

PSYC - PSYCHOLOGY (PSYC)

PSYC 6100 Res Design and Analy I (3 Credits)

This is the first of two courses in research design and analysis. Students will develop an understanding of basic statistical theory and research design with special emphasis on research designs that use analysis of variance (NOVA) and relate analysis. Students will learn to choose the appropriate statistical techniques for a range of situations, and compute the statistics both by hand and with standard statistical software packages.

PSYC 6200 Res Design and Analy II (3 Credits)

The second of two courses in research design and analysis. This course introduces students to basic behavioral science research in psychology, with special emphasis on experimental design. The course will help students read, understand, and interpret published literature as well as translate their ideas into practical research designs. Prerequisite: PSYC 6100.

PSYC 7101 Conditioning and Behavior (3 Credits)

The primary research literature will be read to investigate traditional and contemporary views of conditioning. Emphasis is placed on how classical and instrumental conditioning procedures are used to examine how animals and humans learn, process, and remember information. How experience interacts with pre-organized, elicited behaviors will also be considered.

PSYC 7102 Cognition (3 Credits)

The course covers two aspects. a) The main theoretical models that explain how the mind works will be discussed and reviewed in light of the supporting/disconfirming data. The models discussed are the product of the interaction and integration of several areas of investigation: experimental psychology, neuropsychology, computer science, neurobiology and philosophy. The specific contribution of each area will be discussed. b) Some of the most recent studies on memory will be the topic of in-depth examination and discussion.

PSYC 7103 Perception (3 Credits)

Covers the major theoretical perspectives on perception, particularly the dispute over the adequacy or inadequacy of physical information for perception, and how learning, genetic factors, biological and neural factors, and physical dynamics also provide constraints on ultimate perception. Philosophical issues, and cases and implications of impaired perception are also considered.

PSYC 7104 Psychopharmacology (3 Credits)

A comprehensive examination of the mechanisms by which drugs interact with the brain and behavior, with emphasis on the role of neurotransmitters systems.

Prerequisites: CPSY 6105

PSYC 7105 Behavioral Neuroscience (3 Credits)

PSYC 7106 Cognitive Neuroscience (3 Credits)

The course is a comprehensive introduction to how higher-level cognitive functions are carried out in the healthy brain, including voluntary action, spatial processing, attention, language, numeracy, memory, and executive function. The course provides extensive treatment of the conceptual and methodological issues facing basic research in this area, including coverage of behavioral, neuroimaging, electrophysiological, and neuropsychological methods.

PSYC 7111 Independent Lab Research I (3 Credits)

Hands-on experience working on empirical research in the laboratory of a faculty member. May perform multiple tasks such as guiding human participants through an experiment, coding data, working in an animal laboratory and/or assisting in administrative tasks. Can be taken once under each course number.

PSYC 7112 Independent Lab Research (3 Credits)

PSYC 7200 Graduate Seminar (3 Credits)

This course is the first in a series of formal research courses and is to be taken in the first semester of enrollment in the program. The course provides an introduction to the research conducted by faculty members in the Department of Psychology and an introduction to issues in the ethical conduct of psychological research. By the end of the course students will have identified a faculty advisor with whom to pursue either their thesis or their independent laboratory work.

PSYC 7201 Independent Research I (3 Credits)

This course is the first in a series of four formal research courses, and is to be taken the first semester of enrollment in the program. Students will identify an area of study, formulate a research question, and begin a literature review of relevant research and theory. This work will serve as a foundation for students' thesis development. Students will work closely with a faculty advisor.

PSYC 7202 Independent Research II (3 Credits)

This course is the second in a series of four formal research courses, and is to be taken in the second semester of enrollment in the program. Students will complete literature reviews and refine their research questions. Students will also develop a written thesis proposal, to be approved by the advisor and a departmental committee. Upon departmental approval of the project, students will submit an application to the Institutional Review Board, or the Institutional Animal Care and Use Committee. Prerequisite: PSYC 7201.

Prerequisites: PSYC 7201

PSYC 7203 Independent Research III (3 Credits)

This course is the third in a series of four formal research courses, and is to be taken in the third semester of enrollment in the program. Upon approval of the Institutional Review Board or the Institutional Animal Care and Use Committee, students will commence data collection for their thesis projects. Students will create a database in preparation for conducting analyses. Prerequisite: PSYC 7202.

Prerequisites: PSYC 7202

PSYC 7214 Cognition for Visualization (3 Credits)

An essential element of being able to create optimal visual displays of data is an understanding of the human cognitive system. What are its limitations? What are the data formats that it finds easiest to interpret? This course will survey basic and applied research on cognition with the goal of understanding how humans process information. Topics include attention, perception, memory, reasoning and decision making. This research will be applied to the design of visual displays of data that minimize cognitive processing load and maximize comprehension. Cross-listed with PSYC 3214 Cognitive Psychology. Prerequisite: C- or better in PSYC 1101.

PSYC 8001 Thesis (3 Credits)

This course is the fourth in a series of four formal research courses, and is to be taken in the final semester of enrollment in the program. Students will finalize data analyses, write results and discussion sections, and complete the required oral defense of their theses. Prerequisite: PSYC 7203.

Prerequisites: PSYC 7203

PSYC 8002 Literature Review Writing (3 Credits)

This course is to be taken in the final semester of enrollment in the MS program in Experimental Psychology (non-thesis track) and involves the writing of a cumulative paper. Students take part in this course after having comprised reading lists and bibliographies (annotated) in consultation with an advisor. The purpose of the course is to facilitate independent non-empirical research by a student. Reviewing and critiquing the literature is a core skill for Masters-level students; competence demonstrates sound critical and scientific skills within a domain of experimental psychology. In order to receive credit for this course, students must obtain an acceptable grade from an advisor. Students should be prepared to revise and resubmit papers based on feedback from the advisor.

PSYC 8614 ST - Foundation Clinical Psyc (3 Credits)

PSYC 8615 Special Topics - Memory (3 Credits)

PSYC 8693 ST - Big Data Analytics (3 Credits)

PSYC 8694 ST - Machine Learning (3 Credits)