**G4440 Topics in Neurobiology and Behavior: Health Neuroscience and Stress**  
**Preliminary Syllabus**  
Spring, 2016, Thursdays 12:10 PM – 2:00 PM  
Schmerhorn, Room 405  
Instructor: Julie Spicer, Ph.D.  
Email: [jas2161@columbia.edu](mailto:jas2161@columbia.edu)  
Office Hours: by Appointment

**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 and neural levels (3) developmental origins of health and disease (DOHaD) (4) psychological processes. In some weeks, we will consider examples from the perspective of scholars from related disciplines such as public health and history of science.

**Course requirements:** Each week students will attend a two–hour seminar. No later than 5 PM of the proceeding evening, students will submit (via Courseworks) 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. No later than 5 PM of the preceding evening, class leaders will submit (via email) slides and questions they have prepared. (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:  
Attendance/Participation: 25%  
Weekly questions: 25%  
Class leader: 25%  
Final paper and 10 minute presentation: 25%
Week 1: Introduction and Overview

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

*Approx 23 pages*

*Approx 7 pages*

*Approx 5 pages*

Week 3: Stress

*[Read Introduction, skim Methods and Results, Read Discussion, Assess Figures]*  
*Approx 11 pages*

*Approx 3 pages*

*Approx 5 pages*

*Approx 6 pages*

*Approx 8 pages*
**Week 4: Cardiovascular System**


Approx 14 pages


Approx 9 pages


Approx 9 pages


Approx 2 pages

**Week 5: Inflammation**


Approx 9 pages


Approx 7 pages


Approx 8 pages


Approx 5 pages
**Week 6: Depression**

*Approx 2 pages*

doi:10.1097/PSY.0b013e31824d0865
*Approx 7 pages*

*Approx 9 pages*

*Approx 8 pages*

**Week 7: Socioeconomic Status I**

*Approx 9 pages*

*Approx 5 pages*

*Approx 12 pages*

**Week 8: Socioeconomic Status II**

*Approx 5 pages*
Approx 8 pages

Approx 32 pages

**Week 9: No class meeting – Spring Break**

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

Approx 10 pages

Approx 5 pages

Approx 10 pages

Approx 8 pages

**Week 11: Developmental Origins of Health and Disease II**

Approx 14 pages

Approx 8 pages
*Approx 5 pages*

*Approx 5 pages*

*Approx 1 page*

**Week 12: Psychological Processes I**

*Approx 8 pages*

*Approx 25 pages*

*Approx 9 pages*

**Week 13: Psychological Processes II**

*Approx 4 pages*

*Approx 13 pages*

*Approx 7 pages*

**Week 14: Student presentations of final papers**

**Week 15: No class meeting – Final papers due at 5 PM** (via email)

**Recommended Extra Reading**


** Indicates a class amenable to paired class leaders
Faculty Statement on Academic Integrity

The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.

In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

For more information on academic integrity at Columbia, students may refer to the Columbia University Undergraduate Guide to Academic Integrity:
http://www.college.columbia.edu/academics/academicintegrity