PSYC 880 - INTRODUCTION TO CHILD AND ADOLESCENT NEUROPSYCHOLOGY

Fall, 2005

Dr. William J. Ernst

E-Mail: ernstwj@jmu.edu
Phone: 540.568.7959
Office: Johnston 217

Course Meeting Time: Tuesday 9:30-12:00
Location: Roop Hall, Room G-26

Office Hours: Available by appointment. I ***welcome*** additional questions and discussion beyond the class meetings.

OVERVIEW

This course is intended as an introduction to the fundamental principles of child and adolescent neuropsychology including basic neuroanatomy, the development of the brain, brain-behavior relationships, and neuropsychological assessment. This course will emphasize the application of neuropsychological theories and principles to the appropriate assessment, remedial programming, and school reentry of children and adolescents with acquired brain injury (ABI). While areas of clinical applications will be covered, it is not within the scope of this course alone to train students to a level of competence that would assume expertise in child and adolescent clinical neuropsychology.

SPECIFIC COURSE OBJECTIVES

As a result of this course, participants will be able to demonstrate the following competencies.

1. Knowledge of the history of, and the current issues in, the field of neuropsychology.

2. Knowledge of the fundamentals of human neuroanatomy and brain development.

3. Knowledge of basic relationships between the brain and behavior.

4. Knowledge of the concepts of ABI, especially Traumatic Brain Injury (TBI), current issues with respect to TBI, and the application of research in TBI to educational and social/community settings.

5. Knowledge of selected pediatric neurological disorders, their course, effects, and impact on the child's functioning in educational and community settings as well as the family system.

6. Knowledge and limited application of some of the various models of neuropsychological assessment, including specific techniques and procedures appropriate for the child or adolescent with TBI, in the school and clinic setting.

7. Knowledge of cross-cultural issues in neuropsychology and the potential impact of cultural factors on neuropsychological test performance.

8. Knowledge of the effects of non-neuropathological factors (e.g., depression) on neuropsychological test performance.

9. Basic knowledge of the role of the pediatric neurological evaluation, neuroimaging (e.g. CT, MRI), and electrophysiology (e.g., EEG) in the evaluation of neurologic conditions, especially TBI, and how these neurodiagnostic techniques both complement and differ from neuropsychological assessment.

10. Knowledge and limited application of treatment programs, interventions, and school reentry procedures appropriate for the child or adolescent with TBI.

11. An introduction to career opportunities, professional practice settings, and training requirements in clinical neuropsychology.

COURSE REQUIREMENTS

1. There will be two "section" exams. Each exam will cover approximately half of the course content and will consist of a mixture of multiple choice, short answer, and short essay questions based primarily on the material covered in class. You will, however, be responsible for all readings whether or not they are covered in class. There will be a review before each exam.

2. You will be responsible for a term paper consisting of a brief review of the literature (approximately 6-8 journal articles) on a topic *specific to your interest* in pediatric neuropsychology or ABI in children and/or adolescents. Topics must be cleared by me in advance no later than **10/11/05**. This should be a relatively brief paper (e.g. 10-15 double-spaced, typed pages), thus it is important that the topic be **specific** for it to be of maximum benefit for you. (I'll be glad to help you specify your topic.) The text and reference list of the paper must be in APA format. The term paper is due **no later than 5 pm, November 22nd**. Two points will be deducted for every day the paper is late. A copy of the abstract for each article referenced should be included with the paper. The following format is strongly suggested.

   (1) An Introduction section that covers what you are researching and why (your personal perspective).
   (2) A Literature Review section outlining briefly the main points of each article.
   (3) A Synthesis and/or Conclusions section which "brings it all together" in some meaningful way in terms of the topic chosen.
   (4) Finally, a Critique and/or Impressions section involving your view of such things as the implications, applications and, if applicable, limitations of the literature reviewed. I am particularly interested in what you felt you learned as a result of this research project.

   (Note: Sections (3) and (4) should contain the "core" of the paper. The literature review should be a review as opposed to an exhaustive discussion of the topic.

3. You are expected to attend all class meetings and actively participate in class

discussions. Please notify me if you have to miss class due to an emergency or illness. Also, be sure to prepare for each class meeting by reading the required chapters/articles. The meaningfulness of this course will be substantially enhanced by class discussion.

4. You will be required to submit a discussion question to me every two weeks. This question can be on any topic related to neuropsychology. A few questions will be selected and briefly discussed during the class meetings.

GRADING

Grades will be determined using the following system:

1.	Two section exams	30 points each
2.	Term paper	30 points
3.	Class participation	10 points

Final Grades:

A = 90-100 points
B = 80-89 points
C = 70-79 points

COURSE TEXT AND READINGS

Course texts:

Yeates, K.O., Ris, M.D., and Taylor, H.G. (2000). Pediatric neuropsychology: Research, theory, and practice. New York: The Guilford Press. (Available at Amazon.com)

Walker, N. W. (1997). Best practices in assessment and programming for students with traumatic brain injuries. Raleigh, N.C. : North Carolina Department of Public Instruction. (Available at the JMU bookstore).

Readings: Additional readings will be assigned for most classes. Copies of these readings will be available at the JMU bookstore, Carrier Library or the Test Library in Johnston Hall.

TENTATIVE TOPIC LISTING

Section I: Brief history of neuropsychology (past to present); contemporary issues in clinical neuropsychology; fundamentals of ABI/TBI, neuroanatomy, brain development, neuropathology, and brain-behavior relationships.

Date	Topic	Assignments
8/30	Greetings and course overview	NAN handouts #1 through #4
	An introduction to neuropsychology	Houston Conference policy statement
	Historical development of neuropsychology and current trends	C. Randolph article S. Pelletier et al. article Walker TBI Manual pgs. 1-5 & 45-48
9/6	The developing brain	Walker TBI Manual pgs. 32-36 Teeter & S-C Ch. 2
	Fundamentals of neuroanatomy	Teeter & S-C Ch. 2 Walker TBI Manual 5-8
9/13	Fundamentals of neuroanatomy (continued)	Teeter & S-C Ch. 2
	Brain-behavior relationships	TBI manual – pgs. 36-44
9/20	Brain-behavior relationships (continued)	Reading assignment TBA
9/27	Neuropathology	Yeates Ch. 1 & 5 Walker TBI Man. pgs. 9-31 Bigler article
10/4	Neuropathology-continued	Yeates Ch. 2, 3, & 10 Adelson & Kochanek article
10/11	Section I Exam ***(Term paper topics due)***	

<u>Section II</u>: Neuropsychological assessment; cross cultural issues in neuropsychology; school reentry; remedial programming; contemporary issues in clinical neuropsychology

10/18	Foundations of neuropsychological assessment	Walker TBI manual - Sec. 3 Yeates Ch. 18
10/25	Foundations of neuropsychological assessment-continued	Walker TBI manual - Sec. 3 Yeates Ch. 18
11/1	Specific assessment instrument and techniques	Walker TBI manual- Sec. 3 Yeates Ch. 19
11/8	Specific assessment instruments and techniques-Continued	Walker TBI manual- Sec. 3
11/15	Specific assessment instruments and techniques-continued	Walker TBI manual- Sec. 3
	Cross cultural issues in neuropsychological assessment	Roselli & Ardila article
	The impact of non-neuropathological factors on neuropsychological test performance	
11/22	Issues and procedures in school reentry **(*Term papers due.*)**	Walker TBI manual - Sec. 4 Farmer et al. chapter
11/29	Cognitive remediation and school programming	Walker TBI manual – Sec. 4 Kraemer & Blacher chapter
12/6	Final wrap-up, loose ends	
12/13	Section II exam	

<u>NEUROPSYCHOLOGY AND TBI WEBSITES</u>

1. National Academy of Neuropsychology: www.nan.org
2. Child Neurology Society: www1.umn.edu/cns
3. Interactive atlases: Digital Anatomist Project: www9.biostr.washington.edu
4. Neuropsychology Central: www.neuropsychologycentral.com/index.html
5. The Whole Brain Atlas: www.med.harvard.edu/AANLIB/home.html
6. Division 40 (Clinical Neuropsychology) of the American Psychological Association: www.apa.org
7. The Brain Injury Association, Inc.: www.biausa.org
8. International Neuropsychological Society: www.ins.org