ChatGPT

# University of Chicago Undergraduate Psychology Curriculum

## Year 1 (Freshman)

- **Fundamentals of Psychology (PSYC 20000)** – Survey course covering core domains [1]. Introduces brain–behavior basics (sensation, perception, cognition, learning, motivation) and classic experiments [1]. Students often use an introductory text (e.g. OpenStax *Psychology*) and learn that all behavior is rooted in neural processes (sensation, memory, emotion, etc. are brain-based [2]). This course builds a conceptual foundation for later courses in cognition and neuroscience.
- **Calculus I & II (MATH 13100/13200)** – Required general-education sequence. Provides mathematical foundations (limits, derivatives, integrals) and reasoning skills needed for statistical analysis [3]. Mastery of calculus allows students to understand probability and change, which are essential for PSYC 20250 (statistics) in later years [3].
- **Social Psychology (PSYC 20600)** – Often taken early as a breadth requirement. Examines how individuals think about, feel about, and relate to others [4] [5]. Topics include social perception, attitudes and persuasion, conformity, group processes, and political psychology [5]. Readings typically include classic and modern social psychology studies, training students in causal inference and critical analysis (skills that complement early statistics training).
- **Liberal Arts Integration:** First-year students also complete the College's Core curriculum (Great Books, writing, and quantitative reasoning). Courses in philosophy, ethics, and humanities sharpen critical thinking and argumentative skills, underpinning later work on research ethics and theoretical models (for example, PSYC 20200 will explicitly address IRB and ethical standards [6]).

## Year 2 (Sophomore)

- **Statistical Concepts (PSYC 20250, formerly 20100)** – Introductory statistics for psychology [7]. Covers descriptive statistics, probability, sampling and estimation, and inferential tests (t-tests, chi-square, ANOVA) [7] [8]. Key texts might include Agresti & Finlay or OpenIntro materials. Students learn to compute and interpret p-values and confidence intervals, laying groundwork for all empirical studies. (It is recommended students complete both calculus quarters before or alongside this course [3].)
- **Research Methods (PSYC 20200)** – Intensive methods and design course [6]. Teaches how to formulate hypotheses, design experiments or surveys, collect data, and analyze results [6] [9]. Students complete case studies and draft IRB protocols, emphasizing quantitative and qualitative techniques and ethical issues [6]. Core concepts include validity, reliability, experimental control, and writing grant-style proposals (the course culminates in a mock research proposal) [9]. This course integrates formal research training with previous statistics knowledge.
- **Biological Psychology (PSYC 20300)** – Introduction to neuroscience and behavior [10]. Covers anatomy, physiology and chemistry of the brain and nervous system, and how these change with experience [11]. Students study neural mechanisms of perception, attention, action, motivation, and emotion [11]. Typical readings include chapters from Pinel's *Biopsychology* or similar texts, and papers

on neural communication. This course often runs concurrently with an Introductory Biology or *Foundations of Neuroscience* course (e.g. PSYC 24450 [12]) to integrate biological sciences with behavior.

- **Developmental Psychology (PSYC 20500)** – Survey of cognitive and social development in childhood [13]. Focuses on infancy through early childhood, covering major theories (Piaget, Vygotsky, etc.) and empirical findings about how children learn number concepts, moral reasoning, language, and social behavior [13]. Readings include developmental texts (e.g. Berk) and classic studies (e.g. on attachment, theory of mind). Students learn that early environments and experience shape later cognition and behavior, a theme that connects biology, cognition, and education.
- **Broad Requirements:** By the end of year 2, majors complete the two-quarter calculus requirement and usually finish the stats/methods sequence. Students may also begin electives like computer programming (e.g. **PSYC 23030: Python for Behavioral Sciences**), which supports data analysis skills, and continue core humanities courses (e.g. critical writing seminars, ethical reasoning) that reinforce the ability to critique research.

## Year 3 (Junior)

- **Cognitive Psychology (PSYC 20400)** – Fundamental course on human thinking [14]. Views the brain as an information-processing system, covering categorization, attention, memory, language, and decision-making [14] [15]. Students explore classic models of memory (short-term, long-term, working memory), problem-solving strategies, and biases. Readings often come from cognitive textbooks (e.g. Sternberg, Goldstein) and research articles. By now students can apply research methods to cognitive experiments and interpret findings statistically.
- **Remaining Core Area (fourth breadth course)** – If not already done, students take one more of the five core areas (Biological, Social, Developmental, Cognitive, or Sensation/Perception) [16]. For example, a junior might enroll in **PSYC 20700 (Sensation & Perception)** if still needed (see below) or re-take any if prerequisites are now met. The goal is to complete four breadth courses by end of junior year.
- **Advanced Psychology Electives:** The six required electives are typically taken in the last two years. In junior year students might choose courses such as:
- **PSYC 24450 (Foundations of Neuroscience)** – Introduces neural cell anatomy, sensory/motor pathways, and cognition from a neuroscience perspective [12].
- **PSYC 23800 (Learning & Memory)** – Advanced seminar on theories of learning (classical/operant conditioning, statistical learning) and memory (implicit vs. explicit, models of memory systems).
- **Area seminars (e.g. PSYC 25500 Cognitive Aging, PSYC 25101 Decision Making)** – Specialized topics in cognition or social behavior.
  Electives deepen knowledge of subfields (e.g. psychopathology, communication, computational models) and often include primary research articles.
- **Research Experience:** Juniors are strongly encouraged to conduct independent research [17]. Many take **PSYC 29700/29200 (Undergrad Research/Reading)** or enroll in lab courses, gaining hands-on methodology skills. In parallel they may take advanced statistics (e.g. regression, longitudinal methods) to handle real data. Research participation integrates all prior learning (design, ethics, analysis) and often leads to an honors project.

## Year 4 (Senior)

- **Senior Seminar / Honors Thesis (PSYC 29800)** – Honors-track students take the senior seminar in Winter of their fourth year [18]. This course focuses on formulating, conducting, and writing up an original research project. Students refine hypotheses, apply advanced statistical methods, and prepare a written thesis under a faculty advisor. Senior spring features an **Honors Day presentation** of the thesis findings [18]. Non-honors students may instead take an independent study or capstone course, but all seniors integrate their cumulative knowledge through a major project.
- **Capstone Electives:** Remaining electives are taken. Examples include:
- **PSYC 23800: Learning & Memory** (if not already taken), covering models like dual-store memory and neural substrates of learning.
- **PSYC 23660: The Disordered Mind** – Seminar on classification and causation of mental disorders [19]. Integrates biological, psychological, and social perspectives on disorders (e.g. depression, schizophrenia, developmental disorders) [19].
- Electives in any area (e.g. social cognition, applied psychology, ethics in science). These advanced courses involve reading cutting-edge research and synthesizing models from previous courses.
- **Integration of Knowledge:** By senior year students have a clear, detailed "mental model" of psychology. They can trace a behavior from sensory input (Sensation/Perception) through cognitive processing (Cognitive Psych) to social influence (Social Psych), all measured with sound methods and statistics. Their senior work explicitly combines earlier tools: designing experiments (Methods), analyzing data (Statistics), and situating results in broader ethical and theoretical context (Humanities). The result is a cohesive foundation for a future psychologist or researcher.

**Sources:** The UChicago psychology major requires research methods and statistics by year 3, four of five core-area courses (20300–20700), and six additional electives [20] [21]. Course descriptions and learning goals are drawn from the department catalog and standard texts [21] [22]. Core concepts (e.g. neural bases of behavior [2], cognitive processing [15], social influence [4]) are documented in contemporary psychology literature. All citations refer to UChicago course requirements and authoritative psychology sources.

---


[1] [5] [6] [7] [10] [11] [13] [14] [18] [21] [22] Psychology < University of Chicago Catalog
https://www.classes.cs.uchicago.edu/archive/2015/winter/12200-1/new.collegecatalog.uchicago.edu/thecollege/psychology/index.html

[2] 2.1 Biological Psychology – Introduction to Psychology – 1st Canadian Edition
https://opentextbc.ca/introductiontopsychology/chapter/2-1-biological-psychology-structuralism-and-functionalism/

[3] [8] [9] [12] [19] Courses | Department of Psychology
https://psychology.uchicago.edu/undergraduate-major/courses

[4] 12.1 What Is Social Psychology? - Psychology 2e | OpenStax
https://openstax.org/books/psychology-2e/pages/12-1-what-is-social-psychology

[15] 7.1 What Is Cognition? - Psychology 2e | OpenStax
https://openstax.org/books/psychology-2e/pages/7-1-what-is-cognition

[16] [17] [20] Requirements | Department of Psychology
https://psychology.uchicago.edu/undergraduate-major/requirements