

Department of Psychology



Graduate Course Descriptions

PSY 450. **Senior Thesis** 3 cr.

A laboratory or field research project conducted under faculty supervision. Requires written research proposal, conduct of research, data analysis, and final written report. Prerequisites: PSY 310, six additional psychology credits, consent of the supervising faculty member, and junior or above standing. May be repeated for a maximum of 6 credits.

PSY 460. **Testing and Measurement** 3 cr.

Investigates theories and methods of measurement, scaling, and test construction. Topics may include reliability and validity of tests, and the use of tests for various purposes, including measurement of ability, personality assessment, and personnel selection. Prerequisite: PSY 201G, one of: STAT 251, STAT 271, or E ST 311G, and one of: PSY 310 or PSY 355; or consent of instructor.

PSY 461. **Language Processing** 3 cr.

An information processing analysis of speech perception, reading, and psycholinguistics. Prerequisite: PSY 201G or LING 200G.

PSY 470. **Special Topics** 1-3 cr.

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

PSY 472. **Aviation Psychology** 3 cr.

Human performance in aviation systems: cockpit (displays, controls), National Airspace System, Air Traffic Control, crew coordination, selection, training, simulation, reliability, and analytic strategies.

PSY 480. **Human-Computer Psychology** 3 cr.

Theories, methodologies, and data from psychology applicable to interface design, with an emphasis on construction and application of conceptual psychological models.

PSY 501. **Introduction to Psycholinguistics** 3 cr.

Introduction to graduate studies in psycholinguistics. Psychological aspects of language; linguistic theories of grammar, psychological factors influencing language performance, primary language acquisition and the relationship of language to thought processes. Same as LING 501.

PSY 507. **Quantitative Methods in Psychology I** 3 cr.

Statistical concepts emphasizing distributions and methods most appropriate to the data, models, and theories in psychology. Prerequisite: An elementary statistics course or consent of instructor.

PSY 508. **Quantitative Methods in Psychology II** 3 cr.

Statistical concepts emphasizing distributions and methods most appropriate to the data, models, and theories in psychology. Prerequisite: PSY 507 or equivalent.

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PSY 509. Quantitative Methods in Psychology III 3 cr.

Statistical concepts emphasizing distributions and methods most appropriate to the data, models in psychology. Prerequisite: PSY 507 or equivalent.

PSY 510. Computer Methodology 3 cr.

Use of computers in psychological research with emphasis on developing experimental control programs.

PSY 520. Learning Theory and Methodology 3 cr.

Classical areas of learning, including instrumental and classical conditioning paradigms, habituation, reinforcement variables, stimulus generalization and transfer, and memory.

PSY 522. Sensation and Perception Theory and Methodology 3 cr.

Stimulus and decision variables in judging auditory and visual events. Topics include: detection of signals; signal intensity versus perceived strength; size, shape, and movement perception; reading and listening.

PSY 524. Cognitive Psychology 3 cr.

Examines theoretical and empirical work on human cognition. Topics include: information processing theories, pattern recognition, memory, attention, language, problem solving, decision making, and reasoning.

PSY 525. Biopsychology 3 cr.

The biological basis of behavior with an emphasis on human cognitive functioning.

PSY 527. Social Psychology 3 cr.

Current and traditional theories, research findings, and research methodologies of social psychology. Special attention is devoted to social problems.

PSY 529. Experimental and Field Evaluation Methods in Social Psychology 3 cr.

Both laboratory and field experimental methodologies appropriate for investigating social psychological theories and problems. Includes quasi-experimental designs and issues in evaluation research. Prerequisite: graduate student in psychology or consent of instructor.

PSY 530. Human-Computer Interaction 3 cr.

Issues associated with human-computer interface design. Concepts, methods, and data from HCI, cognitive psychology, human factors, artificial intelligence, and psycholinguistics that apply.

PSY 531. Computer Methodology 3 cr.

Basic techniques for using computers to conduct psychological experiments.

PSY 540. History and Systems of Psychology 3 cr.

History of scientific method emphasizing outstanding methodological problems of contemporary science, especially psychology. Covers recent history of psychology and development of schools of psychology.



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PSY 542. **Thinking** 3 cr.

Advanced analysis of research and theory in human thinking and problem solving. Includes reasoning, categorization and concept formation, decision making, effective problem-solving methods, and common obstacles to problem solving. Prerequisite: PSY 524.

PSY 547. **Engineering Psychology** 3 cr.

Concepts, methods, and findings of human performance. Treats the human as a subsystem that receives, stores and processes information, makes decisions, and acts within a human-machine environment system.

PSY 548. **Methods in Engineering Psychology** 3 cr.

Engineering psychology methods such as task analysis, cognitive task analysis, user testing, prototyping, protocol analysis, cost-benefit analysis, safety and reliability analysis, and multivariate techniques. Prerequisite: PSY 547 or consent of instructor.

PSY 549. **Human-Computer Interface Prototyping** 3 cr.

Development of human-computer interface prototypes, prototyping tools and methods, and evaluation of prototypes, using object-oriented programming languages, authoring software, and user-interface management systems. Prerequisite: PSY 547 or consent of instructor.

PSY 558. **Individual and Group Differences** 3 cr.

Introduction to graduate studies in individual and group differences. The influence of biological and social factors (heredity, race, sex, age, environment, social class) upon psychological variables (intelligence, aptitude, ability, achievement, personality, interests, values).

PSY 561. **Language Processing** 3 cr.

An information-processing analysis of speech perception, reading, and psycholinguistics. Prerequisite: PSY 201G or LING 200G.

PSY 570. **Special Topics** 1-3 cr.

Specific subjects to be announced in the Schedule of Classes.

PSY 571. **Advanced Industrial and Organizational Psychology** 3 cr.

Advanced psychological issues and research in industrial job design and satisfaction, testing and performance assessment, training, workplace and equipment and environmental design, organizational behavior, industrial safety, and performance monitoring.

PSY 572. **Advanced Aviation Psychology** 3 cr.

Contemporary problems in aviation systems: impact of technology on cockpit design, automation, socio-technical systems, training using simulations, and other current issues.

PSY 574. **Psychopharmacology and Toxicology** 3 cr.

How and why drugs and environmental chemicals affect behavior including the chemistry underlying normal and abnormal behavior and the synaptic modifications responsible for learning and memory.

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PSY 584. **Advanced Perceptual and Cognitive Development** 3 cr.

Theories and research findings related to growth, stability, and decline in intellectual functioning across the lifespan.

PSY 598. **Special Research Programs** 1-3 cr.

Individual investigations either analytical or experimental. May be repeated for credit.

PSY 599. **Master's Thesis** var. cr.

Thesis.

PSY 600. **Doctoral Research** var. cr.

This course number is used for assigning credit for research performed prior to successful completion of the doctoral qualifying examination.

PSY 625. **Seminar in Cognitive Science** 3 cr.

May be repeated with consent of instructor. May be repeated for unlimited credit.

PSY 627. **Seminar in Social Psychology** 3 cr.

Specific topics in social psychology. May be repeated for unlimited credit. May be repeated for unlimited credit.

PSY 647. **Seminar in Engineering Psychology** 3 cr.

Specific topics in engineering psychology. May be repeated for unlimited credit.

PSY 670. **Special Topics** 1-3 cr.

Specific subjects to be announced in the Schedule of Classes.

PSY 698. **Special Research Programs** 1-3 cr.

Individual investigations either analytical or experimental. May be repeated for credit.

PSY 700. **Doctoral Dissertation** var. cr.

Dissertation.