conducting research interviews designed to elicit information about personality and social adjustment. Prerequisite: Psych 354 and junior or senior standing.

Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4555 Emotion Regulation

The purpose of this course is to provide an introduction to the field of emotion regulation. We will discuss theoretical and empirical work on emotion regulation from various areas of psychology, including social, personality, developmental, clinical, and neuroscience. Example topics include definitional issues, goals and strategies, personal and interpersonal consequences, sociocultural influences, life-span development, health and psychopathology. PREREQ: Psych 301. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4557 Biopsychosocial Aspects of Eating Disorders and Obesity

This seminar examines the epidemiology, etiology, prevention, and treatment of body image, eating disorders, and obesity. An emphasis will be placed on understanding the characteristic symptoms of excessive dieting, body image disturbance, and binge eating, not only as formal psychiatric syndromes but also as a representation of dysregulatory processes reflecting social-cultural, psychological, and biological disturbances. Students will also learn about the clinical characteristics, medical sequelae, and physical aspects of eating disorders and obesity. Prerequisites: Psych 100B and junior/senior standing plus 6 units of advanced home-based psychology courses. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4591 The Development of Social Cognition

This course explores what is known about the development of social cognition. Our starting point is infants' capacity to navigate the social world, for instance, detecting agents, identifying social partners and learning from those around us. We consider what happens when the human ability to reason about others breaks down (as with autism), and what this can teach us about typical development. Each week we cover one topic and a related set of readings. Class meetings are devoted to active discussion and debate about the content of the readings. Students are required to write a weekly reaction paper to the readings to promote class discussion and give an in-class presentation on a novel research topic at the end of the semester. Graduate students may have additional course requirements. Prerequisites: Psych 100B and one of the following: Psych 315 or Psych 321 or Psych 360. Credit 3 units. A&S IQ: SSC BU: BA EN: S

L33 Psych 4592 Development of Social Cognition (Writing Intensive)

This course explores current hot topics in social cognitive development. We will study this in children by examining the development of social groups/categories and identity in children, with a focus on language, race, and ethnicity. We will also explore the emergence and development of bias and prejudice and approaches to reducing its development in children. We will explore these issues in the context of innate knowledge and the effects of the environment on children's development. Each week we will cover a topic by reading one book chapter and two journal articles. Class time will be devoted to active discussion of these readings, with lecture and class activities as needed, to complement the readings and set the stage for discussion. This is a writing intensive course, so a second goal is to improve student writing. There will be several writing assignments that will receive extensive feedback from the instructor, and then students will write an improved final version. Students will also give class presentations: one that directly addresses writing and another on a research topic of their choice that is relevant to social cognitive development. Prerequisites: Psych 100B and either Psych 315, Psych 321, or Psych 360. Credit 3 units. A&S IQ: SSC, WI Arch: SSC Art: SSC EN: S

L33 Psych 4593 Psychology of the Good Life

What is the good life, and how can people achieve it? This discussion-based seminar class explores two aspects of the "good life": (1) "good" for oneself (living a personally fulfilled life), and (2) "good" for others (living an ethical life, being a good person). We will consider how psychological science can be used to conceptualize, uncover the causes of, and promote well-being for oneself and for others. There will be a particular focus on the ways in which these two aspects of the good life are in alignment or in conflict with each other. Classes will focus on critically evaluating research and integrating and connecting the weekly readings to students' personal research interests and lives, primarily through student-led discussions. PREREQ: Psych 100B, Psych 301/3011, and either Psych 315 or Psych 353 or Psych 367. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 461 Seminar in Selected Topics in Learning & Memory: Cognitive Illusions

This course will consider illusions of perceiving, attending, remembering and, more broadly, thinking. The reading will be concentrated on three books — Blink, The Invisible Gorilla, and Thinking Fast and Slow — as well as selected journal articles. We will consider how processes that lead us astray in some situations are the same ones that aid us in other situations, which is why these processes exist. Students will write essays and a term paper on one illusion or class of illusions. Prerequisites: Psych 100B and either Psych 360 or Psych 380. Credit 3 units. BU: BA

L33 Psych 4615 The Science of Paying Attention

What processes underlie humans' ability to "pay" attention? This course will introduce students to theories of attention and cognitive control. Students will develop an understanding of empirical approaches to studying the control of attention, and examine factors that facilitate and impair humans' ability to pay attention. A final section will examine attention and cognitive control challenges that accompany aging and select psychological disorders such as ADHD, and applications of attention and cognitive control research to the classroom, driving, and other contexts. Prerequisites: Psych 100B and Psych 301. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 462 Psychology of Memory and Cognition

This course will explore the core readings that have shaped the way scientists tackle fundamental aspects of memory and cognition. These include cognitive methods, pattern recognition, attention, working memory, episodic memory, semantic memory, language acquisition and comprehension, decision making, problem solving, and expertise. Each week we will explore at least three "classic" readings on a given topic along with some more recent papers. The goal is to expose students to this foundational literature, and develop a better understanding of the zeitgeist that set the stage for these papers to change how researchers tackled specific problems. Prerequisite: Psych 360 or Psych 380. Credit 3 units. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 4631 Introduction to Computational Cognitive Science

How does the mind work? Over the last few decades, cognitive psychologists have become increasingly interested in using computational models. These models are designed to describe cognitive processes and the behavior that is produced by them. This computational approach has several advantages. Computational theories of cognition are more specific than verbal theories. Therefore, they do not only afford precisely quantifying certain aspects of cognition, but they also make it possible to simulate cognitive processes. This course provides an introduction to several leading computational methods for understanding cognition, including model fitting and comparison, reinforcement learning, neural networks and

Bayesian modeling. These methods will be applied to a wide range of cognitive phenomena, such as short-term memory, reinforcement learning, decision making, cognitive control, concept learning and visual perception. Prerequisites: Psych 100B and Psych 301/3011. Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM BU: BA

L33 Psych 4651 History and Modern Systems of Psychology

An introduction to the history of psychology. This course begins with a brief consideration of forces leading to the development of psychology in the mid-1800s. It then examines the birth of modern psychology in Germany and the schools of psychology that emerged early in the 20th century. Newer orientations and ideas are considered in the final segment of the course. We also consider the impact of psychology on American public life during the 20th century. Prerequisite: Psych 100B, junior or senior standing, and 6 units of advanced home-based psychology courses.

Credit 3 units. A&S IQ: HUM Arch: HUM Art: HUM EN: H

L33 Psych 4746 Biological Pathways to Psychopathology: From Genes and the Environment to Brain and Behavior

This seminar will introduce students to methods and recent empirical literature evaluating links between genes, brain, and behavior. This research is beginning to illuminate specific biological pathways shaping risk for psychopathology. In particular, the course focuses on the design, analysis, and interpretation of multimodal research (e.g., fMRI, PET, EEG, pharmacology, molecular genetics, environmental assessment/manipulation) examining the biological underpinnings of behavior relevant to psychopathology. Primary journal articles, reviews, and book chapters are the readings for this seminar. PREREQ: Psych 100B and one of the following: Genes, Environment, and Human Behavior (Psych 345), Biological Psychology (Psych 3401), or Principles of Biology II (Biol 2970); OR Graduate Standing (prior coursework in psychology, neuroscience, and genetics is advised).

Credit 3 units. A&S IQ: NSM Arch: SSC Art: SSC

L33 Psych 4765 Inside the Disordered Brain: Biological Bases of the Major Mental Disorders

How do subtle disturbances in brain circuits lead to abnormal behavior and psychopathology? This course provides students with a working knowledge of our rapidly evolving understanding of brain circuits that create order in our social, emotional and cognitive worlds, and how disorder within these circuits leads to a broad range of psychopathology including depression, anxiety, phobias, PTSD, OCD, addiction, schizophrenia, psychopathy and violence. PREREQ: Psych 100B and one of the following: Biological Psychology (Psych 3401), Abnormal Psych (Psych 354), or a basic Biology/Neuroscience course. Credit 3 units. A&S IQ: NSM Arch: NSM Art: NSM

L33 Psych 488 The Cognitive Neuroscience of Film

To understand complex events in real life depends on perception, action and memory. To understand movies, people probably depend on similar psychological and neural mechanisms. This seminar uses results from psychology and neuroscience to try to better understand the experience of a movie viewer, and uses theory and practice to explore psychological hypotheses about perception. Prerequisite: Psych 360 or Psych 3604 or Psych 4604, or graduate standing in Psychology.

Credit 3 units. A&S IQ: NSM

L33 Psych 494 Behavioral Psychology Readings Group

This weekly journal-style readings course provides the opportunity to read and discuss seminal as well as current writings on the conceptual aspects of behavioral psychology and relevant research. Points of contact among behaviorism, cognitivism, and neuroscience and the natural lines of fracture will be examined. Prerequisites: Psych 100B and one of the following: Psych 361, Psych 360, or a Philosophy course. Credit 1 unit. A&S IQ: SSC Arch: SSC Art: SSC EN: S

L33 Psych 498 Study for Honors

Acceptance into the Honors Program is based on superior performance as evidenced by the student's record in undergraduate course work and the written agreement (Petition for Permission to Enroll) of a member of the faculty of the department (or other approved supervisor) to supervise an Honors project. The student must complete 6 units of Honors work (3 units of Psych 498 and 3 units of Psych 499), submit an acceptable written thesis, and be recommended by the department. Recommendation for an Honors degree is based on the evaluation of the written thesis and the student's overall performance as an undergraduate. Students in the Honors Program meet regularly in the Honors Seminar to discuss their research and become acquainted with the work of the other students. Psych 498 is a writing-intensive course. All students must meet with Dr. Sommers prior to registering. Prerequisite: Psych 301 or equivalent and permission of instructor. Credit 3 units. A&S IQ: SSC, WI EN: S

L33 Psych 499 Study for Honors

Acceptance into the Honors program is based on superior performance as evidenced by the student's record in undergraduate course work; the written agreement (Petition for Permission to Enroll) of a member of the faculty of the department (or another approved supervisor) to supervise an Honors project; and approval of the Honors Coordinator. The student must complete 6 units of Honors work (3 units of Psych 498 and 3 units of Psych 499), submit an acceptable written thesis, and be recommended by the department. Recommendation for an Honors degree will be based on the evaluation of the written thesis and the student's overall performance as an undergraduate. All students must meet with the Honors Coordinator prior to registering. Students in the Honors Program will meet regularly in the Honors Seminar to discuss their research and become acquainted with the work of the other students. Prerequisite: Psych 498. Credit 3 units. A&S IQ: SSC Art: SSC EN: S