Fall 2024
UNC Department of Psychology and Neuroscience
Undergraduate Courses

For the complete list of undergraduate Psychology courses, please refer to the Undergraduate University Catalog
For the complete list of undergraduate Neuroscience courses, please refer to the Undergraduate University Catalog

First-Year Seminars (FYS)

PSYC 054: First-Year Seminar: Families and Children (3)
Instructor: Dr. Shauna Cooper (001)
This course will consider family from a life-course perspective and family influences on child development. Research and theory concerning divorced and step families, single parents, gay and lesbian parents, and family processes that shape children's development will be examined.

PSYC 058H: First-Year Seminar: The Psychology of Mental States and Language Use (3)
Instructor: Dr. Frederick Wiss (001)
Examines how language use is affected by one's reasoning about the mental activities of others. We will examine the development of language, adult language use, and the language of autistic individuals, who are known to have difficulty reasoning about others' minds. This seminar will follow a discussion format. Honors version.

Lower-Level Undergraduate Courses (PSYC 100-399)

PSYC 101: General Psychology (3)
Instructor: Dr. Jeannie Loeb (001), Dr. Ndidi Adeyanju (002), Dr. Frederick Wiss (01F & 02F)
PSYC 101 is a prerequisite for all psychology courses. This course will give an overview of the many different scientific perspectives from which to understand behavior, including the biological, cognitive, developmental, social and psychopathological perspectives. This course is offered in two formats: a large-course format and as a First-Year Launch.

NSCI 175: Introduction to Neuroscience (3)
Instructor: Dr. Sabrina Robertson (001), Dr. Shveta Parekh (002), TBD (003), TBD (004)
Provides an introduction to the structure and function of the nervous system. Fundamental principles will be introduced including nervous system anatomy; molecular and cellular properties of the nervous system; sensory and motor systems; current methods used in neuroscience; and how the nervous system produces behavior and cognition. This course provides greater breadth and depth of neuroscience topics, as compared to Biopsychology (PSYC 220). Previously offered as PSYC 175 and 315..

PSYC 180: Social Media, Technology, and the Adolescent Brain (3)
Instructor: Dr. Rosa Li (001)
In this course, we will learn about current evidence, theory, and controversies with regards to how technology use may affect adolescent development. Questions such as how technology is changing adolescents' social relationships, impacting their mental health, and interacting with the developing brain to influence social, emotional, and cognitive development will be explored.

PSYC 210: Statistical Principles of Psychological Research (3)
Instructor: Dr. Natasha Parikh (001 & 002)
Prerequisite: PSYC 101
Consideration of the methodological principles underlying psychological research, descriptive and inferential techniques, and the manner by which they may be employed to design psychological experiments and analyze behavioral data. Three lecture hours. Students may not receive credit for both PSYC 210/PSYC 210H and PSYC 215/PSYC 215H.

PSYC 220: Biopsychology (3)
Instructor: Dr. Sara Estle (001), Anne Dankert (002), Dr. Daniel Christoffel (003)
Prerequisite: PSYC 101
Introductory course which surveys the biological bases of behavior. Topics may include nerve cells and nerve impulses, sensory systems, wakefulness and sleep, reproductive behaviors, and cognitive functions. This course would be an appropriate foundational course for Advanced Biopsychology (PSYC 402).

NSCI 221: Neuropsychopharmacology. (3)
Instructor: Dr. Rachel Penton (001)
Prerequisite: NSCI 175 or both PSYC 101 and PSYC 220
This course provides an introduction to the scientific study of psychopharmacology, with emphasis on drugs of abuse and psychotherapeutic drugs. Previously offered as NSCI/PSYC 320.

NSCI 222: Learning (3)
Instructor: Dr. Sara Estle (001)
Prerequisite: PSYC 101 or NSCI 175
Topics in Pavlovian and operant (instrumental) conditioning, learning theory, higher order cognitive learning, and application of those principles to mental-health related situations. Previously offered as PSYC 222.

NSCI 222H: Learning (3)
Instructor: Dr. Donald Lysle (001)
Prerequisite: PSYC 101 or NSCI 175
Topics in Pavlovian and operant (instrumental) conditioning, learning theory, higher order cognitive learning, and application of those principles to mental-health related situations. Honors version.

NSCI 225: Sensation and Perception (3)
Instructor: Dr. Vicki Chanon (001)
Prerequisite: PSYC 101 or NSCI 175
Topics in vision, audition, and the lower senses. Receptor mechanisms, psychophysical methods, and selected perceptual phenomena will be discussed. Previously offered as PSYC 225.

PSYC 230: Cognitive Psychology (3)
Instructor: Dr. Vicki Chanon (001), Nikki Fackler (002), Annaliisa Powers (003)
Prerequisite: PSYC 101
Topics in attention; memory; visual, auditory, and other forms of information processing; decision making; and thinking.

PSYC 242: Introduction to Clinical Psychology (3)
Instructor: Dr. Desiree Griffin (001), Esmeralda Navarro (002), Madison McCall (003), Robin Brown (004)
Prerequisite: PSYC 101
Overview of clinical psychology: history, scientific basis, and major activities and concerns, including assessment, psychotherapy and other psychological interventions, community psychology, ethics, and professional practice.

PSYC 245: Psychopathology (3)
Instructor: Dr. Desiree Griffin (001), Emily Carrino (002), Adrianna Richards (003), Amanda Haik (004)
Prerequisite: PSYC 101
Major forms of behavior disorders in children and adults, with an emphasis on description, causation, and treatment.

PSYC 250: Child Development (3)
Instructor: Dr. Rosa Li (001), Jimmy Capella (002)
Prerequisite: PSYC 101
Study of the development of social and intellectual behavior in normal children and the processes that underlie this development. Emphasis is typically on theory and research.

PSYC 260: Social Psychology (3)
Instructor: Dr. Steven Buzinski (001), Natalie Frye (002)
Prerequisite: PSYC 101
Introductory survey of experimental social psychology covering attitudes, interpersonal processes, and small groups.

PSYC 270: Laboratory Research in Psychology (3)
Instructor: Dr. Patrick Harrison (001 & 002)
Prerequisites: PSYC 101
Students in this course will be exposed to a survey of methodology (i.e., experimental, quasi-experimental, non-experimental) used across various disciplines in psychology (i.e., social, clinical, development, cognitive, and neuroscience). In addition, students will work as a class to conduct research projects on a common theme. Students will spend class time planning, conducting, and writing up the results of this project. Class time will also be used to discuss methodological considerations in psychological research more broadly.

NSCI 273: Brainwaves: Human Electroencephalography Lab (3)
Instructor: Dr. Joseph Hopfinger (001 & 002)
Prerequisites: NSCI 175
This research-based course is focused on understanding the neural underpinnings of electroencephalography (EEG) data. Bysynchronizing EEG recorded on the scalp with experimental events, Event-Related Potentials (ERPs) link human brain activity tospecific mental processes. Students will gain technical skills, through hands-on experience, in processing, analyzing, and interpreting electrophysiological data.

NSCI 277: Molecular Imaging of the Brain (3)
Instructor: Dr. Shveta Parekh (001 & 002)
Prerequisites: NSCI 175 and PSYC 210 or STOR 155
Addiction Neuroscience qPCR Laboratory is a laboratory and research-based course that will expose students to the fundamental and emerging approaches used in RT-qPCR addiction neuroscience research. In this course students will learn to handle rodent brains, perform cryostat sectioning, conduct reverse transcription, create a cDNA library, and utilize R programming to analyze qPCR results by studying genes of interest in the context of a drug exposed rodent. Majors only.

PSYC 391: Pedagogy Course for Psychology & Neuroscience Undergraduate Learning Assistants (3)
Instructor: TBD (001)
Prerequisites: Application only
This course gives an overview of teaching methods that facilitate the acquisition of knowledge and understanding as well as entails hands-on experience in the classroom. Common misconceptions of learning as well as legal and ethical considerations related to working closely with an undergraduate population will also be covered. Departmental application and approval required.

Upper-Level Undergraduate Courses (PSYC 400-699)

NSCI 405: Advanced Molecular Neuropharmacology (3)
Instructor: Dr. Rachel Penton (002)
Prerequisites: NSCI 175 or both PSYC 101 and PSYC 220; and NSCI 221
This course will examine the molecular basis of drug action in the brain. Students will learn about ligand-receptor interactions and modulation of receptor number, structure, and function by drugs. Detailed examples will examine the molecular details of both ligand-gated ion channels and G-protein coupled receptors. The course will use analysis of primary literature and a semester-long makerspace project to delve into research where central themes will include developing critical thinking, design thinking, and communication skills.

NSCI 418: Glial Neuroscience (3)
Instructor: Dr. Kathryn Reissner (001)
Prerequisites: NSCI 175 or both PSYC 101 and 220
The purpose of this course is to provide an in-depth investigation into glia cells in the brain, and their roles in health and disease. We will focus particularly on astrocytes, microglia, and oligodendrocytes, but we will also cover and discuss other glial cell types as well. A general overview will be provided for each topic, followed by study and discussion of primary literature.

NSCI 419: Behavioral Endocrinology (3)
Instructor: Dr. Monica Gaudier-Diaz (001 & 002)
Prerequisites: NSCI 175 or PSYC 220
The endocrine and nervous systems interact with each other in complex ways to influence behavioral processes. In this course, we will discuss the ways by which hormones regulate homeostatic and social behaviors, learning, stress responses, and affective disorders, among others. Additionally, we will read scientific articles to learn about advances in the field of neuroendocrinology.

NSCI 421: Principles of Brain Circuits (3)
Instructor: Dr. William Snider (001)
Prerequisites: NSCI 175, or PSYC 101 and PSYC 220; BIOL 101 Recommended
This course is designed for upper-level undergraduates who are interested in how brain circuits control behavior. A major focus will be the new technique of optogenetics that is revolutionizing our approach to systems neuroscience. Circuits that control movement, sensation, sleep, memory, and fear will be explored in detail. Points of emphasis will be circuits mediating pain as related to actions of opiates and circuits mediating feeding behavior as related to obesity.

NSCI 423: Neurotechnology in Modern Neuroscience Research (3)
Instructor: Dr. Sabrina Robertson (001)
Prerequisites: NSCI 175, or PSYC 101 and PSYC 220
This course addresses fundamental challenges inherent in studying the brain and explores the theory, applications, and limitations of new and traditional neurotechnology. The unique ethical issues and significance of interdisciplinary approaches in neuroscience will also be highlighted. Students will analyze research literature and focus on cellular, molecular, and genetic techniques that are essential staples in the neuroscientist's toolkit. Students will also design experiments, utilize publicly available resources, and analyze big data generated by high-throughput approaches.

NSCI 427: Neurobiology of Aging (3)
Instructor: Dr. Kelly Giovanello (001)
Prerequisites: NSCI 175, or PSYC 101 and PSYC 220
This course will survey clinical and experimental literature regarding the neurobiology of aging, considering different theories of aging, how aging is studied in the laboratory, and recent findings. Biochemical, molecular, physiological, and behavioral changes associated with both "normal" and pathological aging will be considered. Previously offered as PSYC 427.

NSCI 434: Cognitive Neuroscience (3)
Instructor: Dr. Jessica Cohen (001)
Prerequisites: One of the following: NSCI 175, NSCI 222, NSCI 225, PSYC 220, or PSYC 230
Introduction to cognitive neuroscience. Higher mental processes including attention, memory, language, and consciousness will be covered, with an emphasis on the neural mechanisms that form the substrates of human cognition. Previously offered as PSYC 434.

PSYC 474: Digital Mental Health (3)
Instructor: Dr. Deborah Jones (002)
Prerequisites: PSYC 101
This course will provide an overview of the use of digital technologies to increase opportunities for training in, access to, and use of evidence-based mental health services. Coverage will include the current status of and future directions in research, innovations in service delivery, and policy implications. Special attention will be given to the evolution of the field, the potential costs and benefits, and the promise to address health disparities in particular.

PSYC 490: Quantitative Methods for Making Causal Inferences (3)
Instructor: Dr. Kenneth Bollen (001)
Prerequisites: Prior introduction to statistics, including multiple regression.
Understanding cause-effect relationships is at the heart of all sciences including psychology. More broadly, we encounter causal claims in news stories, advertisements, and everyday conversations. However, numerous challenges face us when we attempt causal inferences and there are good reasons to carefully examine these claims. Confounding variables, sample selection bias, measurement error, and internal and external validity are among the issues. The goal of this course is to introduce the threats to causal inference as well as proposed solutions. Contemporary approaches to causal inferences such as potential outcomes, directed acyclic graphs (DAGs), and structural equation models (SEMs) will be introduced. The course will consider experimental, quasiexperimental, and nonexperimental designs and analyze empirical data.

PSYC 490: Psychotherapy: Culture and Development (3)
Instructor: Dr. M. Dalal Safa (002)
Prerequisites: PSYC 101, 210 or 215, and 250 or 260
An examination of research and theory pertaining to the intersections of culture, ethnicity-race, and development. Specifically, this course focuses on identifying limitations and advances in psychological and developmental sciences toward our understanding of ethnic-racial minoritized and immigrant youth development in culturally bounded contexts (e.g., families, schools, and neighborhoods). The course is recommended for students interested in engaging in rich dialogue and self-reflection.

PSYC 490: Gender and Development (3)
Instructor: Dr. Annie Maheux (003)
Prerequisites: PSYC 101 and PSYC 210 or PSYC 270
This course examines the role of gender in child and adolescent psychosocial development, with a focus on advanced research methods in psychological science. Topics include socializing agents of gender development (e.g., parents, peers, media); conceptions of gender, masculinity, and femininity; experiences of youth at different intersections of gender and other identities (e.g., race/ethnicity, sexual identity); and the influence of gender in developmental outcomes (e.g., preferences and traits, academic outcomes, sexual behavior, mental health).

PSYC 490: Society and the Developing Brain - Pathways of Risk and Resilience in context (3)
Instructor: Dr. Margaret Sheridan (004)
Prerequisites: PSYC 101 or NSCI 175 and A 200 level course which emphasized child development or any 200 level neuroscience course

In this course emphasis will be placed on developing an integrated understanding of neurobiology and variation in human behavior in the context of environmental influences. In particular, in this course we will examine how society shapes the intimate environments of the family and school systems that a child develops within. We will link decision making on the societal level with brain development within an individual child.

This course will provide an overview of principles of developmental cognitive neuroscience with an eye to examining how this knowledge varies across individuals and as a result of early experience. Commonly used methods in human neuroscience (e.g., cognitive subtraction and task design, fMRI, EEG/ERP, TMS) will be introduced and described. The course will provide examples of societal level interventions which shape children's experiences. Current knowledge about the development of neural mechanisms supporting perception, cognitive, and emotional function will be investigated in the context of the course through summary chapters, review articles and recent empirical studies.

NSCI 493: Internship in Neuroscience (3)
Instructor: Dr. Steven Buzinski (001)
Prerequisites: PSYC 101 and completion of application process
Required preparation, minimum of two other neuroscience courses and junior/senior standing. Designed for highly motivated neuroscience majors interested in exploring professional opportunities in neuroscience-related areas. Students complete hands-on internships at community sites for approximately 120 hours across the semester. Students also attend a weekly one-hour class with other interns. This course is only for those students who have been accepted into the Karen M. Gil Internship Program: https://psychology.unc.edu/gil-internship/

PSYC 493: Internship in Psychology (3)
Instructor: Dr. Steven Buzinski (001)
Prerequisites: PSYC 101 and completion of application process
Required preparation, minimum of two other psychology courses and junior/senior standing. Designed for highly motivated psychology majors interested in exploring professional opportunities in psychology-related areas. Students complete hands-on internships at community sites for approximately 120 hours across the semester. Students also attend a weekly one-hour class with other interns. This course is only for those students who have been accepted into the Karen M. Gil Internship Program: https://psychology.unc.edu/gil-internship/

PSYC 501: Theoretical, Empirical Perspectives on Personality (3)
Instructor: Dr. Michael Hallquist (001)
Prerequisites: PSYC 101
An in-depth coverage of the traditional clinically based personality theories of the early 20th century contrasted with more recent empirically based perspectives.

PSYC 504: Health Psychology (3)
Instructor: Dr. Karen Gil (001 & 002)
Prerequisites: PSYC 101 and PSYC 245
An in-depth coverage of psychological, biological, and social factors that may be involved with health.

PSYC 531: Tests and Measurement (3)
Instructor: Dr. Oscar Gonzalez (001)
Prerequisites: PSYC 101 and PSYC 210 or 215
Basic psychometric theory underlying test construction and utilization. Detailed study of issues and instruments used in assessing intellectual functioning, educational progress, personality, and personnel selection.

PSYC 535: Programming for Psychologists: Computational Tools for Psychological Research (3)
Instructor: Dr. Natasha Parikh (001)
Prerequisites: PSYC 101; Pre or Corequisite: PSYC 210
In this course, we will cover fundamental coding practices and computational tools used frequently in psychology research. We will go over the basics of coding, how to present computer-based experiments, how to keep a digital lab notebook, univariate data analyses, and visualization through programming. Through this process, students will have the opportunity to develop and run a simple experiment from start to finish.

PSYC 562: Psychology of Race and Racism (3)
Instructor: Dr. Julian Rucker (001)
Prerequisites: Psyc 101, and either PSYC 210 or 215
This course offers an overview of research investigating the psychological underpinnings and impacts of racialization, racism, and racial inequality. It will center research in social psychology, but will also feature work from other areas of psychology (e.g., developmental), as well as other social science disciplines (e.g., sociology, political science).

PSYC 534: Introduction to Computational Statistics (3)
Instructor: Dr. Kathleen Gates (001)
Prerequisites: PSYC 210, SOCI 252, or STOR 155
Introduction to programming and the implementation of statistical techniques. Topics include data manipulation, graphical procedures, writing loops and functions, data simulation, use of regular expressions, and scraping data from the web.

PSYC 565: Stereotyping, Prejudice, and Discrimination (3)
Instructor: Dr. Keith Payne (001)
Prerequisites: PSYC 101, PSYC 260 and PSYC 210 or PSYC 215
PSYC 270 recommended. Examines the determinants, functions, processes, and consequences of stereotyping, prejudice, and discrimination. Prospects for change are considered. Class presentations and participation required.

PSYC 570: The Social Psychology of Self-Regulation (3)
Instructor: Dr. Stephen Buzinski (001)
Prerequisites: PSYC 101, PSYC 260 and PSYC 210 or PSYC 215
PSYC 270 recommended. An intensive review of self-regulation theory and research, focusing on the cognitive, motivational, and affective processes involved in goal commitment, monitoring, and overriding behavioral responses.

PSYC 601: Psychology and Law (3)
Instructor: Dr. Neil Mulligan (001)
Prerequisites: PSYC 101 and PSYC 210 or PSYC 215
Examines the legal system from the perspective of psychology methods and research, with a focus on criminal law. Discusses dilemmas within the law and between the legal system and psychology.

PSYC 602: Evolutionary Psychology (3)
Instructor: Dr. Frederick Wiss (001)
Prerequisites: PSYC 101 and PSYC 210 or PSYC 215
Major topics of general psychology are examined from an evolutionary perspective with an emphasis on empirical studies asking why much current human behavior and experience would have been adaptive for our early ancestors.

PSYC 693H: Honors in Psychology II (3)
Instructor: Dr. Keely Muscatell (001)
Prerequisites: cumulative GPA of 3.3, at least one semester of PSYC/NSCI 395 or the approved equivalent, and acceptance into the Psychology or Neuroscience Senior Honors Program; PSYC/NSCI 693H must be taken in the first semester of the last year of studies
To be taken in the fall of the last year of studies as the first course in the two-semester honors sequence. Students conduct research under the direction of a faculty advisor and receive classroom instruction in research-related topics.

NSCI 693H: Honors in Neuroscience II (3)
Instructor: TBD (001)
Prerequisites: cumulative GPA of 3.3, at least one semester of PSYC/NSCI 395 or the approved equivalent, and acceptance into the Psychology or Neuroscience Senior Honors Program; PSYC/NSCI 693H must be taken in the first semester of the last year of studies.
This course comprises the first semester in the two-semester sequence of Senior Honors in Psychology/Neuroscience. There are two components to the course: research that you will conduct under the direction of your faculty thesis advisor, and this class, which you will attend with the other senior honors students to learn about research-related topics and receive consultations with the instructor and your classmates.