

## **ANBI 149: Social and Behavioral Epigenetics**

Prof. Amy L. Non  
Mon 9am-11:50am  
SSB 102

### Contact Info:

Email: [alnon@ucsd.edu](mailto:alnon@ucsd.edu)

Office Hours: Wed 9-10am on zoom (or by appointment)

### **Course Summary:**

This course is a seminar where we will discuss the latest scientific research in epigenetic mechanisms (changes to gene expression without changing underlying DNA sequences, e.g. DNA methylation, miRNA, histone modifications) and their role in regulating health and behavior of humans and other mammals specifically in relation to social and behavioral environmental stimuli. The course will be seminar format, in which students will lead discussion on articles each week, and participate in short writing assignments. While learning these topics, students will develop analytical and critical thinking skills through reading, interpreting, and critiquing some of the most recent and unique studies in the field of social and behavioral epigenomics, including studies about social status, childhood adversity, stress, mental health, aging, obesity, and resilience.

**Course design:** This seminar course is designed for upper level undergraduate students or graduate students interested in learning more about epigenetics from an anthropological perspective. Students from all colleges and departments are welcome to enroll. The course format is mainly discussion with substantial student participation. Lectures will be supplementary only in order to provide necessary introductory or background material.

### **Course expectations:**

Students are expected to learn about the latest research on social and behavior epigenetic data that is relevant to anthropology, biomedicine, and public health. At the end of the course, I expect students will have developed strong critical and analytical reading skills, and a detailed knowledge of the latest findings in this field. This class will require comprehension and analysis of current scientific publications. Students are expected to write short (~150 word) summaries or responses to directed questions a few times throughout the quarter, and each student will lead 2 discussions (in pairs) on a research article from the course syllabus. Students will also partake in an ongoing joint class activity throughout the duration of the course in which they will collate the magnitude, direction, and strength of associations found in social/behavioral epigenetics research to date. A final evaluation will involve a short writing assignment summarizing the state of the field in social epigenetics, based on the articles read in class and their views on the results of the class project.

Students will be graded on participation in class discussions (20%), responses to short writing prompts (20%), contributions to joint class project (20%), leading class discussions (20%), and final paper (20%).

In converting your numerical average to a letter grade, fractions will be rounded to the nearest whole number and the following scale will apply:  
94-100%=A, 90-93=A-, 87-89%=B+, 83-86%=B, 80-82%=B-, 77-79%=C+, 73-76=C, 70-72%=C-, 67-69%=D+, 63-66=D, 60-62%=D-, < 60%=F.

### **Reading Material:**

Reading assignments will be in the form of 1-2 scientific articles that will be assigned and posted online each week. Students are welcome to suggest alternate or additional articles for discussion.

### **Participation**

The course will be taught in hybrid format, with all meetings recorded and posted on CANVAS, though students are expected to attend in person as often as possible. Students are strongly encouraged to stay home when ill. Participation (either remote or in person) is required of all students and will be based on each student's contribution of original comments and thoughtful questions to the class. Students are not graded on the brilliance of their statements, but on their willingness to talk, a demonstration that the assigned material was read, and the originality of their comments. Simply showing up for class does not constitute participation. Remaining silent in class means that the highest grade a student can receive is a C. If a student misses class, he/she will miss the opportunity to gain participation credit for that day. A student can have one *unexcused* absence without penalty to their participation grade. Excused absences will be considered on a case-to-case basis. Prolonged illnesses will require a doctor's note.

### **Leading class discussion**

Each student will lead 2 discussions of assigned article(s). The student does not need to use Power Point. Leading class discussion can be as creative as students desire, including activities such as debates or games that students can assign to the class, as long as the material of the assigned article(s) are covered. Regardless of whether a student is leading discussion, all students will read all articles in the syllabus and be prepared to participate in class discussions of the articles. Students will sign up for days they would like to lead discussion by the second week of class (only two student may sign up for each day).

### **Useful websites:**

- Useful information is provided by several websites:
- <http://www.ncbi.nlm.nih.gov/PubMed> - National Library of Medicine database of over 11 million journal articles dating back to the 1960s
- <http://www.genome.gov/glossary.cfm> NIH-maintained glossary of genetic terms

**Class attendance policy:** Because the class format is mainly discussion, it is very difficult to make up missed classes by borrowing notes, etc. Therefore, students expected to attend all classes and to arrive on time. Participation grade will be diminished if

students miss classes (each student is allowed 1 free miss without penalty). Computers are allowed in class, so you can access the readings or look up facts relevant to discussion, but if they are used to check email or surf the web, this will change. Class discussions/lectures cannot be recorded in any manner without special permission. All cell phones must be silenced during class.

### **Strategies for success:**

It is important to complete all the readings on time and it is best to do the readings throughout the week. In this way, you have time to think about and process the information during the week and in between different readings. Ideally, you would read some every night of the week. The amount of reading material is modest, particularly for an anthropology course. This is because it is expected that you will **re-read anything you do not understand** the first time. During your reading, you should **take copious notes**.

**Ask for help** in taking notes, comprehending the material, or preparing any of the assignments – I am available during office hours, you can schedule an appointment outside of office hours, and I am always available by email.

**Accommodations for students with disabilities:** Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison at the Global Health Program in advance so that accommodations may be arranged. <https://disabilities.ucsd.edu/students/index.html>

### **Academic Integrity**

All UCSD students are required to adhere to the Policy on Integrity of Scholarship. Please take the time to read the Policy found here: <http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>. The policy applies to all work done in this class. All written assignments should be your own work. **Plagiarism or cheating will result in an “F” for the assignment and may be reported to the Academic Integrity Office for further action.**

### **COURSE SCHEDULE**

Available in a separate document on online; contains reading assignments and important deadlines.

