

# PSYCHOLOGY, PHD

Psychology offers six areas of concentration (known as area groups): biological, clinical, cognitive and cognitive neuroscience, developmental, perception, and social and personality. Although there is a good deal of collaboration and interaction across groups, each area of concentration has its own requirements for graduate study and students are typically admitted into one of these areas of concentration.

Although most incoming graduate students' interests fall within these six areas of concentration, some do not. That some students' interests cut across disciplinary area groups and/or interface with other programs on campus is to be expected in a top-notch department because the boundaries of psychology itself are in flux. An innovative feature of the program is the Individualized Graduate Major designed for those graduate students who do not find a niche in the current area group structure and, instead, wish to cross area group lines and/or incorporate substantial training from other programs in their psychology graduate work. It is important to emphasize that the Individualized Graduate Major leads to a psychology PhD and is not appropriate for students whose graduate study does not emphasize psychological science. Such students are advised to pursue a PhD in another program or a committee degree.

Faculty members and graduate students have many affiliations with other departments, institutes, and training programs: Institute on Aging, Waisman Center, Wisconsin Regional Primate Research Center, Health Emotions Center, Neuroscience Training Program, Keck Neuroimaging Center, Hearing Training Program, Center for Research on Gender and Women, Institute for Research on Poverty, NSF National Consortium on Violence Research, Mass Communications Research Center, and Survey Research Laboratory. There are strong ties to the departments of Anatomy, Anthropology, Communicative Disorders, Educational Psychology, Entomology, Forest and Wildlife Ecology, Medical Microbiology and Immunology, Industrial Engineering, Ophthalmology, Psychiatry, Sociology, and Zoology.

## BIOLOGY OF BRAIN AND BEHAVIOR

The *biological psychology* area encompasses the subdisciplines of behavioral neuroscience and animal behavior. Students sponsored by faculty in this area are trained in theory and methods required for understanding the biological bases of behavior. The doctoral track in behavioral neuroscience provides research training in specific methods and techniques needed to assess brain and peripheral physiological mechanisms. Topic areas investigated by program faculty include psychoneuroimmunology, hormone-behavior relationships, neurobiology of stress and arousal, sensory processes, and the neural organization of the cerebral cortex. Age-related changes during development, and the impact of stress on health and behavior are also important foci. Students learn modern surgical, neuroanatomical, neurophysiological, neuroimaging (PET, MRI), immunohistochemical, pharmacological, and behavioral techniques. Training in hormone and immune assays, or cellular recording, are also provided when required for the student's research. Conceptual issues, such as experimental design, and the relevance to human clinical and social conditions are emphasized.

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specific research methods and techniques needed to assess brain and peripheral physiological mechanisms. Our students can also pursue training in theories and methodologies involved in the study of animal behavior. Coursework and research provide a unique interdisciplinary experience with a strong emphasis on evolutionary/ecological principles and proximate mechanisms, including communication and the role of hormones and social relationships underlying the expression of behavior. Our goal is to train outstanding students with a special interest in integrating knowledge across traditional discipline lines.

Many facilities are available for graduate training, including the department's Harlow Primate Laboratory, internationally known for its studies of primate development and learning. Many primate projects also take advantage of the neuroimaging resources at UW and benefit from the Wisconsin National Primate Research Center with its large rhesus monkey and marmoset colonies. Within the Brogden Psychology Building, research programs utilize many other small animal species.

Our program continues to grow and incorporate new perspectives. Our students and faculty interact and collaborate with the Departments of Anthropology, Comparative Biosciences, Psychiatry, Wildlife Ecology, and Zoology, as well as the Neurosciences Training Program, Institute on Aging, and Center for Excellence in Women's Health Research. The University of Wisconsin provides a diverse and stimulating academic environment for training in Biological Psychology.

## CLINICAL PSYCHOLOGY

The training model for the UW-Madison doctoral program in clinical psychology is that of a scientist-practitioner. Based on the program's endorsement of a scientist-practitioner model, the educational plan focuses on two major and interrelated goals that integrate science and practice:

1. to produce graduates who have the requisite knowledge, skills, and experience to create and disseminate new knowledge about the processes and mechanisms underlying psychopathology; and
2. to produce graduates who have the requisite knowledge and skills for entry into the practice of professional clinical psychology and who understand and appreciate the importance of an empirical basis to clinical practice.

The program uses a mentor model for research training; applicants are admitted to the program based in part on how closely their research interests are aligned with that of current faculty. The close working relationship between the faculty mentor and the graduate student is one of the mechanisms that serves to integrate theory and research with the applied training. Coursework and practicum experiences comprise the other mechanisms that foster the integration of science and practice.

The interests of and methods utilized by faculty vary widely but all share the common goal of pursuing innovative, cutting edge analyses of major forms of psychopathology. The program also offers excellent clinical training and in the course of their tenure in the program, graduate students in clinical psychology develop expertise in both assessment and treatment of psychopathology. However the student who is not deeply committed to research and scholarship will, in all likelihood, not be satisfied with the Wisconsin Clinical Program.

During their stay, clinical graduate students complete courses in assessment, clinical research methods, and a sequence of clinical core courses covering the etiology and treatment of psychopathology, in addition to statistics/methodology courses and coursework in nonclinical areas both in and outside of the department. The required curriculum may

take more than five years to complete. The clinical program is situated in a world-class department that includes area groups in biology of brain and behavior, cognitive and cognitive neuroscience, developmental, perception, and social and personality. In addition, an Emotion Training Program within the department cuts across all other area groups and is supported by an NIMH training grant. Many clinical students and faculty are involved in various aspects of the Emotion Training Program. Clinical students have access to an extensive range of opportunities through collaborations with other units on campus including the Waisman Center, an interdisciplinary research institute for developmental research; the Institute on Aging; the Waisman Laboratory for Brain Imaging and Behavior; the Department of Psychiatry; and other departments in the Medical School, College of Letters & Science, and the School of Education.

A major goal of the program is to integrate students' clinical and research activities. Students begin their clinical practicum in the Psychology Department Research and Training Clinic (<https://psych.wisc.edu/graduate-program/clinical-psychology-program/research-and-training-clinic/>) during their third year in the program and typically continue such practicum training throughout the remainder of their graduate careers. An important component of clinical training is the "Small Group Practicum" in which various clinical professors supervise practicum activities on topics related to their own areas of interest. In the summer following the third academic year, the student is appointed to a clerkship in one of the several agencies that cooperate with the department in providing practicum training. Finally, all clinical students obtain at least one full year of full-time clinical experience in an approved internship facility. Whereas many students obtain internships at various of the better-known training centers around the country, other students complete their internships at one of the excellent local sites. Virtually all clinical graduate students have received financial support while in residence in the graduate program.

## COGNITIVE AND COGNITIVE NEUROSCIENCE (CCN)

The study of cognition and perception has undergone explosive growth during the past decade with exciting developments in psychology and related fields and with new techniques for studying mind and brain. The *cognitive and perceptual sciences* (CPS) area group provides a unique and stimulating graduate school experience for students interested in an interdisciplinary approach to cognition and perception. Faculty members combine expertise in cognition and perception with a broad arsenal of methods including experimental, developmental, computational, and biological approaches. This breadth in methodologies is paralleled by breadth across disciplines of communicative disorders, educational psychology, and neuroscience. Areas of exceptional strength in cognition include language development, speech perception, neural representation of language and memory, gesture, higher-level comprehension, music cognition, problem solving, and embodied cognition. Research in hearing and vision includes perceptual development, perception of complex sounds, perception of 3-D layout and auditory space, attention, and neural processing of auditory and visual objects and events. Laboratory facilities are comprehensive and fully state of the art, enhanced by unique opportunities for training in neuroimaging at the Keck Laboratory for Functional Brain Imaging and in developmental methods at the Waisman Center. The program is committed to maintaining a collegial environment in which students collaborate with faculty in developing their research programs. Graduates with a PhD from the program maintain careers as university or college professors, or as researchers at public or corporate laboratories.

## DEVELOPMENTAL PSYCHOLOGY

Research in the *developmental* area group focuses on the interrelationships of biological, environmental, and behavioral processes throughout the life span, and on the mechanisms and processes of change. The program emphasizes interdisciplinary studies and allows graduate students flexibility in designing a program of study consonant with their goals and interests. One central part of the developmental program is a weekly lunch meeting, in which students and faculty present ongoing research and discuss current topics in the field. Students in the program focus on cognitive, emotional, language, perceptual, personality, social development, or relations between these areas. Within these content domains, students and faculty conduct research on both typical and atypical development, and work with individuals representing a wide range of ages, including infants, preschool and school-age children, adolescents, adults, and the elderly. Specific faculty research interests include the development of mathematical reasoning and problem solving, development of visual perception and attention, developmental behavioral genetics, gender role development, developmental psychopathology, resiliency in adulthood and aging, and language acquisition.

Participants in research studies are drawn from an unusually wide variety of sources, including local preschools and day care centers; public, and private schools in the Madison area; the Dane County Division of Children, Youth, and Families; the Wisconsin Longitudinal Survey; University of Wisconsin Hospitals and Clinics; and the Institute on Aging. Many developmental faculty are affiliated with the Waisman Center on Human Development, which provides a database of typically developing infants and children with developmental disabilities.

## SOCIAL AND PERSONALITY PSYCHOLOGY

The program is designed to train students for research on the cutting edge of the fields of *social and personality psychology*. The curriculum consists of a series of courses and seminars designed to provide students with a thorough introduction to the fields of social and personality psychology. This coursework is complemented by courses that provide the methodological and statistical skills necessary for several kinds of research. The primary emphasis is on experimental laboratory research, but training is also provided in field research, longitudinal studies, observational methods, and archival research. There are also opportunities to pursue theoretical issues in various applied areas (e.g., education, health psychology). The goal is to train students for productive academic careers in university settings. Students are provided with the opportunity to work collaboratively with one or more faculty members on a variety of research topics, including acculturation, achievement behavior, attitudes, competition, culture and cognition, emotion, goals and self-regulation, interest and intrinsic motivation, social cognition, social perception, social neuroscience, and stereotypes, prejudice and intergroup relations. Students are also encouraged to develop their own independent lines of research.

Additional resources are available to students from outside the psychology department. The social psychology program in the sociology department shares faculty members and courses with the program in psychology and offers seminars that supplement those taught in psychology. In addition, resources are provided by the Mass Communications Research Center, the Institute for Research on Poverty, and the Survey Research Laboratory.

## FACILITIES

The department has an extraordinary array of research facilities. Virtually all laboratories are fully computer controlled, and the department's general purpose computing facilities are freely available to all graduate students. The Brogden Building and the Harlow Primate Laboratory have special facilities for housing animals, as well as for behavioral, pharmacological, anatomical, immunological, and physiological studies. The department is well-equipped for studies of visual, auditory, and language perception and other areas of cognitive psychology. In addition, the Psychology Department Research and Training Clinic is housed in the Brogden Building. See Research Labs (<http://psych.wisc.edu/research-centers/>) for further information about individual faculty research labs and facilities. Connections with other departments and research institutes on campus (e.g., W.M. Keck Laboratory for Functional Brain Imaging and Behavior, and others) have been described above.