

Psychology

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Program of Study

The requirements of the B.A. 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. Psychology may interest students who are still focusing their goals and are considering the social sciences or a public service profession. 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

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

Breadth Requirement. Students are required to take three 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 eleven in the major) must be chosen from among the courses offered by the Department of Psychology. For students pursuing honors in psychology, one of the elective courses should be an Honors Seminar (PSYC 29800), which is offered each Winter Quarter. A maximum of three research courses can count toward the eleven courses required of a psychology major (PSYC 29700, 29800, and 29900). 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 Experience. Required research experience can be obtained by working on a research project under the guidance of a faculty member or by taking a course with a research component other than the Methodology course. (A list of such courses is available in Br 109 and on the departmental Web site at <http://psychology.uchicago.edu>.)

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

<i>General Education</i>		MATH 13100-13200 or higher†
<i>Major</i>	2	PSYC 20100 (or STAT 22000† or above), and PSYC 20200
	3	three courses chosen from the following five courses: PSYC 20300, 20400, 20500, 20600, or 20700
	<u>6</u>	electives* +
	11	

† *Credit may be granted by examination.*

* *A minimum of one of the six required additional psychology courses must have a research component. See Research Experience section.*

+ *Courses without a psychology number must be approved by the Curriculum Committee.*

Grading. All courses in the major must be taken for quality grades except for research courses, which are available for either quality grades 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 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 as one of the three possible research courses. 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 the departmental Web site at <http://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.

Faculty

S. Beilock, R. D. Bock, A. Bookstein, N. M. Bradburn, D. Bradley, R. A. Butler, J. Cacioppo, B. Cohler, J. Correll, J. Decety, D. Gallo, S. Goldin-Meadow, W. Goldstein, S. Grossman, E. Hamp, M. Henderson, J. Huttenlocher, P. W. Jackson, L. Kay, B. Keysar, 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, S. Small, R. A. Shweder, M. Silverstein, 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. *J. Cacioppo. Autumn.*

20100. Psychological Statistics. Psychological research typically involves the use of quantitative (statistical) methods. The purpose of this course is to introduce 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 conceived as 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

foundation of PSYC 20100 and considers the logic of psychological inquiry and the analysis and criticism of psychological research. *J. Correll. Winter.*

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. *P. Visser. Spring.*

20300. Biological Psychology. (=BIOS 29300) 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 is an introduction to developmental psychology that stresses the development and integration of cognitive, social, and perceptual skills. *Discussion section required. Spring.*

20600/30600. Social Psychology. (=CHDV 26000/36000) *PSYC 20000 recommended.* This course examines social psychological theory and research 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. Golstein. 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. *D. Bradley. Winter.*

21100. Human Development/Research Designs in Social Science. (=CHDV 20100) This course aims to expose 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.*

21700/41750. Developmental Biopsychology. (=CHDV 22001/44450) *PQ: PSYC 20000 or completion of the general education requirement in the biological sciences.* This course is an introduction to biological and physiological analysis of behavior and to principles of neural and endocrine integration. We use a developmental emphasis with experimental and clinical literature. *M. McClintock. Spring.*

21950/31900. Language, Culture, and Thought. (=ANTH 27605/37605, CHDV 21901/31901, HDCP 41060) *J. Lucy. Autumn.*

22250. Windows to the Social Mind. *J. Decety. Spring.*

22500. Cognitive Development. *PQ: Consent of instructor.* This course examines the intellectual development of the child. Topics include the growth of the child's understanding of the physical and social world, as well as the development of memory and thought processes. *J. Huttenlocher. Spring.*

22850. Environmental Factors in Intellectual 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). *J. Huttenlocher. Winter.*

23000/33000. Cultural Psychology. (=CHDV 23000/31000, HDCP 41060) *PQ: Third- or fourth-year standing and consent of instructor.* At the heart of the discipline of cultural psychology is the tenet of psychological pluralism, which states that the study of "normal" psychology is the study of multiple psychologies. Research findings in cultural psychology thus raise provocative questions about the integrity and value of alternative forms of subjectivity across cultural groups. This course is an analysis of the concept of "culture." We also examine 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. S. Pruett-Jones (even years), J. Mateo (odd years). Winter.*

24300. Qualitative Methods in Social Sciences. *B. Cohler. Winter.*

24600. Sexuality, Identity, and the Life Course. (=CHDV 24600/34600, GNDR 20800/30800, HIPS 26900, ISHU 35900, SOCS 25900) Beginning with a consideration of the shifting historical context of narratives in our culture concerning sexuality, this course explores the concept of sexual identity, its impact on human development across the course of life, and its expression in the personal narratives. In addition to addressing the role of generational or historical change in shaping understandings of sexuality, we consider recent empirical and theoretical investigations of the cultural construction of sexuality, including the possible contributions of “queer theory.” We then move on to a consideration of the developmental processes relevant to an understanding of sexuality. *B. Cohler. 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 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. Autumn.*

24800/34800. Complex Language Acquisition and Schooling. *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.*

25601/35601. Population Coding and the Perceptual Brain. *D. Bradley. Spring.*

25700. The Psychology of Negotiation. The goal of this course is to understand

the structure of different negotiations and the psychology that governs the processes and outcomes of a negotiation. 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.*

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.*

27000. Judgment and Decision Making. (=CHDV 27000) This course provides an overview of topics related to the psychology of decision making and judgment. Topics are drawn from three broad areas: the ends that people pursue (e.g., happiness, meaning), the means with which people pursue them (e.g., processes of self-regulation, strategies of management and coping, planning, problem solving, evaluation, choice), and limitations of deliberative decision making (e.g., lack of self-knowledge, unconscious or emotional processes that are difficult to control, external constraints). *W. Goldstein. Winter.*

27500. Introduction to the Psychology of Language. This course addresses major topics in psycholinguistics and language acquisition: how people speak, how people understand, and language systems. We consider issues such as speech production and perception, the concept of meaning, the development and organization of the mental lexicon, sentence processing, and conversational rules. *T. Regier. Winter.*

28700. Social Cognition Research Seminar. Students participate in research in the lab of Professor Epley. *N. Epley. Autumn, Winter, Spring.*

28800/38800. Information Theory and Coding. (=CMSC 24000) *PQ: Consent of instructor.* This course is an introduction to the mathematical theory of information with emphasis on coding, especially the development of efficient codes. Topics include an introduction to coding, quantification of information and its properties, Huffman codes, arithmetic codes, L to Z, and other adaptive coding techniques and specific applications. *A. Bookstein. Autumn*

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. Students who wish to pursue honors are required to take this honors seminar in Autumn or Winter Quarter of their fourth year. This seminar counts as one of the three reading and research credits. 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 are expected to give thoughtful feedback to others on their presentations and written work. M. Henderson, Autumn; D. Gallo, 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.*

30300. 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 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.*

30400. Cognitive Psychology. (=PPHA 39401) 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.*

31600. Biopsychology of Sex Differences. (CHDV 30901) *PQ: Introductory course in biology or biological psychology.* This course explores the biological basis of mammalian sex differences and reproductive behaviors. We consider a variety of species (including humans), addressing the physiological, hormonal, ecological, and social foundations of sex differences. *J. Mateo. Winter.*

32300. Cognition and Social Neuroscience. *J. Cacioppo, H. Nusbaum. Winter.*

32500. Topics in Cognitive Development. This course examines the intellectual development of the child. Topics include the growth of the child's understanding of the physical and social world, and the development of memory and thought processes. *J. Huttenlocher. Spring.*

37000-37100-37200. Mind and Biology Proseminar. (=CHDV 38000-38100-38200) *Credit is granted only in Spring Quarter after successful completion of the year's work.* Topics relate to mind and biology. *The seminar series meets three to four times a quarter. D. Gallo, L. Kay, D. Maestriepieri, M. McClintock. Autumn, Winter, Spring.*

37155. Neural Oscillations. *L. Kay. Spring.*

37300. Experimental Design I. *Must be taken in sequence with STAT 22600.* This course covers topics in research design and analysis. They include multifactor, completely randomized procedures and techniques for analyzing data sets with unequal cell frequencies. Our emphasis is on principles, not algorithms, for experimental design and analysis *Offered in even-numbered years only.* *W. Goldstein. Spring.*

37500. Psychology of Language. This course addresses major topics in psycholinguistics and language acquisition: how people speak, how people understand, and language systems. We consider issues such as speech production and perception, the concept of meaning, the development and organization of the mental lexicon, sentence processing, and conversational rules. *T. Regier. Winter.*

39700-39800-39900. Topics in Experimental Social Psychology. *Credit is granted only in Spring Quarter after successful completion of the year's work.* This course is offered as a speaker series that discusses readings and issues in social psychology. *J. Cacioppo. Autumn, Winter, Spring.*