I. Course Title: Neuropsychology
   Course Number: PSY 720
   Credits: 3
   Date of Revision: July 2005

II. Course Prerequisite(s):
   PSY 702 – Psychopathology of Childhood
   PSY 712 – Advanced Psychology of Learning
   PSY 713 – Psychology of Growth & Development

III. Catalogue Description:
This course presents the neuropsychological approach to the identification and education of children with learning disorders. The central nervous system and brain regions and their role in learning are studied in depth. Neuropsychological assessment techniques will be introduced to clarify cognitive strengths, weaknesses, processing preference patterns (simultaneous-sequential), and the identification of neuropsychological deficits in children. This course focuses on issues related to children with learning disorders, including: etiological factors, epidemiological studies, gender differences, subtyping, emotional concomitants of learning disorders, diagnostic instruments, and remedial techniques. The intent of this course is to provide the necessary theoretical framework from which more effective remedial programs can be developed for learning disordered children.

IV. Course Objectives:

Special Note:

The goal of the School Psychology Program is to develop school psychologists who will function as effective problem solvers in schools. Consistent with that goal, this course partially satisfies Program requirements in the general area(s) of knowledge and skills.

Competencies Addressed:

Assessment – data collection through informal or formal procedures in a context that is responsive to the individual needs of the client. This would include competency in test administration procedures, scoring, and interpretation of evaluation results. Emphasis is placed on the synthesis of assessment data to ensure valid and reliable results that can be utilized in the development of an appropriate intervention (i.e., problem solving).

Intervention – knowledge, design, and implementation of strategies, including counseling, for behavioral or academic problems.

The student will:

A. Describe and explain the functions of various parts of the central nervous system, specifically the brain, and the role each part plays in learning.
IV. **Course Objectives (continued):**

B. Describe the brain - behavior relationships involved in information processing, and identify the most common childhood learning disorders and their implications for learning and remediation.

C. Offer and explain the underlying neuropsychological deficits associated with learning disorders, and review the classic symptoms of children's learning disorders.

D. Distinguish how specific learning or developmental abilities and socio-cultural factors relate to neurological changes in the child.

E. Describe the utility of family and educational history, and social-cultural issues in assessing a child referred for neuropsychological problems.

F. Discuss the efficacy of neuropsychological assessment procedures in the differential diagnoses of learning disorders subtypes.

G. Review research findings from major epidemiological studies that relate to learning disorders in school-aged children.

H. Discuss the role of neuropsychology in delineating a strength versus deficit approach to remediation or treatment.

I. Describe a task analytic approach in developing a remedial program based upon neuropsychological data.

V. **Course Outline:**

A. Introduction and overview of neuropsychology. Definition of terms, parts and functions of the central nervous system and the brain.

B. Etiological factors affecting learning disorders will be discussed in the context of physiological, biochemical, nutritional, educational, nature-nurture, and social implications.

C. Prevalence estimates and determination of learning disorders. Include discussion of measurement techniques.

D. Cerebral dominance and learning disorders, including the development of laterality and hemispheric processing in learning disordered children.

E. Neuropsychological perspective of learning and learning disorders. Assessment techniques will be reviewed in view of their efficacy in inferring cerebral integrity.

F. Perceptual disorders in children and their relationship to specific learning disorders, including the visual system, perception, sensation, and auditory processing and their contribution to the learning process.
V. Course Outline (continued):

G. Attention and memory and their role in learning, information processing, learning disorders and remediation of disabled children.

H. Socio-emotional concomitants of learning disorders, including learned helplessness, ineffective coping strategies, and remedial techniques.

I. Speech and language development, including aphasia, dyslexia, agraphia, and, specifically, reading disabilities. Includes assessment, diagnosis and remedial strategies.

J. Learning disorders in math and nonverbal or social functioning, including parts of the brain involved in this type of learning, and remedial strategies for children with disabilities in these areas.

K. Task analysis of behavioral and learning tasks and its use in developing remedial strategies.


Practicum Requirements

Objectives:

The practicum experiences of this course address Program goals related to assessment practices and intervention planning.

Activities:

A. Each student interviews a public school administrator, learning disabilities teacher, or school psychologist about the actual practices in the schools relating to eligibility determination for learning support services and implementation of state and federal regulations. This activity requires one (1) hour of practicum experience.

B. The student conducts a case study on a child with learning problems. Each student is paired with an Intern completing a case in the School Psychology Clinic. A comprehensive evaluation report is written, which integrates the intake interview with the parent, developmental, medical, social and educational history of the child, evaluation and assessment results, multidisciplinary evaluation report and IEP, and generates research based interventions for the child. This activity requires 11 to 14 hours of practicum experiences.
V. Course Outline (continued):

Practicum Requirements (continued)

Evaluations/Feedback:

The course professor, in conjunction with reports from school personnel, will evaluate the Interview and the case study evaluation report, and the summary for completion and for insights gained, and provide corrective feedback to the student concerning this experience/performance.

VI. Teaching Methodology:

A. Lecture as per preceding content outline.

B. Presentation and review of video tapes.

C. Class discussion of research and current topics.

VII. Evaluation of the Student:

A. Three or Four Exams -- Objective, Short Answer, Short Essay

B. Journal Article Abstract -- topic related to neuropsychology and/or learning disorders in children.

C. Project (choose one of the following):

1. Case Study (required of School Psychology Practicum Students) -- detailed case study of a learning disordered child; includes social, medical, family, educational history and any test results available, as well as interventions.

2. Assessment of a child referred for learning problems -- complete assessment including developmental, educational, social and medical history, presenting problems, assessment and written psychological evaluation report. Includes diagnoses and recommendations for remediation.


4. Test Review or Comparison -- reviews one test instrument or compares two instruments in their utility with children with learning disorders.
Bibliography:


VIII. Bibliography (continued):


VIII. Bibliography (continued):


