# 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 take the Honors Seminar (PSYC 29800), which is offered each 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.

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

#### Summary of Requirements

*†* 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. 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, R. D. Bock, A. Bookstein, N. M. Bradburn, R. A. Butler, J. Cacioppo, B. Cohler,

J. Correll, J. Decety, D. Gallo, S. Goldin-Meadow, W. Goldstein, S. Grossman, E. Hamp,

J. Huttenlocher, P. W. Jackson, L. Kay, B. Keysar, K. Kinzler, S. C. Levine, J. Levy,

F. F. Lighthall, J. Lucy, D. Margoliash, M. McClintock, D. McNeill, H. Nusbaum,

J. M. Pokorny, B. Prendergast, T. Regier, M. J. Rosenberg, S. K. Shevell, R. A. Shweder,

M. Silverstein, S. Small, V. C. Smith, N. L. Stein, P. Visser, B. D. Wright

### 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. *D. Gallo, B. Prendergast. 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 the quantitative psychology, concept of probability, elementary statistical methods for estimation and hypothesis testing, and sampling theory. PSYC 20200 builds on the

500 PSYCHOLOGY (SSCD)

foundation of PSYC 20100 and considers the logic of psychological inquiry and the analysis and criticism of psychological research. *L. Kay. 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. *H. Nusbaum. Spring.* 

**20300/30300.** 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. B. Prendergast, L. Kay. Winter.

**20400/30400.** 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. *S. Beilock, D. Gallo. Autumn.* 

**20500/30500.** Developmental Psychology. (=CHDV 25900/30700) This course introduces developmental psychology, stressing the development and integration of cognitive, social, and perceptual skills. *K. Kinzler. Autumn.* 

**20600/30600.** Social Psychology. (=CHDV 26000/36000) *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. *H. Nusbaum. 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 Designs in Social Science. (=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. *Spring.* 

**21109.** Concepts and Categories. Despite how central categories and concepts are in theories of cognition, there is a lack of consensus within the scientific community as to the nature of concepts and categories. This course introduces the ever-growing dialogue regarding concepts and categories. Students analyze both classical and current theories of categorization. *S. Heald. Spring.* 

**21110. Stereotyping and Prejudice.** This course examines the constructs of stereotyping and prejudice through the lens of experimental social psychology. We systematically review and analyze theories and empirical research aimed at understanding the development, causes, moderators, and consequences of stereotyping and prejudice. *D. Ma. Spring.* 

**22650. Problems in the Study of Sexuality.** (=GNDR 10200, HUMA 22800) This course focuses on histories and theories of sexuality: gay, lesbian, heterosexual, and otherwise. This exploration involves looking at a range of materials from anthropology to the law and from practices of sex to practices of science. *S. Michaels, Autumn; B. Cohler, Winter.* 

**22750. Developmental Psychopathology.** (=BIOS 29280) For course description, see Biological Sciences. *K. Keenan, Spring.* 

**23000/33000.** 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 thus 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 years), J. Mateo (odd years). Winter.* 

**23300.** Social Neuroscience of Empathy and Sympathy. How do we understand each other? Why and how do we care about others? If we put ourselves into the mental shoes of another person, how closely do we really feel what she feels? What cognitive and neural mechanisms account for a sense of self and other? These questions are among those addressed in this course through an interdisciplinary approach that includes developmental science, social psychology, and cognitive neuroscience. *J. Decety. Spring.* 

**24000/31100.** Systems Neuroscience. (=BIOS 24205) PQ: BIOS 24204 or 24236, or consent of instructor. This course meets one 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.* 

**24300/39300.** Qualitative Methods in Social Science. (=CHDV 24300/39300) This seminar explores the variety of qualitative methods used in social science study. Perspectives surveyed include field study, including the Chicago studies of social disorganization. "Grounded Theory," ethnography and study of culture, and narrative and life-story approaches to study of person and social life. Attention is devoted to issues of method such as reliability and validity, implications for philosophy of social science study, portrayal of both person and context or setting, and to both the complex interplay of observer and observed, and "reflexivity" in the human sciences. *B. Cohler. Spring.* 

**24600/34600.** Sexual Identity, Life Course, and Life Story. (=CHDV 24600/34600, GNDR 20800/30800, HIPS 26900) This course considers gay, lesbian, and bisexual lives from childhood through later life. Beginning with study of the concept of sexual identity, this course explores what is known about biological factors presumed relevant to emergence of same gender sexual orientation. We also discuss social circumstances and aspects of personal development salient among those persons whose self-identify is or becomes gay, lesbian, or bisexual across the years of childhood, adolescence, and young adulthood, as well as in middle and later life. We focus on such issues as gender atypical interests, the contribution of

familial circumstances, and the role of the "coming-out" story. We also explore such issues as intimacy, partnership, parenthood, and aging among bisexual men and women, lesbians, and gay men. We conclude with considerations and limitations of "queer theory" to our understanding of sexual identity and life story. *B. Cohler. Winter. Not offered 2009–10; will be offered 2010–11.* 

**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.* 

**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. 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. This course may be taken for one or two quarters, depending on the size of the project. 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. We read and discuss 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 provide feedback to others on their presentations and written work. S. Levine. Winter.

**29900.** Honors Paper Preparation 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. This course is not a requirement for doing an honors paper. This course may be taken for one or two quarters, depending on the size of the project. Autumn, Winter, Spring.

**36800.** Gestural Communication in Nonhuman and Human Primates. (=CHDV 36800) This seminar explores the communicative use of nonverbal behavior in human and nonhuman primates. Topics include evolutionary, comparative, and cross-cultural aspects of facial expressions and gestures; comparative and cognitive aspects of eye gaze and pointing; the relation between nonverbal behavior and emotion; the development of nonverbal communication in children; the contextual usage and information content of nonverbal expressions; the relation between nonverbal gestures and speech; the neural control of facial expressions; and the perception and processing of nonverbal information in the brain. *S. Goldin-Meadow, D. Maestripieri. Autumn.*