

Brain Health 411

Professor Tracey J. Shors, Ph.D.

TTH4 (1:40-3pm) in SEC 220

Final Exam: May 7, 8-11 AM

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The course is an upper level course in Psychology, with an emphasis on topics related to the neuroscientific study of brain health. In addition to scientific papers, students will read 4 books related to the covered topics, as listed below. Students will also be required to construct essays, participate in class discussions and complete standard exams. The topics are listed below, although they will not necessarily be covered in this order.

- SAVING NEW BRAIN CELLS: HOW NEUROGENESIS AND LEARNING INTERACT TO MAINTAIN A FIT BRAIN (Shors article in Scientific American posted on Sakai)
- BASICS OF BRAIN STRUCTURE AND FUNCTION
- MIND/BODY DISTINCTIONS: FALSE OR OTHERWISE
- ENDOGENOUS BRAIN OSCILLATIONS AS THEY RELATE TO COGNITIVE FUNCTION
- SEX DIFFERENCES IN LEARNING, MEMORY AND MENTAL ILLNESS
- EXERCISE AS A COGNITIVE ENHANCER AND AS THERAPY FOR MENTAL ILLNESS
- MEDITATION AND MINDFULNESS AS THERAPY FOR MENTAL ILLNESS
- PSYCHOTROPIC MEDIATIONS AND THEIR PARADOXICAL ROLE IN MENTAL ILLNESS
- NEURONAL AND MENTAL CONSEQUENCES OF CHILDHOOD TRAUMA
- DELUSIONS AND HALLUCINATIONS IN THE SCHIZOPHRENIC BRAIN
- CONSCIOUSNESS AND ITS PUTATIVE NEURONAL MECHANISMS

Books:

- The Human Brain, Rita Carter, DK Publisher, 2009, ISBN: 978-0-7566-5441-2
- Anatomy of an Epidemic, Robert Whitaker, Crown Publishers, 2010
- Spark, The Revolutionary New Science of Exercise and the Brain, John Ratey, 2008
- Buddha's Brain, The Practical Neuroscience of Happiness, Love and Wisdom, Rick Hanson, Ph.D., New Harbinger Publications, INC. 2009.

Examination and Grading: The testing will consist of five written essays (<1000 words each) and two standard objective question and short answer examinations (1 midterm, 1 final). Each student will be expected to demonstrate proficiency in his or her communications skills by the end of the course.