Syllabus PSY992, Fall 2018, Neurobiology of Stress

Instructor:
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Course prerequisites
Students should have a basic knowledge of the nervous system.

Course Description
The course will give an overview of the neural systems involved in the stress response from the molecular and cellular to the behavioral level. We will discuss the roles of the hypothalamic-pituitary-adrenal axis in the stress response and the effects of stress on neuronal plasticity, learning and memory, and mental health and disease. Emphasis will be on the mechanisms mediating vulnerability and resilience to stress. The long-term consequences of early life stress on cognitive, emotional, and social behaviors will also be discussed. Students will present current research articles covering experimental findings in both animals and humans.

Course Readings
The course material consists of scientific journal articles (research reviews and primary research articles). To discuss the very latest discoveries in the stress field, students will present primary research articles from 2017-2018. The journal articles serve as a basis for the class lectures in which we will further elaborate on the specific topics. Please read the journal articles in advance and be prepared to discuss them in class.

Organization of Course

Topic 1: Basics of the stress response
Readings

Topic 2: Stress and the HPA axis
Readings
5. Research article(s) to be presented by student(s)
**Topic 3: Stress and Neuronal Plasticity**
Readings
6. Research article(s) to be presented by student(s)

**Topic 4: Stress and Learning and Memory**
Readings
4. Research article(s) to be presented by student(s)

**Topic 5: Stress and Mental Health**
Readings
4. Research article(s) to be presented by student(s)

**Topic 6: Early life stress**
Readings
4. Research article(s) to be presented by student(s)
D2L
The syllabus, the required readings, and the lecture slides will be posted on D2L.

Assignments
There will be two exams consisting of multiple choice and short essay-type questions. You will be tested on class lecture material and course readings. The first exam is scheduled for TBD. The second exam is scheduled for TBD. The exams will not be cumulative. Furthermore, each student will give a 50-min “lecture” centered around a recent research article within the field of neurobiology of stress. The student lecture should place the selected research article in a larger context and should stimulate a class discussion led by the student.

Overall grade
Each of the two exams will count for 1/3, the student lecture will also count for 1/3. It is expected that students will be actively participating in class, including responding to questions, asking questions, and participating in class discussions.

Grades
Grades will be assigned according the following scale: 90-100% = 4.0; 85-89% = 3.5; 80-84% = 3.0; 75-79% = 2.5; 70-74% = 2.0; 65-69% = 1.5; 60-64% = 1.0; < 60% = 0.

Classroom electronics
Cell phones are to be turned off during class. Laptops are allowed in the classroom, but only to take notes and for class assignments.

Academic honesty:
Article 2.3.3 of the Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." The Department of Psychology adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; see https://www.msu.edu/~ombud/academic-integrity/index.html. Cheating will be taken very seriously and any student that violates MSU rules (i.e. is caught cheating on any assignment) will be given a failing grade for the class, the incident will appear permanently on the students’ record and the case will be brought to the attention of the Psychology Department advisors who may take further action.

Accommodations for Disabilities:
Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to the instructor at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored. If you require testing accommodations (additional time, less disruptive room, etc.) you must contact the instructor or the TA and present your VISA at least two weeks before the exam date to
schedule an alternative exam. Typically, the exam will be scheduled during a special exam sessions offered by the Psychology Department. Those exams occur in small group settings and are offered every Wednesday and Thursday at 4 pm in Giltner 346. If you are unable to make either of those times, or that option does not meet your VISA accommodations, you may be able to schedule to take your exam at the RCPD office. In either case, the exam must be scheduled well in advance, so you need to adhere to the two weeks prior notification requirement.