Adapted from Arati Sadalge Kreibich and Laurel E. Ecke

BIBB 430-601: Neurobiology of Autism
Summer 2015

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Course Description: This course examines the neurobiological processes underlying Autism Spectrum Disorders (ASD). In this seminar style course, we will first examine the brain phenotypes associated with ASD and investigate the genetic and environmental contributions to the etiology and pathophysiology of ASD. After initial examination of clinical literature and research, we will focus on animal models to investigate changes in neurotransmitter systems and synaptic dysfunction associated with ASD.

Course Objectives: The central objective of this course is to expose students to the range of neurobiological research related to ASD that is currently taking place. In addition to gaining knowledge through lectures and secondary literature, students will develop skills in addressing research questions through critical review of the recent primary literature, including evaluating results of research designs and communicating information orally. Specifically, the following objectives will be achieved through lectures, analysis of scientific literature, class discussions, group presentations, and written assignments. 1) Students will gain a deep understanding of the neurobiological differences in ASD on a clinical and basic research level, 2) Students will understand and be able to present informed opinions on a variety of clinical and basic research papers in the field of ASD, and 3) Students will be able to analyze and critique journal articles.

CLASS POLICIES

Recordings of the lectures in any form are prohibited. Any use of cell phone will result in student being expelled from the class. Late assignment will not be accepted and automatically result in a 0.

Required Reading: There is no standard text. Class readings are selected from books, journal articles, and/or popular media perspectives available on topics related to ASDs. This course utilizes the Canvas website for distribution of journal articles and other assigned readings. Please visit http://upenn.instructure.com to make sure you can access the course site.

Grading: Course grades will be based on class attendance/participation (15%), quizzes (15%), one midterm exam (15%), one oral presentation (20%), one paper (20%) and a final cumulative exam (15%).

Attendance/Participation/In Class assignments (15%): Please do not be late or leave early or you will be noted as absent. Three absences and more will result in a 0 in attendance/participation. Neurobiology of Autism is a seminar course designed to familiarize students with current research in the field. Primary journal articles will be read and discussed. The journal club format necessitates student attendance and participation, which is required and will be monitored. Students who prepare for and participate fully in relevant and collaborative ways in class discussions and activities will receive higher grades. To this end, read all the papers well beforehand and make relevant notes. Bring your copies of the paper to class.

Quizzes (15%): Every class will start with a 10-15 minutes quiz on the previous class content. Please bring in extra paper to write down answers for quizzes. The lowest quiz grade will be dropped. If you miss a class, you will get a 0 for that quiz and it will be automatically dropped. Each quiz will include multiple-choice questions, and or sentences with blank to complete, and or short answers questions.

Midterm Exam and Final Exam (each 15%): The mid-term and final exams will consist of short answer questions designed to assess basic knowledge of the concepts discussed in class as well as the ability to apply that knowledge to novel research questions. The student should understand the material in sufficient depth to be able to integrate information from different lectures. Each exam will include all lecture and reading materials covered until two weeks before the day of the exam. Missed exams will only be given at a later date with an authorized university absence. If an exam is submitted for a re-grade, it must be done in writing within *one week* of receiving the graded exam. All submitted exams will be re-graded in their entirety and the resulting score may higher or lower than the original grade. A fraction of exams are photocopied before being returned to the students. If an exam is found to have been altered before submission for re-grading, the student will be reported to the Office for Student Conduct.

Presentation (20%): During the second class, you will be given an article to present (2 students per article). Please sign up for one of the 10 presentations on Canvas before the second class**.** Presentations will happen during the last 2 classes. PowerPoint format is required. Presentations should be 30 minutes in length plus 5-10 minutes for discussion. Presentations should include: a short introduction to the topic, a discussion of the methods, results and conclusions of the paper, and a general conclusion that should include alternative explanations and future directions and incorporate together the paper's results with other material presented in class. **A draft of your presentation is due 1 week prior to your presentation date.**

Final Paper (20%): The final paper (~8-10 1.5-spaced pages, arial 11 point) will be in the form of a review article and will be written by a group of 2 students. I will provide 5 papers that you will have to make your review out of.

In general, it is expected that students will follow the Code of Academic Integrity.
http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html

IMPORTANT NOTE: *I will communicate with the class through Canvas email. Please confirm that the email address listed in Canvas is the email you will be reading on a daily basis.*

Student Name (please print) _____

I have read the syllabus for Neurobiology of Autism for Spring Semester 2015. I understand the expectations, policies and procedures for this course.

Student Signature _____Date_____