

## Fall 2016 Advanced Topics/400 Level Courses

### **830:411 Advanced Topics in Psychobiology**

#### **Brain Health**

**Professor Tracey Shors**

**Tillett 103C TTH5 (3:20-4:40pm)**

**Prerequisites:** 830:310 (Neuropsychology) or 830:311 (Conditioning and Learning), 830:313 (Physiological Psychology)  
(Jr/Sr 830 Major or permission of instructor is a prereq for Adv Topics/400 Level courses)

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 related to the covered topics. Students will also be required to construct essays, participate in class discussions and complete standard exams. Lectures will cover the following topics:

#### INTRODUCTION TO TOPIC OF BRAIN HEALTH

- How learning enhances neurogenesis to maintains brain plasticity and mental health
- Mental and Physical (MAP) Training for relieving depression in humans
- (First essay)

#### STRESS AND BRAIN HEALTH

- The stress response – body and brain
- Stressful life experience and its effects on brain health
- Post-traumatic stress disorder and depression
- The stress of sexual trauma and abuse

#### ENHANCING BRAIN HEALTH

- Aerobic 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:

- 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

**Examination and Grading:** The testing will consist of both written essays (3) and standard objective testing with examinations (1). Each student will be expected to demonstrate proficiency in his or her communications skills by the end of the course.