

Brain Health 411

Professor Tracey J. Shors, Ph.D.

TTH 1:40-3:00 Tillett 252

The course is an upper level course in Psychology, with an emphasis on topics related to the neuroscientific and psychological study of brain health. In addition to scientific papers, students will read several books (listed below) related to the covered topics. Students will also be required to construct three essays, participate in class discussions and complete standard exams. Lectures will cover the following topics:

INTRODUCTION TO TOPIC OF BRAIN HEALTH (according to Shors)

- How learning maintains brain health (Sept. 4)
- Learning and neurogenesis in the adult brain (Sept. 9)
- Mental and Physical (MAP) Training (Sept. 11)
- (First essay)

STRESS AND BRAIN HEALTH

- The stress response and sex differences in the stress response
- Stressful life experience and its effects on brain health
- Post-traumatic stress disorder and depression
- The stress of sexual trauma and abuse
- The stress of maternal deprivation
- The stress of poverty and homelessness

ENHANCING BRAIN HEALTH

- Consciousness: What is it?
- Exercise for cognitive enhancement and stress reduction
- Mental training for cognitive enhancement
- Meditation for cognitive enhancement and stress reduction
- Maternal and paternal behavior for enhancing brain health
- Psychotropic medications – do they help or hinder brain health?
- Anatomy of an Epidemic (book discussion; second essay)
- Far from the Tree (book discussion; third essay)

Books and Other Readings:

- The Human Brain, Rita Carter, DK Publisher, 2009, ISBN: 978-0-7566-5441-2
- Far from the Tree, Andrew Solomon, 2012
- Anatomy of an Epidemic, Robert Whitaker, Crown Publishers, 2010

Other required readings will be posted on Sakai.

Examination and Grading:

The testing will consist of written essays (3) and standard objective testing with examinations (2). Each student will be expected to demonstrate proficiency in his or her communications skills by the end of the course.

EXAMS:

- First midterm (October 28)
- 20 minute quiz on basics of neurocardiac/heart function (November 20)

ESSAYS:

First essay: Neurogenesis and Learning, due on September 25th

Second essay: Anatomy of Epidemic, due on November 13th

Third essay: Far from Tree, due December 9

Grade determination:

Each essay 3X 20% = 60%

Midterm 20%

Quiz 15%

Class participation 5%