Class Activities

# Chapter 2: Neuroscience Approaches to Understanding Psychopathology

1. Break students into groups of about 5 students. Assign each group a specific brain imaging technique: EEG, MEG, PET, fMRI, and DTI. Each group then generates 5 multiple choice questions specific to their assigned brain imaging technique, with answers provided and page reference from the textbook. A delegated student is a note taker and another is the spokesperson for the group. They share their questions and the correct response. The note taker, emails the completed document to the instructor, the instructor then chooses 3 of the questions to be included in an exam. Modifications and edits are at the discretion of the instructor. All the brain imaging technique documents are compiled into one document and made available as a study guide for the exam.

Students learn about cooperation and planning, self-selected key concepts, communication

2. In groups of 5 students, they are to choose a topic related to Neurocognitive or neuronal functioning. They are to produce an art, literary piece, novella, poetic, hip hop, lyric, musical piece, drawing/painting/digital piece, demonstration, or dance piece. Provide a brief summary of the key terms and the process being depicted (provide references, accordingly). The first class activity is approximately 20 minutes long involving discussion, idea generation, and developing a plan to present to the class. They are to meet at least 2-3 times outside of class. At later date, the groups, each present their piece 5-10 minutes to the entire class. The groups can be larger given the enrollment of the class.

\*Students who are so encouraged and inclined with faculty supervision, could develop a symposium to be presented at an undergraduate research/creative showcase.

The video below serves as an inspiration for the class activity: https://www.youtube.com/watch?v=sqAWLvNjFKA



3. Have students break into teams of 7:

Group A: 2 students to discuss the ethical issues of genetic testing

Group B: 2 students to discuss the benefits of genetic testing

Group C: 3 student judge panel: students are to take notes regarding what was presented by Group A and B, and are to provide their decision on whether genetic testing of mental illness as part of a screen is conducted at birth (i.e., autism or schizophrenia). Address how environmental factors relate to the expression of a particular mental illness. Likewise, discuss preventative experiences and resiliency that speak to the non-expression of the mental illness.

When all Group C’s have completed their decisions, with noted rationale, have all Group C students gather as panel at the front of the class and present their findings and rationale. The entire class then votes YES or NO: Should genetic testing of mental illness become instituted as a regular screen conducted at birth.

Review the following article regarding genetic testing and ethics by Dr. Besterman which provides a summary of Dr. Hoop’s article “Ethical considerations in psychiatric genetics”.

* The Ethics of Genetic Testing in Psychiatry
* A discussion of ethics concerns in psychiatric genetics focusing on predictive genetic testing, psychosocial consequences for patients, effects on family and communities, and the ethics of some emerging technologies. ~ Aaron D. Besterman, MD
* <http://journalofethics.ama-assn.org/2012/06/jdsc1-1206.html>
* Hoop JG. Ethical considerations in psychiatric genetics. *Harv Rev Psychiatry*. 2008;16(6):322-338.