Topics in Neurobiology and Behavior: Health Neuroscience and Stress G4440

Fall, 2015, Thursdays 10:10-12 PM
Schmerhorn, Room 405
Instructor: Julie Spicer, Ph.D.
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Office Hours: TBD

Course overview: This course explores the emerging field of health neuroscience with a focus on stress. Health psychology and neuroscience are concerned with the links between psychological processes and health outcomes by way of neural and physiological processes. We will consider (1) neural mechanisms of physiological processes important to health outcomes, such as cardiovascular and inflammatory processes (2) how stress is defined from social, psychological, physiological and neural levels (3) developmental origins of health and disease (DOHaD) (4) psychological processes. In some weeks, we will consider briefly examples of these topics as they have appeared in the recent media or from the perspective of scholars from disciplines such as economics, public health, and history of science.

Prerequisites: Mind, Brain and Behavior (Psych 1010) or an equivalent biological-based psychology class, one course in statistics and one course in research methods

Course requirements: Each week students will attend a two–hour seminar. No later than 5 pm of the proceeding evening, students will submit (via email) to the instructor three questions about that week’s readings (none based on the same paper). These questions will be used to launch discussion during each meeting. Weekly readings are readily available to download via the CU system, PubMed or Google Scholar. Students will be assigned a week for which they will lead the discussion. (Depending on class size and preference, students can do this individually or in pairs.) In addition to these readings, students will write a final paper (10 pages) on a topic of their choice. These papers will require 15 references (5 of which can be from the course syllabus). Students will give a brief presentation on their paper topic at the final class meeting.

A note about weekly questions: These are to be integrative and to reflect thoughtfulness about the class readings; they should not be one sentence ‘why’ questions, or ‘has this ever been looked at’ questions, as those can begin to be answered with a little investigative work on one’s own.

Grading will be allocated as follows:
Weekly questions: 25%
Participation in discussion: 15%
Class leader: 25%
Final paper and 10 minute presentation: 35%
**Week 1: Introduction and Overview**

**Week 2: What is health neuroscience?**


**Week 3: Stress**


**Week 4: Cardiovascular System**


**Week 5. Inflammation**


**Week 6: Depression**


**Week 7: Socioeconomic Status I**


**Week 8: Socioeconomic Status II**


**Week 9: Developmental Origins of Health and Disease I**


**Week 10: Developmental Origins of Health and Disease II**


Branchi, I., & Cirulli, F. (2014). Early experiences: Building up the tools to face the challenges of adult life. Developmental Psychobiology, n/a–n/a. doi:10.1002/dev.21235


**Week 11: Psychological Processes I**


**Week 12: Psychological Processes II**


**Week 13: Student presentations of final papers**