Psychology

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Program of Study

The requirements of the BA in psychology, together with the department's broad range of course offerings, allow students to tailor programs to their own talents and goals. The program may serve as preparation for graduate work in psychology, in related fields (e.g., sociology, anthropology, linguistics), or in the communication and information sciences. Psychology courses are also suitable for biological sciences majors who are interested in the relations between physiology, mind, and behavior; as well as for mathematics majors who are interested in the applications of quantitative methods. Students who foresee a profession in law, public health, urban planning, personnel management, social work, education, or journalism also find the program valuable. Because research experience and contact with faculty are important requisites for professional development, students who plan a career in psychology are advised to contact a compatible faculty member by the end of their third year, with a view toward consultation and joint research.

Program Requirements

NOTE: The following revised requirements are in effect for students who matriculated September 2008 and after.

Statistics/Methodology Sequence. A coordinated two-quarter sequence covering statistical methods (PSYC 20100) and methodological issues (PSYC 20200) in psychology is typically taught Winter and Spring Quarters. Students may take STAT 22000 or a more advanced statistics course instead of PSYC 20100. Students should plan to take this sequence as early as possible in their studies.

Breadth Requirement. Students are required to take four of the following five courses, each of which will be offered every year:

PSYC 20300. Biological Psychology
PSYC 20400. Cognitive Psychology
PSYC 20500. Developmental Psychology
PSYC 20600. Social Psychology
PSYC 20700. Sensation and Perception

Additional Courses. At least six additional courses (for a total of twelve in the major) must be chosen from among the courses offered by the Department of

Psychology. Courses without a psychology number must be approved by the Curriculum Committee; petitions must be submitted to the undergraduate program chair. Only one undergraduate research course can count toward the twelve courses required of students who are majoring in psychology (PSYC 29200, 29700, and 29900). In addition to the six electives, students pursuing honors in psychology must also take the Honors Seminar (PSYC 29800), which will be offered during the Winter Quarter. Research courses can be taken for *P/F* grading, but all other courses must be taken for a quality grade. NOTE: Before registering for an elective, students should confirm that they have met any prerequisites for the course.

Research. Students are required to take Psychological Research Methods (PSYC 20200). Students are encouraged to gain additional experience by working on a research project under the guidance of a faculty member.

Calculus. Students are required to take two quarters of calculus as part of the College general education requirements.

NOTE: For psychology students, a maximum of three courses can be transferred into the major from outside the University of Chicago.

Summary of Requirements

General Education		MATH 13100-13200 or higher†
Major	2	PSYC 20100 (or STAT 22000† or above), and PSYC 20200
	4	four courses chosen from the following five courses: PSYC 20300, 20400, 20500, 20600, or 20700
	6	electives+
	12	

† *Credit may be granted by examination.*
\+ *Courses without a psychology number must be approved by the Curriculum Committee; petitions must be submitted to the undergraduate program chair.*

Grading. All courses in the major must be taken for quality grades except for the research course, which is available for either a quality grade or for *P/F* grading.

Honors. To qualify for honors, students must meet the following requirements: (1) Students must have a GPA of at least 3.0 overall, and a GPA of at least 3.5 in the major. (2) Students should arrange to write an honors paper with a faculty sponsor. Papers must represent a more substantial research project than the average term paper. After the paper has been approved by the faculty sponsor, the paper must then be read and approved by a second faculty member. (3) Students are required to take an Honors Seminar (PSYC 29800) in Winter Quarter of their third or fourth year. This is in addition to the 12 required courses for the major. It is expected that students will be actively working on the thesis project during the quarter they are taking the honors research seminar. (4) Students are required to present their findings in Spring Quarter of their fourth year at an honors day celebration. For details, visit *psychology.uchicago.edu*.

Specialized Courses of Study. Faculty members (or the undergraduate program chair) are available to help individual students design a specialized course of study within psychology. For example, particular course sequences within and outside of psychology may be designed for students who wish to pursue specializations in particular areas. These areas include, but are not limited to, cognitive neuroscience, language and communication, computational psychology, behavioral neuroscience and endocrinology, sensation and perception, and cultural psychology.

Double Majors. Students pursuing honors in more than one major should note that: (1) the student's thesis adviser for psychology cannot be the same person as his or her thesis adviser for the second major; and (2) the student must meet all the requirements listed in the preceding Honors section, including taking the Honors Seminar (PSYC 29800) and presenting at an honors day celebration.

Earl R. Franklin Research Fellowship. The Earl R. Franklin Research Fellowship is awarded to a third-year student who is majoring in psychology. It provides financial support during the summer before his or her fourth year to carry out psychological research that will be continued as a senior honors project. Applications, which are submitted at the beginning of Spring Quarter, include a research proposal, personal statement, transcript, and letter of recommendation.

Faculty

S. Beilock, J. Cacioppo, J. Cloutier, B. Cohler, J. Correll, J. Decety, D. Gallo, S. Goldin-Meadow, W. Goldstein, J. Huttenlocher, L. Kay, B. Keysar, K. Kinzler, S. C. Levine, J. Lucy, D. Margoliash, M. McClintock, D. McNeill, K. Morrison, H. Nusbaum, B. Prendergast, S. K. Shevell, R. A. Shweder, M. Silverstein, N. L. Stein, P. Visser, A. Woodward

Courses: Psychology (PSYC)

20000. Fundamentals of Psychology. This course introduces basic concepts and research in the study of behavior. Principal topics are sensation, perception, cognition, learning, motivation, and personality theories. *W. Goldstein. Winter.*

20100. Psychological Statistics. Psychological research typically involves the use of quantitative (statistical) methods. This course introduces the methods of quantitative inquiry that are most commonly used in psychology and related social sciences. PSYC 20100 and 20200 form a two-quarter sequence that is intended to be an integrated introduction to psychological research methods. PSYC 20100 introduces explanatory data analysis, models in quantitative psychology, concept of probability, elementary statistical methods for estimation and hypothesis testing, and sampling theory. PSYC 20200 builds on the foundation of PSYC

20100 and considers the logic of psychological inquiry and the analysis and criticism of psychological research. *J. Correll. Autumn.*

20200. Psychological Research Methods. *PQ: PSYC 20100 or STAT 22000, or consent of instructor.* This course introduces concepts and methods used in behavioral research. Topics include the nature of behavioral research, testing of research ideas, quantitative and qualitative techniques of data collection, artifacts in behavioral research, analyzing and interpreting research data, and ethical considerations in research. *K. Morrison. Spring.*

20300. Biological Psychology. *PQ: Some background in biology and psychology. This course does not meet requirements for the biological sciences major.* What are the relations between mind and brain? How do brains regulate mental, behavioral, and hormonal processes; and how do these influence brain organization and activity? This course introduces the anatomy, physiology, and chemistry of the brain; their changes in response to the experiential and sociocultural environment; and their relation to perception, attention, behavioral action, motivation, and emotion. *L. Kay. Winter.*

20400. Cognitive Psychology. Viewing the brain globally as an information processing or computational system has revolutionized the study and understanding of intelligence. This course introduces the theory, methods, and empirical results that underlie this approach to psychology. Topics include categorization, attention, memory, knowledge, language, and thought. *I. Lyons, I. McDonough. Autumn, Winter.*

20500. Developmental Psychology. (=CHDV 25900/30700) This course introduces developmental psychology, stressing the development and integration of cognitive, social, and perceptual skills. *K. Kinzler. Spring.*

20600/30600. Social Psychology. (=CHDV 26000) *PSYC 20000 recommended.* This course examines social psychological theory and research that is based on both classic and contemporary contributions. Topics include conformity and deviance, the attitude-change process, social role and personality, social cognition, and political psychology. *W. Goldstein. Autumn.*

20700/30700. Sensation and Perception. This course centers on visual and auditory phenomena. Aside from the basic sensory discriminations (i.e., acuity, brightness, loudness, color, pitch), more complex perceptual events (e.g., movement, space) are discussed. The biological underpinnings of these several phenomena are considered, as well as the role of learning in perception. *S. Elliott. Winter.*

20850. Introduction to Human Development. (=CHDV 20000) This course introduces the study of lives in context. The nature of human development from infancy through old age is explored through theory and empirical findings from various disciplines. Readings and discussions emphasize the interrelations of biological, psychological, and sociocultural forces at different points of the life cycle. *B. Cohler. Autumn.*

21100. Human Development/Research Design in the Social Sciences. (=CHDV 20100) This course exposes students to a variety of examples of well-designed social research addressing questions of great interest and importance. One goal is to clarify what it means to do "interesting" research. A second goal is to appreciate the features of good research design. A third goal is to examine the variety of research methodologies in the social sciences, including ethnography, clinical case interviewing, survey research, experimental studies of cognition and social behavior, behavior observations, longitudinal research, and model building. The general emphasis is on what might be called the aesthetics of well-designed research. *M. Keels. Winter.*

21504/31504. The Clinical Freud: From Case History to Psychological Theory. (=CHDV 21502/31502, FNDL 27503) *PQ: Required of new Fundamentals majors; open to others with consent of instructor. Prior knowledge of Freud welcomed but not required.* This course is a close reading of Freud's case studies with a focus on: (1) Freud's mode of reasoning regarding life-history and the origin and course of personal distress, and (2) the implications for psychoanalytic understanding of the human condition that arise from his work with these cases that were written across the years 1900 to 1918, the period of work in which he developed the "theory" of the unconscious, including both wish or desire and the manner in which this wish appears as a "symptom" in consciousness. *B. Cohler. Winter.*

22104/32104. The Second Half of Life: Person and Social Context. (=CHDV 20104/30104) This course provides an overview of lives in contemporary society from the middle adult years through oldest age and from both psychological and social perspectives. The focus is on expected transitions across the course of life in terms of such major adult roles as intimate ties (marriage/partnership), work and vocation, and generativity. We consider issues of social change and the ways in which loss and change alter sense of self, morale and interpersonal relations. We also consider the transition both from settled adulthood to mid-life and then from mid-life to older adulthood and the management of meaning among the oldest old or the "survivors" of their generation. *B.Cohler. Spring.*

22750. Developmental Psychopathology. (=BIOS 29280) *This course does not meet requirements for the biological sciences major.* This advanced course focuses on the development of mental disorders that have their onset in infancy, childhood, or adolescence from the perspective of developmental psychopathology. Developmental psychopathology is a field that lies at the interface of clinical and developmental psychology within which the aim is to identify the earliest deviations from normative developmental processes that likely lead to the development of psychopathology. By incorporating the study of basic biological and psychological processes into the study of psychopathology, the identification of earliest markers, and ultimately causal factors, may be achieved. *K. Keenan. Spring.*

23000/330000. Cultural Psychology. (=ANTH 21500/35110, CHDV 21000/31000) *PQ: Third- or fourth-year standing.* There is a substantial portion

of the psychological nature of human beings that is neither homogeneous nor fixed across time and space. At the heart of the discipline of cultural psychology is the tenet of psychological pluralism. Research findings in cultural psychology raise provocative questions about the integrity and value of alternative forms of subjectivity across cultural groups. This course analyzes the concept of "culture" and examines ethnic and cross-cultural variations in mental functioning, with special attention to the cultural psychology of emotions, self, moral judgment, categorization, and reasoning. *R. Shweder. Autumn.*

23200/33200. Introduction to Language Development. (=CHDV 23900/31600, LING 21600/31600) This course addresses the major issues involved in first-language acquisition. We deal with the child's production and perception of speech sounds (phonology), the acquisition of the lexicon (semantics), the comprehension and production of structured word combinations (syntax), and the ability to use language to communicate (pragmatics). *S. Goldin-Meadow. Winter.*

23249. Animal Behavior. (=BIOS 23249, CHDV 23249, HDCP 41650) *PQ: Completion of the general education requirement in the biological sciences.* This course introduces the mechanism, ecology, and evolution of behavior, primarily in nonhuman species, at the individual and group level. Topics include the genetic basis of behavior, developmental pathways, communication, physiology and behavior, foraging behavior, kin selection, mating systems and sexual selection, and the ecological and social context of behavior. A major emphasis is placed on understanding and evaluating scientific studies and their field and lab techniques. *S. Pruett-Jones (even-numbered years), J. Mateo (odd-numbered years). Winter.*

23300/33300. The Social Brain. *J. Decety. Spring.*

23650. Defining Wisdom. Psychology has attempted to understand intelligence for a relatively long time, but the concept of wisdom has largely eluded scientific inquiry. Understanding wisdom has largely been left to philosophers, theologians, and other areas of the humanities. In recent years, however, there has been interest in trying to understand wisdom using the methods of science. This class examines research on wisdom. We discuss some relevant philosophy and consider in more detail fundamental psychological processes that may underlie wisdom, as well as research on the psychology and neuroscience of wisdom. The course is conducted as a seminar in which students read relevant books and papers on wisdom. Students present and discuss papers on topics ranging from classical notions of wisdom to modern neuroscience of wisdom and animal models. Course requirements include class presentations, weekly writing assignments, and a final paper. *H. Nusbaum. Autumn.*

PSYC 23750. Social Isolation and Loneliness. Social isolation can be as harmful to your health as smoking or a sedentary lifestyle. A large part of this effect is driven by the subjective sense of social isolation we call loneliness. New research shows that human beings are simply far more intertwined and interdependent—physiologically as well as psychologically—than our cultural prejudices have allowed us to acknowledge. The course is designed to survey the growing literature on the causes and consequences of loneliness, and on what it says about who we are as a species. "If you want to go fast," says an African proverb, "go alone. If you want to go far, go together." *J. Cacioppo. Spring.*

24000/31200. Systems Neuroscience. (=BIOS 24205) *PQ: BIOS 24204 or consent of instructor.* This course meets on of the requirements of the neuroscience specialization. This course introduces vertebrate and invertebrate systems neuroscience with a focus on the anatomy, physiology, and development of sensory and motor control systems. The neural bases of form and motion perception, locomotion, memory, and other forms of neural plasticity are examined in detail. We also discuss clinical aspects of neurological disorders. *M. Hale, D. Freedman. Spring.*

24701/34701.The Development of Emotional and Social Understanding. (=CHDV 24701/34700) This course focuses on the development of emotional and social understanding from infancy through adolescence. We discuss questions such as: How do we conceptualize and define emotional understanding? How are moods and emotions related to each other? How good is emotional memory? Do young children have the capabilities to remember emotional events accurately? How does emotional understanding reflect children's understanding of themselves and other people? Are emotional expressions accurate predictors of behavior in subsequent situations? *N. Stein. Spring.*

24850. Cross-Cultural Approaches to Learning and Instruction. *N. Stein. Winter.*

25100. Decision Making and Communication. We constantly make decisions in life by determining our preferences and choosing among alternatives. How do we make decisions? What are the rules that guide us? How do we negotiate? We consider how the way we gather information affects our judgment, and how the way we frame problems affects our perceptions and the solutions to the problems. We also consider intuitive predictions and consider the way we learn from our experience. While this course focuses on individual decision making and communication, we also learn about the negotiation of a joint outcome and how the biases of an individual affect the process. *B. Keysar. Autumn.*

25700. The Psychology of Negotiation. The goal of this course is to understand the structure of different negotiations and the psychology that governs their processes and outcomes. We observe how trust, reciprocity, fairness, cooperation, and competition can affect our ability to benefit from an exchange or contribute to the escalation of conflict. To better understand the psychology behind the negotiation process, students learn through engaging in negotiation and relating these experiences to research findings. *B. Keysar. Winter.*

26200/42200. Research Seminar in Research in Behavioral Endocrinology. (=CHDV 42200, EVOL 42200) *PQ: Consent of instructor.* Ongoing research in

the lab of Professor McClintock is discussed. *M. McClintock. Autumn, Winter, Spring.*

29200. Undergraduate Reading in Psychology. *PQ: Students are required to submit the College Reading and Research Course Form. Available for either quality grades or for* P/F *grading. Autumn, Winter, Spring.*

29700. Undergraduate Research in Psychology. *PQ: Students are required to submit the College Reading and Research Course Form. Available for either quality grades or for* P/F *grading. Autumn, Winter, Spring.*

29800. Honors Seminar. *PQ: Open to third- or fourth-year students who are majoring in psychology and have begun their thesis project. Available for either quality grades or for* P/F *grading.* This course is a reading and discussion of general papers on writing and research, and individual students present their own projects to the group. A literature review, data from ongoing or completed empirical projects, or portions of the thesis paper itself can be presented. Students are expected to give thoughtful feedback to others on their presentations and written work. *J. Cloutier. Winter.*

30300 Advanced Topics in Biological Psychology. What are the relations between mind and brain? How do brains regulate mental, behavioral, and hormonal processes, and how do these influence brain organization and activity? This course provides an introduction to the anatomy, physiology, and chemistry of the brain; their changes in response to the experiential and sociocultural environment; and their relation to perception, attention, behavior, action, motivation, and emotion. *L. Kay. Winter.*

30400. Cognitive Psychology. Viewing the brain globally as an information processing or computational system has revolutionized the study and understanding of intelligence. This course introduces the theory, methods, and empirical results that underlie this approach to psychology. Topics include categorization, attention, memory, knowledge, language, and thought. *D. Gallo. Spring.*

32750. Advanced Topics in Chronobiology. The course considers biological rhythms evident in animals and humans, with an emphasis on daily and annual cycles. There is an emphasis on the role of the nervous and endocrine systems of mammals and birds in relation to behavioral rhythms of eating, drinking, sleeping, sex activity, hibernation, migration, seasonal affective disorders, menstrual and estrous cycles. *B. Prendergast. Autumn.*

34400. Computational Neuroscience III: Cognitive Neuroscience. (=BIOS 24223, CPNS 332000, ORGB 34600) This course is concerned with the relationship of the nervous system to higher order behaviors (e.g., perception, action, attention, learning, memory). Psychophysical, functional imaging, and electrophysiological methods are introduced. Mathematical and statistical methods (e.g., neural networks, information theory, pattern recognition for studying neural encoding in individual neurons and populations of neurons) are

discussed. Weekly lab sections allow students to program cognitive neuroscientific experiments and simulations. *N. Hatsopoulos. Spring.*

34500. Developmental and Neuroscience Perspectives on Social Cognition. In this course we explore social cognition from two perspectives: developmental psychology and social developmental neuroscience. We aim to discuss existing points of contact between the two literatures, as well as places where points of contact might be made. Topics include (though are not limited to) theory of mind, agency, intentionality, empathy, morality, social categorization, and prejudice. *J. Decety, K. Kinzler. Winter.*

38300. Attention. This course covers basic topics in the area of attention, including orienting responses, selective and divided attention, resource limitations, and cognitive load. We discuss basic research methods in attention, mathematical and computational models of attention, and neurophysiological research on attention. We also consider theoretical controversies and recent advances in our understanding of attention and its role in cognitive processing. *H. Nusbaum. Autumn.*