

COURSE SYLLABUS
PSYC G4440: Topics in Neurobiology & Behavior
Prenatal Drug Exposure & Cognition

Meeting Time:
Thursday 8:10-10:00 pm, Room TBA
Columbia University
Spring, 2020

Instructor: Ciara A. Torres, PhD
Office Hours: Friday (8-9 pm), Saturday (6-7 pm) by appointment (videochat)
Email: cat2119@columbia.edu

Bulletin Description: Examines current topics in neurobiology and behavior.

Course Description: This seminar provides an overview of the effects produced by exposure to recreational drugs during pregnancy. Students will obtain a basic working knowledge of the neural mechanisms that are thought to mediate these effects. Given recent state legislative changes regarding marijuana – which can now be consumed legally for recreational purposes in nine states (and Washington, DC) – this semester, special emphasis will be placed on the topic of prenatal marijuana-associated cognitive alterations in human offspring. We will examine the extent to which the drug produces long-term disruptions on neural and cognitive markers. Required readings will include seminal reviews in the area of prenatal marijuana exposure, as well as primary empirical literature. The student who successfully completes this seminar will be equipped with tools to enhance critical thinking about scientific research in the area of substance use.

Course Requirements

Attendance: Because this is an upper level undergraduate/graduate seminar, attendance is mandatory and absences are rarely excused. To be excused from a class session you must personally notify Prof. Torres before the session and must present some evidence certifying the legitimacy of your absence. For each attended session, students will earn a maximum of 3 points (attendance and participation).

Class Participation and Weekly Assignments: This seminar requires that all students be active participants, engaging in stimulating, thought-provoking (and sometimes lively) dialogue. Each week, students will be assigned readings related to the topic of discussion for that week and will be expected to come to class prepared with discussion issues related to the current readings. To facilitate this process, and in order to prepare students for the submission of their final Letter to the Editor (LTE) project, students will submit a weekly practice LTE based on the week's assigned reading. Although entries should be of an intellectual nature, raising questions, for example, about the appropriateness of the conclusions drawn by the study authors based on the study design and/or presented data, they should be no more than a few paragraphs. Assignments will be due at the start of each session. Late journals will not be accepted.

Student Presentations: Each week, two related papers (all available on Courseworks) will be discussed. Articles assigned for Weeks 2 and 3 will be discussed either by Prof. Torres or together

as a group. Starting on Week 4, students will present. Students are expected to know what 2 articles they are interested in presenting by Week 1. Each student will be given 30 minutes to present one paper. Students will be expected to use PowerPoint to facilitate communication of the paper. Presentations will be judged by the following criteria:

1. Presentation skills
2. Presentation content
 - a. Study rationale
 - b. Hypothesis tested
 - c. Experimental design/methodology
 - d. Results and authors' conclusions
3. Ability to point out merits and/or limitations of the article
4. Ability to facilitate discussion with peers
5. General preparedness

Letter to the Editor: A major portion of the student's grade for the course will be based on the submission of a publishable-quality LTE. Letters will raise issues/concerns about a recently published paper in the area of neurobiology of substance abuse. Typically, such letters are no more than 300 words. Letters are expected to incorporate topics, concepts, and principles covered in class – specifically in the area of how exposure to recreational drugs affect cognition. For example, students should ask questions such as the following: Have the authors satisfied the criteria for determining causation? Is the model being used appropriate for the stated goals of the study? Do the data collected in laboratory animals correspond with those obtained humans?

Students are expected to work with Prof. Torres throughout the semester to discuss their topics and are required to have selected an article to submit a Letter to the Editor to by March 9th. Both the selected article and a list of three concerns you have about its methodology, analysis and/or authors' conclusion should be sent to cat2119@columbia.edu by this date. Students are also expected to submit several drafts to Prof. Torres before submitting their letters, if appropriate, to a journal for consideration for publication. It is the student's responsibility to research the targeted journal's Letter submission procedures. The first draft is due by March 17th, though you are welcome to submit it to Prof. Torres earlier than that. Five points will be deducted from the Paper/Letter grade if first draft is turned in beyond March 17th. The second draft is due by April 14th. All final Letter submissions are due prior to April 30th at 11:59 pm (three points will be deducted from the Paper/Letter grade if first draft is turned in beyond this date).

Grading Scale

97-100% -	A+
93-96% -	A
90-92% -	A-
87-89% -	B+
83-86% -	B
80-82% -	B-
77-79% -	C+
73-76% -	C
70-72% -	C-
60-69.9% -	D
Below 60% -	F

Student Evaluation	Percentage of course grade
Attendance/Participation	39 (3 pts/session)
Weekly Assignments	26 (2 pt/entry)
Student Presentations	15
Student Papers	20

Academic Integrity: Students are expected to do their own work on all tests and assignments for this class and act in accordance with the Faculty Statement on Academic Integrity and Honor Code established by the students of Columbia College and the School of General Studies.

Because any academic integrity violation undermines our intellectual community, students found to have cheated, plagiarized, or committed any other act of academic dishonesty can expect to receive a zero for the work in question and may be referred to the Dean's Discipline process. It is students' responsibility to ensure their work maintains the standards expected and should you have any questions or concerns regarding your work, you can ask the instructor; and/or refer to the Columbia University Undergraduate Guide to Academic Integrity.

Students with Disabilities: In order to receive disability-related academic accommodations, students must first be registered with Disability Services (DS). More information on the DS registration process is available online at www.health.columbia.edu/ods. Prof. Torres must be notified of registered students' accommodations before accommodations will be provided. Students who have, or think they may have, a disability are invited to contact DS for a confidential discussion at (212) 854-2388 (Voice/TTY) or by email at disability@columbia.edu.

Note: Aspects of this course may be changed if unforeseen circumstances arise; these changes, however, will be announced before they are initiated.

<u>Class Schedule Dates</u>	<u>Readings</u>	<u>Topics</u>
W01: 1-23-20	Fried, 2002	Introduction and overview
W02: 1-30-20	Hart et al., 2012	Statistical vs clinical significance
W03: 2-6-20	Fried and Watkinson, 1988 Singer et al., 1999	Infancy 1
W04: 2-13-20	Singer et al., 2002 Richardson et al., 2008	Infancy 2
W05: 2-20-20	Fried et al., 1992a Fried et al., 1992b	Childhood 1
W06: 2-27-20	Lewis et al., 2004 Morrow et al., 2006	Childhood 2
W07: 3-5-20	Mayes et al., 2007 Bennett et al., 2008	Childhood 3
W08: 3-12-20	Singer et al., 2008 Richardson et al., 2009	Childhood 4
W10: 3-23-20	<u>First draft of LTE due</u>	
W10: 3-26-20	Goldschmidt et al., 2004 Hurt et al., 2005	Early adolescence 1
W11: 4-2-20	Hurt et al., 2009 Lewis et al., 2010	Early adolescence 2
W12: 4-9-20	Carmody et al., 2011 Day et al., 2011	Early adolescence 3
W13: 4-14-20	<u>Second draft of LTE due</u>	
W13: 4-16-20	Fried and Watkinson, 2001 Fried et al., 2003	Late adolescence & adulthood 1
W14: 4-23-20	Richardson et al., 2015 Goldschmidt et al., 2012	Late adolescence & adulthood 2
W15: 4-30-20	<u>Last draft of LTE due</u>	Conclusion

Readings (available on Courseworks)