**TRINITY COLLEGE**

**Department of Psychology**

**HUMAN NEUROPSYCHOLOGY (PSY 392)**

**SPRING 2024**

**INSTRUCTOR:** C. Charles Mate-Kole

**Office:** Life Sciences

**Email:** cmatekol@trincoll.edu

**Office Hours:** Tuesday 12: 30 – 2:00p.m.; Thursday 1:00 – 3:00p.m. Other times by appointment only

**COURSE DESCRIPTION**

Neuropsychology is a specialty in psychology that focuses primarily on the relationships between brain and behavior. Neuropsychology provides insight into the early diagnosis of the nature and location of lesions that disrupt brain functioning. Further, it broadens understanding of how a patient's psychological functioning is affected by a brain lesion.

The class will study various clinical disorders and the processes involved in the assessment of these disorders. Topics will include general introduction to neuropsychology, language disorder, memory, neuropathological disorders, neuropsychological assessment, rehabilitation.

Through assigned readings, lectures and short video presentations, students will acquire basic knowledge of the central nervous system and common neurological disorders.

**COURSE OBJECTIVE**

This course is intended for students at the junior senior undergraduate level. Students will acquire knowledge of the basic principles of clinical neuropsychology. They will gain insight in identifying certain neuropsychological deficits after brain injury. These may include disorders, apraxia, and agnosia. In addition, the student would obtain basic knowledge of assessment and rehabilitation of patients with these neurological and neuropsychiatric disorders.

**Learning Outcomes:**

It is expected that by the end of the course, students would have gained a better understanding of the key concepts in neuropsychology. They should be able to address common neuropsychological disorders and understand the application of neuropsychological principles in clinical practice.

**COURSE ASSIGNMENTS**

You must complete all assignments on time. In exceptional circumstances (such as medical or a family emergency), you may be given an extension. You must, however, contact me within seventy-two (72) hours.

**MOBILE PHONES/PAGERS**

This equipment must be switched off during class hours to avoid distractions.

**COURSE REQUIREMENTS**

**Class Participation**: Students will be required to attend classes regularly and on time. You must read the assigned chapters before class. Supplementary paper assignments will broaden the student's understanding of the topic area. Active participation in class discussion is expected.

**Class Presentation:** Students will select a topic area in neuropsychology and prepare a five-minute presentation. Submit a page type-written abstract after your presentation.

**Assignments:** Topics will be assigned in class. You will be required to write two short critical reviews. Each assignment is worth 10%

**Quiz:** There will be two quizzes. Dates are provided.

**Examination:** This will be held during the examination period.

**COURSE GRADING**

Class attendance/Class participation 10%

Assignments 20%

Class presentation 20 %

2 Quizzes 20 %

Examination 30%

January 23 2024 - **Introduction to Neuropsychology**

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press.

January 25 & 30 **Review of Anatomy of the Central Nervous System**

Elias L. & Saucier, D. (2014). Neuropsychology Clinical and Experimental Foundations © Pearson Education Limited

February 1 & 6 **The Neurological Exam and Neuroimaging Techniques**

Elias L. & Saucier, D. (2014). Neuropsychology Clinical and Experimental Foundations © Pearson Education Limited

February 13 & 15 **First Quiz on February 13.**

**Laterality**

Elias L. & Saucier, D. (2014). Neuropsychology Clinical and Experimental Foundations © Pearson Education Limited. Ch 4

February 20 & 22 **Aphasia**

Pasley, B., & Knight, R. (2013). Decoding speech for understanding and treating aphasia. *Progressive Brain Research*, 207, 435-456.

Connolly, J., Mate-Kole, C. (1999) Global Assessment of Aphasia: An innovative approach. *Archives of Physical Medicine and Rehabilitation,* 80, 1309-1315

February 29 **Apraxia**

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press. Ch 14

March 12 & 14 **Memory and Attention**

Zillmer, E. Spiers, MV & Culbertson, W. (2008). Principles of Neuropsychology. Second Edition. Belmont CA: Thomson West. Ch 9

Squire L. R. (2009). The legacy of patient H.M. for neuroscience. Neuron, 61(1), 6–9. <https://doi.org/10.1016/j.neuron.2008.12.023>

Klooster, N. B., Tranel, D., & Duff, M. C. (2020). The hippocampus and semantic memory over time. Brain and language, 201, 104711. https://doi.org/10.1016/j.bandl.2019.104711

March 19& 21 **Agnosia and Spatial Disorders**

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press. Ch 10

March 26 & 28 **Executive Function & Neuropathological Disorders l**

Neubeck, M., Johann, V. E., Karbach, J., Könen., Johann, V.E., Karbach, J. & Könen, T. (2022). Age-differences in network models of self-regulation and executive control functions. Developmental Science, <https://doi.org/10.1111/desc.13276>

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press. Ch 7

April 2 & 4 **Neuropathological Disorders ll**

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press. Ch 7

April 9 & 11 **Developmental Disorders of Childhood**

Zillmer, E. Spiers, MV & Culbertson, W. (2008). Principles of Neuropsychology. Second Edition. Belmont CA: Thomson West. Ch 10

April 16 & 18 **Neuropsychological Assessment**

Lezak, M., Howieson, D., Bigler, E.R. & Trane, D. (2012). Neuropsychological Assessment (Fifth Edition). New York: Oxford University Press. Ch 17

April 23 & 25 **Contemporary Issues in Neuropsychology**

Gonzalez, R., Pacheco-Colón, I., Duperrouzel, J. C. & Hawes, S. W. (2017). Does Cannabis Use decline in Neuropsychological Functioning? A Review of Longitudinal Studies. *Journal of the International Neuropsychological Society* 23, 893–902.

April 30 **Overview of the course**