Psychology

Graduate Programs

The Department of Psychology offers three doctoral programs: Behavioral Neuroscience, Lifespan Developmental Psychology, and Medical/Clinical Psychology. A terminal master's degree is not offered.

Behavioral Neuroscience

The Behavioral Neuroscience Doctoral Program is designed to prepare students for independent research and teaching in the neurobiology of behavior. Research training is provided by faculty in the Department of Psychology and in the UAB Schools of Medicine and Optometry, who share an interest in the biological basis of behavior. The course of study includes a core curriculum in neuroscience and recognizes the interdisciplinary nature of this field. Students obtain strong backgrounds in behavioral science and in neuroscience and gain expertise in the content and techniques of selected areas of neuroscience as they apply to the study of behavior.

Faculty laboratories are equipped for research in behavior, neuroanatomy, neurochemistry, neuroimaging, neuropharmacology, neurophysiology, and molecular biology. The research interests of the faculty include neuroanatomy and neurophysiology of the visual system; interactions between the central nervous system and the periphery in the control of feeding and energy balance; neural underpinnings of obesity and plasticity in participants in a weight loss program; autism; emotional substrates of conditioned fear; neurophysiology and neuropharmacology of pain.

Lifespan Developmental Psychology

The Lifespan Developmental Psychology Doctoral Program trains scientists to conduct research to discover and apply basic principles of developmental psychology in an interdisciplinary context and to apply those principles to a variety of problems. Graduates are capable of taking positions in institutions of higher learning, medical schools, research institutions, government agencies, and other research and teaching positions. Research training is provided by the faculty of the Department of Psychology and may occur in collaboration with faculty at the Civilian International Research Center, the Center for Aging, the Center for Applied Gerontology, the Department of Pediatrics, The School of Public Health, and other centers and departments.

The research programs of faculty with interests in lifespan developmental psychology include a wide variety of topics from infancy to the elderly. Much of this research is funded by federal research grants. Research subareas include: developmental disabilities (with special interests in Autism Spectrum Disorders, prenatal development and exposure to toxic substances, early intervention, adolescent psychosocial development and mental health, and how family members adapt to the problems of a child with a disability); adolescence (with special interest in longitudinal studies, interactions between health and development, alcohol and drug use, predictors of depression and suicide, family and peer relations, those with special health care or education needs); and aging (with special interest in visual-perceptual problems of older adults with low vision, memory skills training with elderly populations, the psychological aspects of chronic illness in the elderly, chronically ill individuals, care giving in families of elderly persons, human factor issues in vision and aging).

Developmental Psychology students must complete a master's thesis. Admission to candidacy for the doctoral degree is based on satisfactory completion of coursework and completion of an area review in the form of a Psychological Bulletin or Psychological Review article. The doctoral degree is awarded upon successful defense of the dissertation.

It is also possible to enroll in the Gerontology Certification Program concurrently with enrollment in the Lifespan Developmental Psychology Program. More information about this program may be found at: http://www.aging.uab.edu/SubChannel/Training/pdf/ gep-student-policy-2006.pdf

Medical/Clinical Psychology

The Medical / Clinical Psychology Doctoral Program prepares students to become leaders in health promotion, disease prevention, risk reduction, and symptom assessment and amelioration in interdisciplinary and medical settings. Research, course work and clinical training emphasize behavioral and psychological factors associated with medical illness and injury as well as neurobehavioral and psychological disorders across the lifespan. The Medical/Clinical Psychology Program is accredited to offer training in clinical psychology by the American Psychological Association.

The Department of Psychology (College of Arts and Sciences) and the UAB School of Medicine co-sponsor the Medical/Clinical Psychology Doctoral Program. Program faculty are distributed across multiple academic departments and divisions, including but not limited to Psychology, Psychiatry, Pediatrics, Neurology, Preventive Medicine, Clinical Immunology and Rheumatology, and Physical Medicine and Rehabilitation. Clinical psychologists and researchers in UAB-affiliated clinics and research centers, the Children's of Alabama Hospital, the Birmingham VA Medical Center and throughout the community also play active roles in teaching as well as research mentoring and clinical supervision.

Research programs in which faculty and students are currently involved include: accidental injury and child abuse risk prevention; adolescence, aging, autism spectrum and other neurodevelopmental disorders and developmental disabilities; chronic pain; coping with medical illness, dementia, eating disorders and obesity; epilepsy; minority health issues and health disparities; neural plasticity; neuroimaging; pediatric oncology; response to stress and psychological trauma; rehabilitation following traumatic brain and spinal cord injury, stroke and neurobehavioral disease; sleep and feeding problems of childhood; and substance abuse.

With the approval of both programs it is possible to complete the Master of Science in Public Health program and the Medical/Clinical Psychology program concurrently.

Application

The deadline for receipt of complete applications for admission is: November 30 for all three programs. Applications are invited both from students with bachelor's degrees and from those who may have already completed some graduate study. The GRE General Test is required. For the most up-to-date description of application requirements please see the websites for the individual programs, given below.

Admission

Admission to the Psychology graduate programs is highly selective. Applications are evaluated as a whole without minimum criteria on single scores or other indicators. Transcripts are evaluated for the content and difficulty of courses completed as well as grades received. All programs
follow an affirmative action/equal opportunity process to ensure that all applicants are evaluated fairly and on the basis of their individual merit. Further information regarding admission to the three programs appears below:

**Behavioral Neuroscience**

Because of the interdisciplinary nature of this program, students with diverse backgrounds in psychology, biology, and physical science are encouraged to apply. All students are expected to have undergraduate training in psychology, biology, physics, chemistry, and mathematics. Students not trained in one or more of these areas may be required to make up deficits after enrollment.

**Lifespan Developmental Psychology**

Admission to the Lifespan Developmental Psychology program requires a solid background in psychology as well as some courses in the life sciences. Research experience is essential. Excellent grades in statistics and mathematics are also valued.

**Medical/Clinical Psychology**

The Medical/Clinical Psychology program requires a strong background in psychology (including statistics and research design; cognitive, biological, and affective bases of behavior; abnormal psychology and personality). Advanced course work in mathematics and natural science (especially anatomy and physiology) is also recommended. Relevant research experience is considered an important indication of the applicant's motivation and commitment to program goals, and prior experience with clinical populations is also advantageous. The relevance of the applicant's goals and interests to ongoing activities of program faculty is weighed heavily in admissions decisions. Please visit the program website for further information on admissions (including characteristics of admitted students) and program outcomes.

**Advisement**

Behavioral Neuroscience students are advised by their Program Director in consultation with a program steering committee and by their research preceptors until the dissertation committee is appointed, usually early in the third year of study.

Students accepted into the Lifespan Developmental Psychology specialization are matched with a faculty member who agrees to mentor that student. Therefore, applicants will need to identify faculty members with whom they share research interest and would like to study.

Medical/Clinical Psychology students are advised by their research mentor, an advisory committee, and the program director.

**Financial Aid**

All students admitted to the Behavioral Neuroscience, Lifespan Developmental Psychology, and Medical/Clinical Psychology programs may expect to receive financial aid for at least 5 years. Sources of support include fellowships, traineeships, assistantships, and tuition scholarships.

**Additional Information**

For detailed information on these programs, please visit the websites listed below. Questions may be directed to the appropriate Program Director or to the Graduate Programs Manager, Ms. Terri Roberson, at 205-934-8723 or trotbe@uab.edu.

**Behavioral Neuroscience**

Website: http://www.uab.edu/cas/psychology/graduate/behavioral-neuroscience

Dr. David C. Knight, Director
Email knightdc@uab.edu

**Lifespan Developmental Psychology**

Website: http://www.uab.edu/cas/psychology/graduate/lifespan-developmental

Dr. Fred J. Biasini, Director
Email fbiasini@uab.edu

**Medical/Clinical Psychology**

Website: http://www.uab.edu/cas/psychology/graduate/medical-clinical-psychology

Dr. Edwin W. Cook III, Director
Email ecook@uab.edu

**Courses**

PY 653. Foundations of Behavioral Neuroscience. 4 Hours. Neural systems which control behavior will be studied, incorporating knowledge gained from neurobiological and psychological research. Topics will include synaptic communication, sensation and perception, movement, genetic influences on behavior, motivation, emotions, psychopathology, brain plasticity, and an extended module on learning.

PY 663. Language: Mind, Brain and Society. 3 Hours. Combines cognitive and behavioral perspectives with what is known about brain systems that support language and how those systems are impaired in developmental and neurological disorders. Topics include: speech perception, word comprehension, semantics, bilingualism, speech production, sentence processing, reading, and the social aspects of language.

PY 687. The Dynamics of Pain. 3 Hours. This course provides a comprehensive study of pain, from basic anatomy through clinical treatment and measurement.

PY 693. Cognitive Neuroscience. 3 Hours. How cognitive processing originates from brains. Focus on synthetic approaches to sensory-input guided behavior implemented in a biologically realistic manner; neurobiological wetware underlying cognition; study and construction of synthetic approaches that emulate biological behavior and psychological processes.

PY 698. Premaster's Degree Graduate Research. 1-12 Hour.


Prerequisites: GAC M

PY 700. Foundations of Research Design. 1 Hour. Presentation and discussion of the nature of scientific evidence, design of research programs and individual studies, and manipulation and measurement of study variables.

PY 701. Professional Issues and Ethics in Psychology. 1 Hour. APA ethical code, manual for service providers in psychology, state and national mental health codes and trends for service providers; ethical practices in research with human subjects. APA organizational structure.
PY 704. Social Psychology. 3 Hours.
Interpersonal relationships and effects of social environment on social perception and human behavior.

PY 705. Learning Processes. 3 Hours.
Phenomena and mechanisms of learning; information processing, attention, and major issues of learning theory.

PY 706. Sensory and Perceptual Processes. 3 Hours.
Sensory physiology; diagnostic techniques for pathophysiology of sensory systems; human psychophysics and principles of perception.

PY 707. Brain and Cognition. 3 Hours.
Integration of cognitive, behavioral, biological, and computational perspectives on perception, attention, learning and memory, language, problem-solving and creativity, and judgment and decision-making.

PY 708. Developmental Psychology. 3 Hours.
Human development from prenatal period to old age. Genetic and environmental determinants of behavior; linguistic, cognitive, intellectual, personality, social, and emotional development.

PY 710. Seminar in Contemporary Issues in Developmental Psychology. 1 Hour.
Weekly forum to discuss issues related to developmental research; ethical issues; professional issues.

PY 711. Seminar in Cognitive Development. 3 Hours.
Seminar in the development of and changes in memory, perception, learning, and thinking throughout the lifespan.

PY 712. Seminar in Social Development. 3 Hours.
Theoretical models and empirical findings.

PY 713. Seminar in Language Development. 3 Hours.
Research and theory related to normal and deviant language development.

PY 716. Introduction to Statistics and Measurement. 3 Hours.
Probability, measurement, descriptive statistics, sampling distributions, null hypothesis significance testing, means comparisons, correlation, regression, reliability, validity, categorical data analysis, and nonparametric methods.

PY 716L. Lab for Introduction to Statistics and Measurement. 1 Hour.
Computer laboratory for PY 716 Introduction to Statistics and Measurement.

PY 717. Applied Statistical Methods. 3 Hours.
Statistical hypothesis testing in the context of the univariate general linear model: 1-way and factorial analysis of variance, multiple comparison procedures, multiple regression and repeated measures.
Prerequisites: PY 716 [Min Grade: C]

PY 717L. Lab for Applied Statistical Methods. 1 Hour.
Computer laboratory for PY 717 Applied Statistical Methods.
Prerequisites: PY 716L [Min Grade: C]

PY 718. Advanced Research Design. 2 Hours.
Presentation and discussion of advanced topics in research design, such as statistical and experimental control, adaptive and other between-groups experimental designs, and program evaluation. The class culminates in preparation of a research grant application.

PY 719. Multivariate Statistical Methods. 3 Hours.
Multiple regression, mediation and moderation, multivariate analysis of variance, logistic regression, principal components and factor analysis, and structural equation modeling.
Prerequisites: PY 717 [Min Grade: C]

PY 719L. Lab for Multivariate Statistical Methods. 1 Hour.
Laboratory for PY 719 Multivariate Statistical Methods.
Prerequisites: PY 717L [Min Grade: C]

PY 720. Human Neuropsychology. 3 Hours.
Structure and function of human brain; effects of neurological impairment on cognitive, affective, and personality functions.
Prerequisites: PY 753 [Min Grade: C] (Can be taken Concurrently) or PY 793 [Min Grade: C] (Can be taken Concurrently)

PY 721. Neuropsychological Assessment. 3 Hours.
Assessment of various types and locations of brain damage and human mental impairment.
Prerequisites: PY 720 [Min Grade: C]

PY 723. Seminar in Abnormal Child Development. 3 Hours.

PY 726. Seminar in Advanced Developmental Psychology. 3 Hours.
Advanced issues in developmental research and theory.

PY 727. Longitudinal Data Analysis Laboratory. 3 Hours.
Hands-on advanced statistics class focusing on analyses of longitudinal data. Topics include multilevel (hierarchical) models, latent growth curve models, latent transition analysis, and survival analysis.
Prerequisites: PY 719 [Min Grade: C]

PY 729. Seminar in Adolescent Development. 3 Hours.
Seminar in Adolescent Development. Theoretical models and empirical findings related to biological, psychological, and socio-historical changes in adolescent development.
Prerequisites: PY 719 [Min Grade: C]

PY 731. Health Psychology. 3 Hours.
Prevention, health enhancement and intervention. Environmental, interpersonal and marketplace factors in health and disease. Basic concepts, methods and instruments in health psychology assessment.

PY 734. Current Trends in Medical Psychology. 1-3 Hour. course.

PY 735. Psychology of Addiction. 3 Hours.
Causative and developmental factors and treatment approaches for all types of addictions (nicotine, alcohol, drugs, etc.).

PY 737. Psychology of Eating Disorders & Obesity. 3 Hours.
History, epidemiology, genetic, environmental, and behavioral correlates and prevention and treatment strategies of eating disorders and obesity; mechanisms of normal feeding and weight control and research methods used to understand other psychiatric disorders.

PY 740. Adult Personality and Psychopathology. 3 Hours.
Fundamental theories, concepts, issues, and methodologies of adult psychopathology and its relationship to normal personality and personality disorders. Focuses on the major syndromes of mental disorder from both biological and psychosocial perspectives.

PY 741. Child and Adolescent Psychopathology and Treatment. 3 Hours.
Development, etiology, diagnosis and treatment of emotional and behavioral disorders affecting children and adolescents. Incorporates historical and contemporary issues pertaining to their phenomenology, comorbidity, and epidemiology along with cultural, ethical and professional issues germane to clinical care.
Prerequisites: PY 708 [Min Grade: C]

PY 742. Sport Psychology. 3 Hours.
Psychological factors in athletic performance. Psychological characteristics of successful athletes; anxiety arousal, motivation, attention, concentration, attribution, cognition, and imagery.
PY 744. Neuroanatomy for Neuropsychologists. 3 Hours.
Overview of the anatomy of the brain from a clinical perspective, with emphasis on a three-dimensional understanding of the brain (both in terms of structure and functional organization). General principles of functional organization are examined at various levels of the neuraxis, as are the functional networks that underly behavior, cognition, and emotion. General classes of neuropathology commonly seen in medical settings are reviewed, along with implications for clinical assessment.

PY 745. Neurobiology of Learning. 3 Hours.
Introduction to data, phenomena, and theory related to associative learning of behaviors. Discussion of issues related to the neurobiology of non-associative learning, stimulus encoding, and memory.

PY 746. Structural Equation Modeling. 3 Hours.
Basic steps in structural equation modeling - model identification, estimation, evaluation and modification - as well as advanced topics such as confirmatory factor analysis, latent variables, multi-group modeling, analysis of non-normally-distributed and categorical data, missing data, and sample size estimation.

Prerequisites: PY 719 [Min Grade: C]

PY 749. Social Psychophysiology. 3 Hours.
Current research on the effects of the social world on hormonal responses (cortisol, testosterone etc.). Several research articles will be discussed every week in a seminar format.

PY 751. Human Psychopharmacology. 2 Hours.
Neurophysiological underpinnings and clinical use of drugs for the treatment of mental disorders and pain.

PY 753. Foundations of Behavioral Neuroscience. 4 Hours.
Neural systems which control behavior will be studied, incorporating knowledge gained from neurobiological and psychological research. Topics will include synaptic communication, sensation and perception, movement, genetic influences on behavior, motivation, emotions, psychopathology, brain plasticity, and an extended module on learning.

PY 754. Advanced Topics in Behavioral Neuroscience. 3 Hours.
Methods and discoveries in the neuroscience of behavior, such as brain imaging, human and animal learning, perception, neurophysiology, neuropsycharmacology and psychiatric disorders. Most students will have taken 753/453 as a prerequisite, but other high level neuroscience courses may also suffice with permission of the instructor.

Prerequisites: PY 753 [Min Grade: C]

PY 755. Human Psychophysiology. 3 Hours.
Basic and applied research topics.

PY 756. Research Seminar in Behavioral Neuroscience. 1 Hour.
Discussion of current literature and presentation of ongoing research by students in the program.

PY 760. Interviewing and Behavioral Observation. 2 Hours.
Theory and practice of interviewing and behavioral assessment with adult and child populations.

PY 761. Behavioral Assessment. 2 Hours.
Psychometric and observational procedures, relying largely on behavioral theory, to observe, analyze, and assess human clinical behaviors; development of intervention activities.

PY 763. Language: Mind, Brain and Society. 3 Hours.
Combines cognitive and behavioral perspectives with what is known about brain systems that support language and how those systems are impaired in developmental and neurological disorders. Topics include: speech perception, word comprehension, semantics, bilingualism, speech production, sentence processing, reading, and the social aspects of language.

PY 764. Cognitive Assessment: Child and Adult. 3 Hours.
Cognitive assessment of children and adults focusing on issues related to assessment, Bayley Scales of Infant/Toddler Assessment, Differential Ability Scales, Wechsler scales and additional cognitive, academic, memory, and learning tests.

PY 765. Personality Assessment. 2 Hours.
Objective personality assessment, primarily focusing on Minnesota Multiphasic Personality Inventory.

PY 769. Cognitive Behavior Therapy. 3 Hours.
Review of cognitive behavioral theory and methods with emphasis on empirically validated individual and group, including brief, interventions.

PY 770. Survey of Psychotherapeutic Methods. 3 Hours.
Procedures for changing maladaptive behavior. Research and methodological issues, factors common to most therapy, and major therapeutic techniques.

PY 772. Behavior Therapy. 2 Hours.
Cognitive and more traditional behavioral approaches to intervention in mental health and medical environment.

PY 774. Family Therapy. 2 Hours.
Traditional systems theory, intervention strategies, and family dynamics; case examples and group participation.

PY 776. Child and Adolescent Psychotherapy. 2 Hours.
Application of child psychopathology knowledge and intervention with child and adolescent population; theoretical and applied issues.

Prerequisites: PY 708 [Min Grade: C]

PY 777. Psychotherapy Practice Shadowing. 1 Hour.
Introduction to psychotherapy practice by sitting in on therapy (consented) with a practicing psychologist.

PY 779. Foundations of Clinical Supervision and Consultation. 1 Hour.
Methods, models, and ethical considerations related to clinical supervision and interprofessional consultation in diverse cultural and professional contexts.

PY 780. Rehabilitation Psychology. 2 Hours.
Rehabilitation of chronic physical disorders; neurological disorders such as cerebrovascular disease, head trauma, and spinal cord injury.

PY 781. Forensic Psychology. 2 Hours.
Interface between psychology and law; civil and criminal procedure; expert witness; insanity, competency, commitment, and malpractice. Experience in criminal justice settings.

PY 783. Developmental Disabilities. 3 Hours.
Mental retardation, learning disabilities, and other developmental disorders. Research on nature of disabilities and major intervention techniques.

Prerequisites: PY 708 [Min Grade: C]

PY 785. Psychology of Aging. 3 Hours.
The relationship between aging and health, cognitive function, intelligence, personality, relationships, and psychopathology. Other topics covered in this course include assessment and treatment of psychological disorders in older adults, end-of-life issues, caregiving and dementia.
PY 786. Aging Seminar. 1 Hour.
Contemporary topics in aging including basic science, clinical, and psychosocial issues.

PY 787. The Dynamics of Pain. 3 Hours.
This course provides a comprehensive study of pain, from basic anatomy through clinical treatment and measurement.

PY 788. Pediatric Psychology. 3 Hours.
Behavioral influences on health and illness; impact of health problems and illness on behavior and development of children and adolescents; family issues related to these interactions.

PY 789. Social/Ethnic Issues in Therapy. 3 Hours.
Psychotherapeutic issues pertinent to the counseling of the culturally diverse; examination of the effects of various cultural histories, values, morals and intrafamilial relationships. Groups emphasized: Hispanic, African-American, Asian and American Indian populations. Issues concerning therapist from a different cultural background than the treatment population.

PY 790. Internship in Clinical Psychology. 0-9 Hours.
Completion of an APA-accredited internship in clinical psychology.

PY 791. Special Topics in Psychology. 1-3 Hour.
Topics and prerequisites vary.

PY 792. Introduction to Neurobiology. 3 Hours.
Introduction to the neurobiological bases of neuronal communication and behavior. Topics include invertebrate and vertebrate neuroanatomy, neurons and glia, resting potentials, action potentials, synaptic transmission, neurotransmitters and receptors, sensory transduction, and sensorimotor integration. The course is taught at Dauphin Island Sea Lab Facilities, Dauphin Island, Alabama.

PY 793. Cognitive Neuroscience. 3 Hours.
How cognitive processing originates from brains. Focus on synthetic approaches to sensory-input guided behavior implemented in a biologically realistic manner; neurobiological wetware underlying cognition; study and construction of synthetic approaches that emulate biological behavior and psychological processes.

PY 796. Practicum in the Teaching of Psychology. 1-9 Hour.
Practicum in the teaching of psychology.

PY 797. Clinical Practicum in Medical Psychology. 1-9 Hour.
Practicum training in clinical and medical psychology, supervised by a licensed mental health professional.

PY 798. Predoctoral Degree Graduate Research. 1-12 Hour.
Predoctoral degree graduate research.

PY 799. Doctoral Dissertation Research. 1-12 Hour.
Doctoral dissertation research.

Prerequisites: GAC Z