

PSYCHOLOGY AND NEUROSCIENCE

Department of Psychology and Neuroscience

Chairperson: Charles A. Weaver, III

Director of the Psy.D. Clinical Psychology Program: Christine Limbers

Director of the Ph.D. Psychology Program: Joaquin Lugo

The department offers two doctoral degrees: Doctor of Psychology (Psy.D.) in Clinical Psychology and Doctor of Philosophy (Ph.D.) in Psychology.

- Graduate Degrees in Clinical Psychology (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-clinical-psychology/>)
 - Clinical Psychology, M.S.C.P. (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-clinical-psychology/clinical-psychology-ms/>)
 - Clinical Psychology, Psy.D. (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-clinical-psychology/clinical-psychology-phd/>)
- Graduate Degrees in Psychology (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-psychology/>)
 - Psychology, M.A. (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-psychology/psychology-ma/>)
 - Psychology, Ph.D. (<https://catalog.baylor.edu/graduate-school/curriculum-departments-institutes-instruction/college-arts-sciences/psychology-neuroscience/graduate-degrees-psychology/psychology-phd/>)

Psychology (PSY)

PSY 4312 Behavioral Medicine (3)

Cross-listed as NSC 4312

Pre-requisite(s): NSC 1106 and 1306 or consent of instructor
Major issues in Behavioral Medicine from the contribution of psychological, behavioral, and physiological factors and processes, to health and illness, to the application of psychological theories and techniques, to the prevention and amelioration of illness and the promotion of health. Uses engaged learning methods.

PSY 4339 Psychology of Religion (3)

Pre-requisite(s): PSY 1305 or consent of instructor

Psychological processes in religious experience and related phenomena with a focus on religious development through the life cycle and the major psychological interpretations.

PSY 5100 Psychology and Neuroscience Seminar (1)

Professional development through participation in and peer review of public presentation of contemporary research.

PSY 5128 Group Dynamics Laboratory (1)

Pre-requisite(s): Psy.D. students only

A laboratory in group dynamics for Psy.D. students emphasizing interprofessional relationships.

PSY 5199 Non-Thesis Degree Completion (1)

To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

PSY 5301 Introduction to Experimental Design (3)

Pre-requisite(s): Graduate standing

Simple and complex analysis of variance and analysis of covariance designs. The general linear model approach, including full-rank and less than full-rank models, will be emphasized.

PSY 5302 Measurement in Psychology (3)

Pre-requisite(s): PSY/STA 5301 or consent of the instructor

Principles and methodology underlying scaling techniques, rating devices, psychological tests, and other forms of measurements used in psychology. Includes an introduction to psychometrics and applications to objective personality assessment.

PSY 5305 Advanced Experimental Design (3)

Pre-requisite(s): PSY 5301 or consent of instructor

The course examines a variety of complex experimental designs that are available to researchers including split-plot factorial designs, confounded factorial designs, fractional factorial designs, incomplete block designs, and analysis of covariance. The designs are examined within the framework of the general linear model. Extensive use is made of computer software.

PSY 5307 Advanced Statistics II (3)

Pre-requisite(s): PSY 5388; or consent of instructor

Selected topics from correlation, regression, path analysis, and generalized linear models.

PSY 5311 Seminar in Memory and Cognition (3)

Cross-listed as NSC 5311

See NSC 5311 for course information.

PSY 5313 Advanced Measurement in Psychology (3)

Pre-requisite(s): PSY/STA 5301

An introduction to item response theory and computerized adaptive testing. Emphasis on the three parameter logistic model. Topics include parameter and ability estimation, item bias, detection of multidimensionality, appropriateness measurement, and Owens-Bayes algorithm.

PSY 5315 Quantitative Psychology (3)

Pre-requisite(s): PSY/STA 5301

Mathematical foundations of contemporary psychology.

PSY 5316 Clinical Psychopathology (3)

Pre-requisite(s): Psy

D. (CPSY) students only. Clinical case formulation, including the assessment and diagnosis of problems, case conceptualization, and treatment planning, based on current theory and research.

PSY 5317 Psychotherapy III: Seminar in Psychotherapy (3)

Pre-requisite(s): Psy.D. students only

Advanced study of current research, theory and practice in evidence-based psychotherapy, interventions, and treatment planning.

PSY 5318 Perception (3)

Cross-listed as NSC 5318
See NSC 5318 for course information.

PSY 5319 Clinical Neuroscience - Advanced (3)

Cross-listed as NSC 5319
See NSC 5319 for course information.

PSY 5320 Learning and Behavior Theory (3)

Cross-listed as NSC 5320
See NSC 5320 for course information.

PSY 5321 Developmental Psychology (3)

Pre-requisite(s): Graduate standing in psychology
Current research and theory on normal and psychopathological development of human behavior from conception through senescence.

PSY 5322 Human Engineering (3)

Pre-requisite(s): Consent of instructor
Application of the methods and techniques of psychology to the problems of designing equipment for efficient human use and the design of man-machine systems.

PSY 5323 Biological Foundations of Behavior (3)

Pre-requisite(s): Psychology Ph
D or Psy.D. students only, or consent of instructor. An introduction to the biological mechanisms underlying behavior. A review of basic neuroanatomy, neuron function, neurotransmitters, emotional process, language, learning and memory function. Will also review biological correlates of targeted mental disorders such as mood and anxiety disorders, schizophrenia, and developmental and cognitive disorders.

PSY 5325 Ethics and Professional Issues in Clinical Psychology (3)

Pre-requisite(s): Psy.D. students only
The application of current ethical and professional standards to professional practice.

PSY 5327 Family and Marital Psychotherapy (3)

Pre-requisite(s): Psy.D. students only
Practice, theory, and research of psychological consultation with couples and families. Emphasis upon systems and interpersonal orientations.

PSY 5330 Neuropharmacology (3)

Cross-listed as NSC 5330
See NSC 5330 for course information.

PSY 5333 Psychological Assessment III (3)

Pre-requisite(s): Psy
D. students only. Advanced study of integrated assessment, focusing on special populations including gerontology, infant assessment, health-related assessments and additional disorder-based assessments.

PSY 5334 Clinical Health Psychology (3)

Pre-requisite(s): Psy.D. students only
Foundations of clinical health psychology, applications of behavioral medicine, and the promotion and maintenance of health.

PSY 5335 Multicultural Issues (3)

Pre-requisite(s): Psy.D. students only
An exploration of multicultural issues in the delivery of psychological services.

PSY 5339 Social Psychology (3)

Review of advanced theory and contemporary research in social psychology.

PSY 5340 Doctoral Project in Professional Psychology I (3)

Pre-requisite(s): Psy.D. students only
Arrangements are made for Psy.D. candidates to undertake individual scholarly projects under the direction of a clinical psychology professor. Work includes individual study and preparation of a detailed proposal for a project in clinical psychology.

PSY 5341 Doctoral Project in Professional Psychology II (3)

Pre-requisite(s): Psy.D. students only
A continuation of PSY 5340, including the execution and completion of the doctoral project.

PSY 5342 Advanced Topics in Social Psychology (3)

Advanced study of theory and research in social psychology.

PSY 5344 History of Psychology, Racism, and the United States (3)

Pre-requisite(s): Psy
D. students only. The history of psychology, medicine, science, racism, and culture in the United States, with an emphasis on how these components are interconnected, how psychology was born into a racist academic world, and how power systems have served to benefit some and oppress many.

PSY 5350 Advanced Personality Psychology (3)

A review of classic personality theory and contemporary personality psychology research.

PSY 5360 Neurophysiology (3)

Cross-listed as NSC 5360
See NSC 5360 for course information.

PSY 5370 Administration and Supervision (3)

Pre-requisite(s): Psy.D. students only
Training in health care administration, supervision, consultation, program development, and evaluation.

PSY 5371 Clinical and Research Practicum I (3)

Pre-requisite(s): Psy.D. students only
Supervision, development, and evaluation of Psy.D. students in all aspects of their work. Introduction to clinical interviewing skills, therapeutic relationship, theories of psychotherapy, and common factors in psychotherapy and clinical assessment.

PSY 5372 Clinical and Research Practicum II (3)

Pre-requisite(s): Nine hours of PSY 5371
Intermediate level practicum experience of supervision, development, and evaluation of Psy.D. students in all aspects of their work.

PSY 5373 Clinical and Research Practicum III (3)

Pre-requisite(s): Nine hours of PSY 5372
Advanced practicum experience. Supervision, development, and evaluation of Psy.D. students in all aspects of their work.

PSY 5374 Clinical Practicum and Professional Development (3)

Pre-requisite(s): Nine hours of PSY 5373
Practicum focusing on refining clinical and research skills. Supervision, development, and evaluation of the Psy.D. student in all aspects of her or his work.

PSY 5380 Multidimensional Scaling (3)

Pre-requisite(s): PSY/STA 5301
Basic scaling theory with emphasis on metric, non-metric, and individual-differences multidimensional scaling models and methodology. Applications of scaling methods to measurement problems in the behavioral and health sciences, education, and business.

PSY 5384 Multivariate Statistical Methods (3)

Pre-requisite(s): PSY/STA 5301

Discriminant analysis, canonical correlation analysis, and multivariate analysis of variance.

PSY 5386 Exploratory Factor Analysis (3)

Pre-requisite(s): PSY/STA 5384 and 5301

Exploratory factor analysis with emphasis on applications in the behavioral and health sciences, education, business, including the description and use of available software.

PSY 5388 Advanced Statistical Methods (3)

Selected issues in applied statistics.

PSY 5389 Mathematical Models in Psychology (3)

Pre-requisite(s): PSY/STA 5301

Introduction to mathematical formulations in a wide range of psychological research including learning theory, decision and choice, reaction time, theory of signal detection, and other selected topics.

PSY 5390 Confirmatory Factor Analysis and Structural Equations Models (3)

Pre-requisite(s): PSY/STA 5301

Confirmatory factor analysis, path analysis and structural equations models, analysis of covariance structures, least squares and maximum likelihood estimation, and application to psychological processes.

PSY 5391 Multilevel Modeling (3)

Pre-requisite(s): PSY 5301

An introduction to multilevel modeling and hierarchical linear modeling in the behavioral sciences. Content includes both the theory behind and the application of multilevel modeling, including the analysis of unconditional models, estimation of effect size, conditional effects, growth curve models, and the analysis of dyadic data.

PSY 5394 Introduction to Systematic Reviews and Meta-Analysis (3)

Pre-requisite(s): PSY 5388 or consent of instructor

Intermediate course focusing on qualitative and quantitative integration of research.

PSY 5410 Psychopathology and Assessment in Children (4)

Pre-requisite(s): Psy

D. students only. This course is designed to provide an overview of emotional and behavioral disorders of children and adolescents and theoretical foundations and applications of psychological assessment with this population.

PSY 5423 Psychotherapy II: Advanced Cognitive Behavior Therapy (4)

Pre-requisite(s): Psy.D. students only

Continued study of cognitive-behavioral psychotherapy. Introduction to third wave cognitive-behavioral psychotherapies including dialectical behavior therapy, acceptance and commitment therapy, motivational interviewing, mindfulness, theory, and applications. Lab required.

PSY 5426 Clinical Intervention with Children (4)

Pre-requisite(s): Psy.D. students only

Theory and research of clinical intervention procedures including family therapy used with children and adolescents with psychological disorders.

PSY 5428 Group and Systems Approaches to Psychotherapy (4)

Pre-requisite(s): Psy.D. students only

Theory, research, and practice of systems approaches to group, couples, and family psychotherapy. Experiential practice in refining psychotherapy skills.

PSY 5429 Psychotherapy I: Cognitive-Behavior Therapy (4)

Pre-requisite(s): Psy

D. students only. Current research and theory on cognitive-behavioral therapy approaches to clinical problems.

PSY 5430 Neuroanatomy (4)

Cross-listed as NSC 5430

See NSC 5430 for course information.

PSY 5431 Psychological Assessment I (4)

Pre-requisite(s): Psy

D. students only. Introduction to assessment principles and approaches. Administration, scoring, and interpretation of intellectual, cognitive, and neuropsychological measures. Introduction to integrated report writing.

PSY 5432 Psychological Assessment II (4)

Pre-requisite(s): Psy.D. students only

Continued study of assessment. Introduction to objective and projective personality measures and disorder-based assessments and integration of the tests with various cognitive, intellectual, or neuropsychological measures. Lab required

PSY 5V04 Graduate Research (1-3)

For research credit prior to admission to candidacy for an advanced degree. May be repeated for credit.

PSY 5V06 Individual Studies in Psychology (1-3)

hrs.

PSY 5V24 Individualized Professional Development and Research (1-6)

Pre-requisite(s): Psy.D. students only

Opportunity for clinical psychology doctoral students to develop further their clinical research skills. Course may be repeated.

PSY 5V51 Supervised Teaching (1-3)

Cross-listed as NSC 5V51

See NSC 5V51 for course information.

PSY 5V71 Selected Topics in Psychology (1-3)

Advanced study in an area of psychology not covered by formal courses. Course may be repeated with a different topic of study.

PSY 5V85 Consulting, Research and Teaching in Statistics (1-3)

Statistics program. Supervised experience in statistical research, consulting, and teaching. Course may be repeated each semester.

PSY 5V96 Research Methods in Experimental Psychology (1-3)

Selected laboratory methods and techniques in Experimental Psychology. May be repeated with change in content. Maximum of 3 credit hours per semester with an overall maximum of 12 credit hours.

PSY 5V99 Thesis (1-3)

Research, data analysis, writing, and oral defense of an approved master's thesis. At least three hours are required.

PSY 6V01 Clinical Internship (1-6)

Course open only to fourth-year clinical psychology doctoral students who are off campus on internship. Must be taken for three semesters.

PSY 6V10 Prospectus Research (1-6)Pre-requisite(s): Completion of required course work for PhD degree
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be subject to review and approval by the Supervisory Committee.**PSY 6V99 Dissertation (1-12)**

Supervised research for the doctoral dissertation. These hours may be distributed over more than one semester.

Neuroscience (NSC)

NSC 4130 Advanced Laboratory in Neural Science (1)

Cross-listed as PSY 4130

Pre-requisite(s): NSC/PSY 4330 or concurrent enrollment
Laboratory experiments illustrating methods and procedures in Behavioral Neuroscience.

NSC 4312 Behavioral Medicine (3)

Cross-listed as PSY 4312

Pre-requisite(s): NSC 1106 and 1306 or consent of instructor
Major issues in Behavioral Medicine from the contribution of psychological, behavioral, and physiological factors and processes, to health and illness, to the application of psychological theories and techniques, to the prevention and amelioration of illness and the promotion of health. Uses engaged learning methods.

NSC 4330 Advanced Principles of Neural Science (3)

Cross-listed as PSY 4330

Pre-requisite(s): NSC 1106-1306 and PSY 1305, or consent of instructor
A study of the structure and function of the human nervous system as related to behavior.

NSC 5100 Psychology and Neuroscience Seminar (1)

Please see course description for PSY 5100.

NSC 5199 Non-Thesis Degree Completion (1)

To fulfill requirements for non-thesis master's students who need to complete final degree requirements other than coursework during their last semester. This may include such things as a comprehensive examination, oral examination, or foreign language requirement. Students are required to be registered during the semester they graduate.

NSC 5311 Seminar in Memory and Cognition (3)

Cross-listed as PSY 5311

Pre-requisite(s): Psychology Ph D or Psy.D. students only, or consent of instructor. An advanced treatment of the study of human cognition. Topics to include memory, language, problem solving, intelligence, and thinking.

NSC 5318 Perception (3)

Cross-listed as PSY 5318

Research and theory on sensory and perceptual processes.

NSC 5319 Clinical Neuroscience - Advanced (3)

Cross-listed as PSY 5319

Pre-requisite(s): PSY 4430 or 5330, or consent of instructor
Neuroanatomy, brain structure-function relationships, experimental neuropsychology, and biological theories of abnormal behavior.

NSC 5320 Learning and Behavior Theory (3)

Cross-listed as PSY 5320

Pre-requisite(s): Consent of instructor
Methods of theories of learning and Behavioral Analysis.

NSC 5330 Neuropharmacology (3)

Cross-listed as PSY 5330

Pre-requisite(s): Psychology Ph.D or Psy.D. students only, or consent of instructor
Introduction to pharmacology with emphasis on drugs that act on the nervous system. Absorption distribution and biotransformation of drugs. Drug receptors, site and mechanism of action.

NSC 5360 Neurophysiology (3)

Cross-listed as PSY 5360

Pre-requisite(s): Consent of instructor
Electrical and chemical behavior of neurons--excitable membranes, cell physiology of nerve cells, neural conduction, transmission, reception and integration.

NSC 5430 Neuroanatomy (4)

Cross-listed as PSY 5430

Pre-requisite(s): Consent of instructor
Selected topics in physiological psychology, including laboratory.

NSC 5V04 Graduate Research (1-3)

Pre-requisite(s): Consent of instructor

For research credit prior to admission to candidacy for an advanced degree. May be repeated for credit.

NSC 5V06 Individual Studies in Neuroscience (1-3)

Individual study in areas of neuroscience not covered by formal courses. Meetings are by appointment, and the course may be repeated for credit.

NSC 5V51 Supervised Teaching (1-3)

Cross-listed as PSY 5V51

Advanced study in an area of psychology not covered by formal courses. Course may be repeated with a different topic of study.

NSC 5V71 Selected Topics in Neuroscience (1-9)

Advanced study in an area of neuroscience not covered by formal courses. Course may be repeated with a different topic of study.

NSC 5V96 Research Methods in Neuroscience (1-12)

Selected laboratory methods and techniques in experimental psychology.

NSC 5V99 Thesis (1-3)

Research, data analysis, writing, and oral defense of an approved master's thesis. At least three hours are required.

NSC 6V10 Prospectus Research (1-6)

Pre-requisite(s): Completion of required course work for PhD degree
Supervised research for developing and writing a Dissertation Prospectus Proposal that will be subject to review and approval by the Supervisory Committee.

NSC 6V99 Dissertation (1-12)

Supervised research for the doctoral dissertation. These hours may be distributed over more than one semester.