

PSY 607 S 2014

Neuroscience and Inequality/Stress

Instructor: Dr. Helen Neville (neville@uoregon.edu)

Prerequisites: Courses in: experimental methods and statistics (e.g., PSY 302 and 303), basic understanding of neuroanatomy, neurophysiology and function (e.g. PSY 304 or 449) and good critical thinking skills and willingness to engage in classroom discussion.

CRN: 39555 Grading option: Optional for all students **Credits:** 4

Time: 1400-1350 Tuesday

Location: Neville Lab Conference Room, Lewis Building (LISB)

Course Materials: Primary research and review papers; available on Blackboard

Overview: This course will examine social inequality and its consequences, as well as research on interventions designed to ameliorate its negative outcomes, all from the perspective of neuroscience. We will begin with definitions of stress and will review the remarkably similar effects of stress in plants, non-human animals and humans. We will read and discuss sets of research articles each week. Topics include the basic data on the physiological, anatomical and epigenetic effects of stress and social inequality, consequences across the lifespan from early childhood to adulthood, the neuroscience of stress and social stress, cognitive outcomes of inequality, and the impact of early and later interventions.

Readings for the course: Weekly readings will be posted one week prior to in-class discussions. No textbook is assigned for this course. Optional, but highly recommended, supplemental readings: *The Status Syndrome: How Social Standing Affects Our Health and Longevity*, by Michael Marmot; *The Spirit Level: Why Greater Equality Makes Societies Stronger*, by Kate Pickett and Richard Wilkinson and PBS and a great Radio Lab program on Stress.

Coursework: Students will be expected to attend all class meetings, prepare for all discussions through readings and participation in Blackboard discussions. Each student will lead a discussion and/or debate of one or two of the sets of readings and in posting discussion questions on Blackboard.

Course Assignments:

Precis: Each week, a student will lead a discussion of the readings. Prior to the discussion, the team will prepare a one-page precis, or summary, of each reading.

Weekly Topics

- Week 1: Inequality, stress and socioeconomic status: definitions and data
- Week 2: Parallels of consequences of stress in plants, nonhuman animals and humans
- Week 3: Stress and inequality in non-human animals
- Weeks 4-5: Stress, anxiety, neural outcomes in humans
- Week 6: Early life stress
- Week 7: Parental nurturance
- Week 8: Interventions
- Week 9: Gene-environment/intervention interactions
- Week 10: Neuroscience of sociality, altruism, 'fairness', perceived injustice