



## Neuropsychology Concentration

### **Description of the Neuropsychology Concentration within the University of Connecticut's Clinical Psychology Program**

Clinical neuropsychology is both a basic and an applied psychological specialty that involves the study, diagnosis, and treatment of disorders of brain functioning in adults and children. The activities of the neuropsychologist build upon the competencies of the general clinical psychologist, and include 1) examining patients with known or suspected cerebral disease, 2) developing and implementing interventions that target cognitive, behavioral, and emotional deficits, 3) consulting with healthcare colleagues, families, and service agencies, 4) conducting research that addresses basic and applied neuroscientific topics, and 5) teaching and supervising students. Because these diverse activities require mastery of knowledge from a variety of disciplines (e.g. neurology, psychiatry, and cognitive science), training is a relatively lengthy and challenging process that involves not only completion of a four- to five-year doctoral curriculum but also a one-year predoctoral neuropsychology internship (or major rotation in neuropsychology) and a two-year postdoctoral neuropsychology residency.

Students who are accepted into the Ph.D. program in clinical psychology at the University of Connecticut may pursue a supplementary course of study in clinical neuropsychology *in addition to completing all clinical psychology requirements*. The structure and content of this concentration have been shaped by the "Houston guidelines", a set of recommendations that identify essential skills that clinicians should have acquired by the end of their training and that offer suggestions for doing so across the three primary phases of professional education (graduate school, internship, and residency). (For details about the Houston guidelines, see [nanonline.org/content/pages/prof/houston.shtm](http://nanonline.org/content/pages/prof/houston.shtm).) Thus, students may complete a variety of *courses* in neuroanatomy, neurophysiology, and neuroscience, in neuropsychologic assessment procedures (including flexible battery and Boston process approaches), and in ethical issues in clinical and forensic neuropsychologic practice. These courses are offered in the Departments of Psychology, Behavioral Neuroscience, and Physiology and Neurobiology and at the University of Connecticut School of Medicine. Moreover, students may become involved in a variety of *research projects* that involve healthy and neurologically compromised adults (including elderly individuals) and children. Current research sites include the UConn Departments of Psychology (Main Campus [Storrs]) and Psychiatry (Health Center Campus [Farmington]) and several collaborating universities, medical centers, schools, and laboratories. Furthermore, students may enroll in *clinical neuropsychology practica* at regional medical centers and in independent clinical practices (see below).

It is expected that students who complete the UConn neuropsychology concentration will be able to successfully compete for INS/Division 40 neuropsychology internships and for APPCN neuropsychology residencies. After obtaining such training, students should be well qualified to function as neuropsychologic clinicians and/or researchers and, if they are so inclined, to complete the American Board of Professional Psychology/American Board of Clinical Neuropsychology (ABPP-CN) board certification process.

This brochure outlines the research and clinical interests of core and adjunct neuropsychology faculty and of behavioral neuroscience faculty whose interests are related to topics and problems in human neuropsychology. In addition, it lists required or strongly recommended courses for the neuropsychology concentration and ancillary classes that may be useful for students who have specialized interests within

neuropsychology (e.g. the cognitive effects of aging or of substance abuse). (***NOTE:*** Neuropsychology courses are open to graduate students who are ***not*** pursuing the concentration as long as prerequisites are met.)

We appreciate your interest in UConn's clinical psychology program and neuropsychology concentration, and we invite you to contact us for additional information as you search for a training site that meets your educational and professional goals.

## Faculty

### Core Neuropsychology Faculty

Inge-Marie Eigsti, Ph.D. (860-486-6021; [inge-marie.eigsti@uconn.edu](mailto:inge-marie.eigsti@uconn.edu)) is interested in developmental cognitive neuroscience. In particular, she investigates language and brain development in children with autism, with a particular interest in the cognitive impairments that may underlie language deficits. She uses a combination of functional MRI and behavioral paradigms in her research. She teaches Child Psychopathology (PSYC 307) and co-teaches Language Acquisition and Language Pathology ((335) with Dr. Letitia Naigles (Developmental Program). **Dr. Eigsti will be accepting a research student for Fall 2009.**

Deborah Fein, Ph.D. (860-486-3518; [deborah.fein@uconn.edu](mailto:deborah.fein@uconn.edu)) is interested in neuropsychology with adults and children, although most of her current research concerns children. In particular, she has investigated various neuropsychologic aspects of autism, including neuropeptides, evoked potentials, language, memory, affect processing, sensory processing, and early detection. Current projects involve early detection, children with optimal outcomes, mimicry and imitation, and early language development. She teaches Neuropsychological Assessment (PSYC 326), co-teaches Fundamentals of Human Neuropsychology (PSYC 325) with Dr. John Salamone (BNS Program; see below), and coordinates the Practicum in Neuropsychologic Assessment (PSYC 327). Dr. Fein is board certified in clinical neuropsychology (ABPP-CN). **Dr. Fein may be accepting a research student for Fall 2009.**

Richard Kaplan, Ph.D. ( [kaplan@psychiatry.uhc.edu](mailto:kaplan@psychiatry.uhc.edu) ) is a professor of Psychiatry and Neurology and director of the Neuropsychology Service at the UConn Health Center. He has over 25 years of experience as a Clinical Neuropsychologist and is board certified in clinical neuropsychology (APBB-CN). Current research projects include the cognitive changes in older adults with vascular risk factors and white matter disease and the neuropsychology of Lyme disease. **Dr. Kaplan will be accepting a research student for Fall 2009.**

**For descriptions of the research interests of other clinical psychology professors, including those who are involved in related areas such as health psychology, please refer to the brochure for UConn's Clinical Psychology Division.**

### Adjunct Neuropsychology Faculty

Greg Javornisky, Ph.D., and Gary Isenberg, Ph.D., teach a course in Child Neuropsychology. They also teach a practicum in child neuropsychological assessment at Connecticut Pediatric Neuropsychology Associates (Hartford). This experience focuses on assessment of children with learning disorders, seizures, head trauma, dyspraxia, Tourette syndrome, and genetic disorders. Their

research interests pertain to long-term outcomes in head injury and to nonverbal learning disorders and pragmatic language deficits.

John Beauvais, Ph.D. is Director of Neuropsychology at the West Haven Veterans Affairs Medical Center, a clinical instructor in the Yale University School of Medicine's Department of Psychiatry (New Haven), and a practicum supervisor. His students work with patients who either have documented neurologic disease or are undergoing diagnostic work-ups for neurologic conditions or trauma. Disorders include cerebrovascular disease, dementing illnesses, multiple sclerosis, head trauma, learning disorders, and substance abuse. Dr. Beauvais' current research addresses the neuropsychologic aspects of chronic substance abuse and human immunodeficiency virus as well as innovative approaches to assessment.

Dennis Johnston, Ph.D. is Director of Neuropsychology at the Hospital for Special Care (New Britain), a rehabilitation and chronic care facility. In association with Timothy Belliveau, Ph.D., he teaches a neuropsychology practicum that involves experience with inpatients and outpatients who have acquired brain or spinal cord injury, stroke, dementia, and other neurologic conditions. Students may also be exposed to rehabilitation procedures. Dr. Johnston's and Dr. Belliveau's research interests include assessment of response bias, actuarial approaches to diagnosis, and emotional and behavioral changes that are associated with traumatic brain injury.

### *Behavioral Neuroscience (BNS) Faculty*

Several faculty members in UConn's Behavioral Neuroscience Division have research and teaching interests that are closely related to human neuropsychology. Students may consult with these professors, attend their classes, have them on their thesis or dissertation committees, and occasionally complete research projects with them. Applicants who wish to pursue doctoral training in basic neuroscience should apply directly to the BNS Division.

James Chrobak, Ph.D. (860-486-4243; [james.chrobak@uconn.edu](mailto:james.chrobak@uconn.edu)) explores the emergent physiologic (fast-frequency oscillations) and cognitive (memory consolidation) properties of the hippocampal formation, its interconnected circuits, and their relation to neuropathology of the temporal lobe (e.g. dementia and temporal lobe epilepsy).

Etan Markus, Ph.D. (860-486-4588; [etan.markus@uconn.edu](mailto:etan.markus@uconn.edu)) studies a variety of cognitive processes in rats, including the neuronal bases of learning and memory, age-related changes in learning, sex differences and estrous cycle effects on cognition, and spatial and contextual learning. These are studied using both behavioral tests and examining the activity of networks of individual hippocampal neurons as rats learn and perform various experimental tasks.

John Salamone, Ph.D. (860-486-4302; [john.salamone@uconn.edu](mailto:john.salamone@uconn.edu)) conducts research on the motivational and motoric functions of dopamine and acetylcholine, explores issues in behavioral pharmacology, and employs microdialysis methods to study neurotransmission. In addition, he is interested in animal models of Parkinson's disease, depression, and schizophrenia.

Harvey Swadlow, Ph.D. (860-486-2252; [harvey.swadlow@uconn.edu](mailto:harvey.swadlow@uconn.edu)) investigates the processing of sensory information by neocortical networks and conducts physiological analyses of communication among identified cortical neurons in the awake state.

## Courses

### Required or Strongly Recommended Courses

- Foundations of Neuropsychology (PSYC 5140 (formerly PSYC 325); Drs. Fein and Salamone): Introduction to neuropsychology, including functional neuroanatomy, neurochemistry, pharmacology, and cognitive and emotional functions.
- Neuropsychological Assessment (PSYC 5141 (formerly PSYC 326); Dr. Fein): Overview of neuropsychological assessment, including neuropsychological functions, common syndromes, test instruments, and professional issues.
- Practicum in Neuropsychological Assessment (PSYC 6141 (formerly PSYC 327); Dr. Fein): Field placements in regional hospitals, independent neuropsychology practices, and rehabilitation settings. Students conduct supervised neuropsychological evaluations and occasionally provide intervention services. May be taken multiple times.
- Neuroanatomy (PNB 5396 (formerly PNB 396); Dr. Rubio): Survey of neuroanatomy, including lectures and lab experiments.

### **OR**

- Mammalian Neuroanatomy (MEDS 5384 (formerly MEDS 384); Drs. Oliver and Zecevic): Examination of mammalian spinal cord and brain, including the relationship between structure and function in the nervous system. *Offered at the UConn School of Medicine.*

### **OR**

- Case Based Neuroanatomy (PSYC 5370 (formerly PSYC 320); Dr. Kaplan) An exploration of neuroanatomy through examination of classic syndromic cases. *Offered at the UConn School of Medicine.*
- Neuropsychopharmacology (BIOB 5228 (formerly BIOB 328); Dr. Salamone): Exploration of basic principles of neuropharmacology, with an emphasis on neurochemical mechanisms and the actions of psychotherapeutic drugs.
- Cognitive Neuroscience (PSYC 5170 (formerly PSYC 301); TBA): Discussion of the complex, dynamic neurobiologic systems that are involved in perception, language, attention, arousal, sleep, learning and memory, abstract reasoning, and consciousness itself. Includes reviews of cutting-edge technologies, the evolutionary bases of neocortical specialization of cognitive functions, and heuristic models of brain function. *Offered in alternate years.*

### Additional Courses

- Child Neuropsychology (PSYC 5370 (formerly PSYC 320); Drs. Isenberg and Javornisky) Overview of child neuropsychology, including brain development, developmental and acquired syndromes, and child neuropsychological assessment. *Offered in alternate years.*

- Human Behavioral Genetics (PSYC 5284 (formerly PSYC 384); Dr. Maxson): Covers concepts and methods in human behavioral genetic analyses, with emphasis on normal variations, psychopathologies, and ethical issues.
- Neuroanatomy of the Mammalian Forebrain (PSYC 5270 – Current Topics in Behavioral Neuroscience; Dr. Chrobak). *Offered Fall 2008.*
- Special Topics in Physiological Psychology: The Cortex (PSYC 5270 (formerly PSYC 358); Dr. Swadlow): Reviews anatomic circuitry and physiologic functions of specific cortical regions. *Offered periodically.*
- Systems Neuroscience (MEDS 5371 (formerly MEDS 371); Dr. Kim): Examines functional organization of neural systems underlying movement, sensation, language, learning/plasticity, and emotion/arousal. *Offered at the UConn School of Medicine.*
- Connectionist Models (PSYC 5515 (formerly PSYC 315); Dr. Rueckl): Surveys connectionist models in psychology and computational neuroscience, including models for learning, memory, and language processes in intact and damaged networks. *Offered in alternate years.*
- Motivation (PSYC 5101 (formerly PSYC 340); Dr. Buck): Addresses cognitive, emotional, and neural aspects of motivation, emphasizing ways that higher-level social, cognitive, and moral emotional have roots in physiological systems of attachment and exploration. *Offered in alternate years.*
- Neural Foundations of Learning and Memory (PSYC 5251 (formerly PSYC 351); Dr. Markus): Outlines processes involved in habituation, conditioning, learning, and memory through study of the neural elements and systems that underlie their production and maintenance. *Offered in alternate years.*
- Memory (PSYC 5513 (formerly PSYC 313); Dr. Rueckl): Contrasts associationist, cognitive, connectionist, and cognitive neuroscientific approaches to short-term memory, long-term memory, and the representation of knowledge. *Offered in alternate years.*
- Special Topics in Physiology: Pharmacology of Alcohol and Other Drugs of Abuse (PSYC 5270 (formerly PSYC 358); Dr. Correa): Delineates neurochemical and behavioral effects of drugs of abuse, including discussion of theories of drug abuse phenomena. *Offered periodically.*
- Neurobiology of Aging: Changes in Cognitive Processes (PSYC 5285 (formerly PSYC 385); Drs. Steinberg and Markus): Covers interdisciplinary approaches to cognitive aging, including neuroscience, cognitive science, and clinical psychology. *Offered in alternate years.*
- Cognition (PSYC 5567 (formerly PSYC 367); Dr. Katz ): An introduction to theories of human cognition.