

GENETICAL ETHICS PCB4085 / GMS6221

Course Description

Presentation and critical discussion of relevant topics pertaining to ethics, science policy, and translation in genetics research. Responsible conduct of research is also covered. Students are expected to have completed readings on the date assigned, post discussion questions 24 hours prior to class meeting time, and to bring their insights to class discussion. Be prepared to provide both scientific and ethical critiques of the readings.

Credit Hours: 1

Pre-requisites or Co-requisites: PCB 3063, AGR3303, MCB4522 or consent of instructor.

Instructor Information

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Program Assistant Information

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Course Meeting Details: Thursday Period 7 (1:55-2:45)

Course is being taught in online synchronous format.

Course Website

Course materials and related information will be posted on the course Canvas website. You are responsible for all announcements made in class and/or posted on the course website for this course as well as instructions sent to your UF e-mail address.

Materials and Supplies Fees

None

Textbooks

There is no required textbook; readings will be provided via Canvas.

Course Communication: Communications will largely be via Canvas announcements or Canvas email. Instructors will respond to student emails within 24 hours, unless that would occur on a holiday or weekend, in which case students may expect a response within 24 hours of the next business day.

Class demeanor

Students are expected to maintain a professional and engaged presence in the class at all times. Students need to arrive on time, as we only have 50 minutes per week synchronously. Cell phones should be off and put away during class meetings. Inappropriate use of technology during class time will result in a reduction of participation points for that day.

Privacy-related issues

Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Grading

Class participation means actively and critically engaging the readings, and bringing your perspective and your questions to the class. The Canvas site is a great place to get discussion started. Posts are required at least 24 hours prior to class each week in order for other students to have the benefit of your insights.

Grading schema:

- 12% of the final grade comes from synchronous class participation
- 12% of the final grade comes from your posts to the discussion board
- 24% of the final grade comes from your performance leading discussion
- 26% of the final grade comes from short paper
- 26% of the final grade comes from the Genetics & Equity summative project

Graduate students are also required to watch additional online content provided by Professor Allen.

Policy on Attendance and on Late and Makeup Work

This class is being taught in a synchronous format. Given the large participation grade, attendance is required. However, under the unprecedented circumstances in which we find ourselves this semester, all students will be allowed to miss one class free of penalty.

Late work will be accepted with a 10% point deduction for every 24 hours it is late. In general, assignments are due just before midnight (11:59 PM) local time. Thus, if an assignment is due Monday 11:59, you will lose 10% if you turn it in before Tuesday at 11:59 PM, 20% if you turn it in before Wednesday at 11:59 PM, etc. This late penalty will apply unless you have an excused extension from the Dean of Students or a technical support trouble ticket documenting technical issues for at least 24 hours prior to the deadline. In other words, please do not wait until the night of the deadline to complete your assignments!

Unavoidable emergency circumstances (e.g. severe illness, hospitalization, or family emergencies) that prevent you from completing your work in a timely manner require you to obtain a letter from a medical professional or the Dean of Students office (<https://care.dso.ufl.edu/instructor-notifications/>) that specifies the time period for which you are excused from classwork, and submit it to your instructors as soon as possible (i.e. within a week, barring extreme circumstances like extended hospitalization).

While this course is entirely online, we hope that all members of this course will follow physical distancing guidelines and good hygiene practices in the rest of their courses and in the rest of their lives. If you are experiencing COVID-19 symptoms, please use the UF Health screening system and follow the instructions on whether you are able to attend class. Course materials will be provided to you with an excused absence (see above), and you will be given a reasonable amount of time to make up work.

- Guidance from the CDC on symptoms of coronavirus: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms: <https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/>

Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available from [the GatorEvals website](#). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [the evaluation system](#). Summaries of course evaluation results are available to students at the [public results website](#).

Expectations:

All students are expected to have completed readings before the date assigned, post comments to Canvas at least 24 hours prior to class, and to participate in class discussion. Please see below for more details.

- You are required to **post to the discussion board** at least 24 hours prior to class, starting with week two. To receive full credit, your discussion posts need to be substantive (beyond “what she said”), but do not necessarily need to be long.
- You and a partner are required to **lead discussion** at least once. You may have a presentation (video, ppt, etc.) that lasts a maximum of ten minutes (uninterrupted). You will be graded on amount of student participation, the extent to which you accurately use an ethical school of thought correctly; and the accuracy of the science. You may use breakout rooms in zoom, debate format, quizzes, puzzles, or anything else you can think of to stimulate the engagement of your peers!
- **The short paper** should be 700-750 words and based on the readings for that week. You may choose one topic from any of those indicated on canvas. You must turn in the paper before the class in which the topic is discussed. Therefore, each topic has a unique due date which is immediately prior to our covering the material in class. You will receive a score and relevant feedback. This will be your final grade, unless you receive less than 90%, in which case you have the option to rewrite the paper. The deadline for rewrites is one week following return of the graded paper. Your paper will be re-graded and the second score recorded as your final grade (even if the second score is lower).
- Summative exercise for the course: **Genetics & Equity group project.** Considering past or present, in any cultural context, how has our understanding of genetics contributed to equity or lack thereof? Using in a format of your choosing (video, podcast, creative writing, visual art, etc.), reflect in depth on an example of the intersection of genetics and equity. Be sure that you incorporate at least one school of ethical thought discussed in the class, and be sure that your project is scientifically feasible. Grading will be on process and reflection that goes into your project. We hope to present the projects on UF social media channels if possible.

Course Outline (topics covered by week or by class period)

| Week | Date | General Topic | Specific Topic |
|------|-------|--|---|
| 1 | 9/3 | Introduction to Ethics and Policy | Plagiarism; responsible conduct of research |
| 2 | 9/10 | Research Integrity: The CRISPR baby hoax | Research misconduct; authorship responsibilities and publication; peer review |
| 3 | 9/17 | Scientific Research and Public Decision-making | Responsibilities of scientists to educate, inform, and listen; reproducible research movement |
| 4 | 9/24 | History of Eugenics | Roots of eugenics; social construction of race |
| 5 | 10/1 | Race, Ethnicity, and Identity in Genetics Research | Human subjects research and informed consent |
| 6 | 10/8 | Genetic Testing, Genetic Privacy | Genetic testing and discrimination; identifiability |
| 7 | 10/15 | What is Life? | Synthetic biology and “nature” |
| 8 | 10/22 | Genetic Selection: Present Day | Pre-implantation genetic diagnosis and related ethics |
| 9 | 10/29 | Genetic Selection: Future | CRISPR, germline manipulation, etc. |
| 10 | 11/5 | Genetics and Intellectual Property (Patenting Life) (<i>asynchronous ok</i>) | Data management practices; mentor and trainee responsibilities |
| 11 | 11/12 | Scientific Research and Conflicts of Interest | Protection of human subjects and other COI |
| 12 | 11/19 | Chimeras | Ethical issues in research with non-human animals |
| 13 | 12/3 | Presentation of Genetics & Equity Projects | |

Grading Scale

| Letter Grade | Range: | |
|--------------|----------|----------|
| A | 100 % | to 94.0% |
| A- | < 94.0 % | to 90.0% |
| B+ | < 90.0 % | to 87.0% |
| B | < 87.0 % | to 84.0% |
| B- | < 84.0 % | to 80.0% |
| C+ | < 80.0 % | to 77.0% |
| C | < 77.0 % | to 74.0% |

| Letter Grade | Range: | |
|--------------|----------|----------|
| C- | < 74.0 % | to 70.0% |
| D+ | < 70.0 % | to 67.0% |
| D | < 67.0 % | to 64.0% |
| D- | < 64.0 % | to 61.0% |
| F | < 61.0 % | to 0.0% |

Grade Curve Policy: This course will not have a curve.

Honor Pledge

- *UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code”. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (sccr.dso.ufl.edu/process/student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions.*
- *Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructors in this class.*

Accommodation for Student with Disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. This class supports the needs of different learners; it is important for students to share their accommodation letter with their instructor and discuss their access needs as early as possible in the semester.

Other UF Resources:

Career Connections Center (352-392-1601 | CareerCenterMarketing@ufsa.ufl.edu) connects job seekers with employers and offers guidance to enrich your collegiate experience and prepare you for life after graduation.

Computing Problems

For issues with technical difficulties in Canvas, or general computing questions, contact the UF Help Desk: (352-392-HELP | <https://lss.at.ufl.edu/help.shtml>)

Counseling and Wellness Center (352-392-1575) provides counseling and support as well as crisis and wellness services including a variety of workshops throughout the

semester (e.g., Yappy Hour, Relaxation and Resilience). You may also want to access mindfulness resources at <https://mindfulness.ufl.edu>.

Dean of Students Office (352-392-1261) provides a variety of services to students and families, including Field and Fork (UF's food pantry) and New Student and Family programs. It is also the home of the Disability Resource Center:

- Disability Resource Center (DRCaccessUF@ufsa.ufl.edu | 352-392-8565) helps to provide an accessible learning environment for all by providing support services and facilitating accommodations, which may vary from course to course. Once registered with DRC, students will receive an accommodation letter that must be presented to the instructor when requesting accommodations. Students should follow this procedure as early as possible in the semester.

Multicultural and Diversity Affairs (352-294-7850) celebrates and empowers diverse communities and advocates for an inclusive campus.

Office of Student Veteran Services (352-294-2948 | vacounselor@ufl.edu) assists student military veterans with access to benefits.

ONE.UF is the home of all the student self-service applications, including access to:

- Advising
- Bursar (352-392-0181)
- Financial Aid (352-392-1275)
- Registrar (352-392-1374)

U Matter, We Care <https://umatter.ufl.edu> Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 911.

UF police: together for a safe campus. 392-1111 (or 9-1-1 for emergencies) <http://www.police.ufl.edu/>.

The official source of rules and regulations for UF students is the Undergraduate Catalog and Graduate Catalog. Quick links to other information have also been provided below.

- Student Handbook
- Student Responsibilities, including academic honesty and student conduct code
- e-Learning Supported Services Policies includes links to relevant policies including Acceptable Use, Privacy, and many more
- Accessibility, including the Electronic Information Technology Accessibility Policy and ADA Compliance
- Student Computing Requirements, including minimum and recommended technology requirements and competencies