

## ANG 6591L, ADVANCED MOLECULAR ANTHROPOLOGY LABORATORY

Prof. Connie J. Mulligan

Class meets in 436 (oral presentations, Thursday, 11am – 1pm) and 415 (laboratory research throughout the week) Cancer & Genetics Research Complex

Contact information:

UF Genetics Institute

409 Cancer & Genetics Research Complex

352-273-8092

[cmulligan@ufl.edu](mailto:cmulligan@ufl.edu) (best contact)

Research time is scheduled by each student

Office hours: Monday, 1-2 pm, B119 Turlington Hall

### Course summary, format and grading:

The purpose of this class is to use molecular genetic data to address questions of anthropological interest through class discussions and original laboratory research. Approximately  $\frac{1}{4}$  of class time will be spent preparing and giving oral presentations of lab results and /or journal articles (chosen by the student) and discussing ethical issues in academic research. The remaining  $\frac{3}{4}$  of class time will be spent on original laboratory research focused on the student's dissertation research topic. All research will be conducted in Dr. Mulligan's laboratory (415 Cancer & Genetics Research Complex).

### Course goals and/or objectives:

By the end of the course, students should be able to:

1. Develop and give oral presentations on their own dissertation research
2. Give useful and constructive feedback to other students about their dissertation research
3. Discuss ethical issues related to academic research
4. Conduct dissertation-level research

### Course format and grading:

The main focus of the class is to design and conduct original research. The majority of student's time will be spent on their dissertation research. The other activities (see below) are intended to enhance students' research experiences and professional development.

We will meet on Thursdays for approximately two hours. At these meetings: 1) all students will give three oral presentations of their own laboratory results; 2) we will discuss one ethical issue, concerning anything to do with conducting original scientific research including lab conduct, publishing a paper, collaborations, etc. approximately every week and students are responsible for submitting at least two questions for discussion; 3) we will discuss other issues that are timely or relevant for graduate students, e.g. collaborations, plagiarism, publishing, etc, and specific articles will be assigned to be read on those days, 4) we will discuss racism in academia and related personal or vicarious experiences.

Students will also create one class project that would increase the impact of their research or in some other way reflects their research or professional interests. This project will be discussed at the first class. Students will design their own project, e.g. develop a professional website, create an outreach project related to research interests, create a class exercise using data (real or simulated), intended to be used in a course you might teach as a professor.

**Grading:** Your final grade will be determined by the following three categories (100 total points):

- Students will design laboratory experiments that address a specific question within the broad area of their thesis research. Each student will have specific goals to be met based on their thesis research interests. Experimental design, performance of experiments, maintenance of a laboratory notebook, and meeting student-determined goals (40 points).
- Three oral presentations plus regular lab meeting participation (30 points)
- Submit two ethical questions/comments and participate in weekly discussions of ethical issues (10 points)
- Class project (20 points)
- Grades will be based on the following point percentages: 93-100%=A, 90-93%=A-, 87-90%=B+, 83-87%=B, 80-83%=B-, 77-80%=C+, 73-77%=C, 70-73%=C-, 67-70%=D+, 63-67%=D, 60-63%=D-, < 60%=E. The university grading policy can be found at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

**Class attendance policy:** Because the class meets formally only one time per week for the weekly seminar and because the class format is mainly discussion, it is very difficult to make up missed classes. Therefore, students are strongly encouraged to attend all classes.

**Accommodations for students with disabilities:** If you require accommodation due to a disability, please make an appointment during my office hours so that we may discuss your needs. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

**Academic honesty:** As a result of completing the registration form at the University of Florida, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

The latest student honor code and student conduct code can be found at:  
<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

The following presentation from the University of Florida Writing Center has essential information concerning plagiarism and properly citing sources. Be sure to note that the University of Florida does consider self-plagiarism to be plagiarism.

<http://mediasite.video.ufl.edu/mediasite/Viewer/?peid=adaa44500eaf460a84f238e6b9a558f9>. All students enrolled in this course are expected to view this presentation and refer back to it as questions arise.

**UF Counseling Services:** On-campus services are available for students having personal problems or lacking clear career and academic goals. They include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling
3. Sexual Assault Recovery Services (SARS), Student Health Care Center, 392-1161, sexual assault counseling
4. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling
5. Additionally, student web-based resources on sexual harassment are available at <http://www.ufsa.ufl.edu/students/sh/sexualharassment.shtml>

**Class recordings:** Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student

**Schedule:**

**436 Genetics Institute, Thursday, 11am – 1pm**

- Aug 26     - Goals for the class – what would you like to get out of this class? Are there any topics you’d like to cover? Any articles or books to read and discuss?  
              - Class project – think of ways to make our research more impactful – community outreach, develop a website, class exercise with real (or simulated) data  
              - Personal experiences with racism – class discussion, paper, etc?  
              - How has COVID-19 affected you? Read Science lost and lessons learned: A lab plots its comeback, Science, Aug 13, 2021, [https://science.sciencemag.org/content/373/6556/725?utm\\_campaign=toc\\_sci-mag\\_2021-08-12&et rid=34819171&et cid=3880749](https://science.sciencemag.org/content/373/6556/725?utm_campaign=toc_sci-mag_2021-08-12&et rid=34819171&et cid=3880749)
- Sept 2     - Career goals – where would you like to be in 1 yr/5 yrs/10 yrs  
              - Ajonja et al. 2021, Postdocs’ advice on pursuing a research career in academia: A qualitative analysis of free-text survey responses, PLOS ONE, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0250662>  
              - Submit two issues/questions/experiences with ethical aspects for class discussion  
              - Submit research and professional goals for the semester
- Sept 9     Chu Hsiao – JHS study, collaboration, and paper
- Sept 16    Samantha McCrane – Secondary DNA transfer project

- Sept 23 Edward Quinn – DNAm in follow-up DRC babies
- Sept 30 Chris Dutton – DNAm analyses of Syrian IGP
- Oct 7 Professional development – writing papers and collaborations

Reading:

- When is self-plagiarism OK? New guidelines offer researchers rules for recycling text, O’Grady, Science, Jun 25, 2021, <https://www.sciencemag.org/news/2021/06/when-self-plagiarism-ok-new-guidelines-offer-researchers-rules-recycling-text>
- ‘We need to talk’: ways to prevent collaborations breaking down, Gewin, Nature, June 15, 2021, <https://www.nature.com/articles/d41586-021-01573-z>
- I critiqued my past papers on social media – here’s what I learn, Holmes, Nature, July 12, 2021, <https://www.nature.com/articles/d41586-021-01879-y>

- Oct 14 Chu Hsiao – DRC transcriptomics analyses  
AABA abstracts due Oct 15
- Oct 21 Samantha McCrane – Secondary DNA transfer project
- Oct 28 Edward Quinn
- Nov 4 Chris Dutton – IGP and malaria/microbiome projects
- Nov 11 No classes - Veteran’s Day
- Nov 18 Katherine Morales
- Nov 25 No classes - Thanksgiving
- Dec 2 Professional development – publications and lab management

Reading:

- Nonreplicable publications are cited more than replicable ones, Serra-Garcia and Gneezy, Science Advances, may 21, 2021, <https://advances.sciencemag.org/content/7/21/eabd1705>
- How scientists can stop fooling themselves over statistics, Bishop, Nature, Aug 3, 2020, [https://www.nature.com/articles/d41586-020-02275-8?WT.ec\\_id=NATURE-20200806&utm\\_source=nature\\_etoc&utm\\_medium=email&utm\\_campaign=20200806&sap-outbound-id=8641E67DA8ECB01DFCD7AF1CC5132BD22A0FD084](https://www.nature.com/articles/d41586-020-02275-8?WT.ec_id=NATURE-20200806&utm_source=nature_etoc&utm_medium=email&utm_campaign=20200806&sap-outbound-id=8641E67DA8ECB01DFCD7AF1CC5132BD22A0FD084)
- Digital secrets of successful lab management, Powell, Nature, June 28, 2021, <https://www.nature.com/articles/d41586-021-01752-y>