

GEORGIA INSTITUTE OF TECHNOLOGY
FALL 2011 BIOLOGY 4650-A SYLLABUS
BIOETHICS

Goals: This course will examine ethical controversies in biology and the ethical implications of research in the biological sciences. The goals of the course are: (1) To gain an understanding of basic ethics and its connection to biology. (2) To appreciate the ethical challenges and complexity of issues involved in biological research and public policy. (3) To learn skills in reading, discussing, presenting, and writing about bioethics.

Instructors: Dr. Mirjana Brockett (mirjana.brockett@biology.gatech.edu. 404-385-6885. Cherry Emerson Bldg #323) and Dr. Michael Goodisman (michael.goodisman@biology.gatech.edu. 404-385-6311. Cherry Emerson Bldg #A110) of the School of Biology. Office hours: By appointment.

Class organization: This is a two credit course intended for advanced undergraduates. BIOL 1510 or 1511 is a prerequisite. Class will be held Wednesday 3:05 pm – 4:55 pm, August 22 - December 17 in Cherry Emerson #204. This course includes reading assignments, written exams and reports, oral presentations, quizzes, and class discussion. You may miss one class without a formal excuse, provided that it is not a class in which you are presenting. Written confirmation of a legitimate excuse, such as a severe illness, will be required for any other absences. If you miss any part of more than one class without legitimate excuse then you will receive no credit for that day's assignments. There are no make-up assignments. Therefore, if you legitimately miss a class, your grade will be calculated from the remaining graded assignments.

Attending and participating in classroom activities is fundamental to this course. So be courteous to your fellow students and do not disrupt class by entering and leaving the room, reading, talking, allowing cell phones to ring, etc. In addition, personal computers are prohibited in class unless you are giving an oral presentation. Finally, your conduct should conform to the Student Honor Code (<http://www.honor.gatech.edu/>).

Required textbooks: K. F. Greif and J. F. Merz. 2007. *Current Controversies in the Biological Sciences: Case Studies of Policy Challenges from New Technologies*. MIT Press, Cambridge, MA. ISBN 978-0262572392. and S. F. Gilbert, A. L. Tyler, and E. J. Zackin. 2005. *Bioethics and the New Embryology: Springboards for Debate*. Sinauer Associates, Sunderland, MA. ISBN 978-0716773450.

Assessments: All students are required to do weekly readings of book chapters. Students will also give a 15-minute oral presentation and write a two-page report based on outside readings. A substantial component of the course grade will consist of class participation in the form of discussion, peer evaluation, and pop quizzes. Finally, there will be a midterm and a final exam. The relative values of the assignments are:

Assessment	Number	Value
Presentation	1	15%
Essay	1	15%
Class Participation	13	20%
Midterm exam	1	25%
Final exam	1	25%
Total		100%

The most stringent scale used will be 90-100% an A, 80-89% a B, 70-79% a C, 60-69% a D, and 59% or less an F. This scale is subject to adjustment at the discretion of the instructor.

Tentative Schedule: This schedule is subject to change!

Week	Date	Topic	Reading	Instructor
1	24-Aug	<i>Introduction</i>	<i>No reading</i>	N/A
2	31-Aug	Ethical theory and principles	Beauchamp et al. 1-22	B
3	7-Sep	Ethical behavior and human subjects	The Belmont Report	G
4	14-Sep	The beginning of human life	Gilbert et al. 3-45	
5	21-Sep	Assisted reproductive technologies	Gilbert et al. 47-79	
6	28-Sep	Choosing the sex of children	Gilbert et al. 81-108	
7	5-Oct	Stem Cells	Gilbert et al. 141-175	
8	12-Oct	Modifying the human genome	Gilbert et al. 176-212	
9	19-Oct	<i>Midterm</i>	<i>No reading</i>	N/A
10	26-Oct	The use of animals in research	Gilbert et al. 241-261	
11	2-Nov	Ownership of genetic information	Greif and Merz 49-76	
12	9-Nov	Regulation and development of drugs	Greif and Merz 117-147	
13	16-Nov	Science and national interest	Greif and Merz 235-266	B
14	23-Nov	<i>No class</i>	<i>No reading</i>	N/A
15	30-Nov	Genetically modified foods	Greif and Merz 267-297	
16	7-Dec	Environmental policy and dangers	Greif and Merz 299-327	
17	14-Dec	<i>Final Exam (2:50-5:40)</i>	<i>No reading</i>	N/A

ASSIGNMENT DESCRIPTIONS

Class presentation

Each student will give one class presentation based on one articles found outside of the classroom. *The purpose of the presentations is to educate the class in some matter related to the topic of the week.* Articles chosen for presentations should be obtained from some *scholarly resource*. The article must be related to the topic of the week in some way, although the relationship can be rather loose. Articles may originate from many sources including peer-reviewed scientific studies, legal decisions, essays on ethical theory, policy statements, etc.

You must contact the instructor at least one week ahead of your scheduled presentation with ideas of the paper you wish to present. The instructor will then clear you to present on the suggested paper. Failure to get cleared to present a paper more than a week ahead of your presentation will incur a five-point penalty on your presentation grade.

Presentations will be on papers that other members of the class have not read. So it will be critically important that the information presented is clear. In addition, as a presenter, you should be able to explain your paper in depth, expand on the importance of the area of research, and be able to answer related questions.

Presentations should be 15 minutes long followed by a ~3 minute question session. Presenters are generally encouraged to use visual aids (e.g., Microsoft PowerPoint), although other presentation methods may be used as well. An outstanding presentation will include many of the following elements: (a) background on the topic including important prior ideas that led to the focal study, (b) a description of the questions or issues being addressed and why they are important, (c) the methodology or arguments used to address the questions, (d) the interpretation of the subject matter by the authors, (e) the larger significance of the study, (f) the ethical implications of the work, (g) the distinct sides of the issue, and (h) what you view as a resolution to the ethical problems. Your presentation grade will come from both student (50%) and professor (50%) assessments.

Class essay

You will be required to write one essay on the paper, and general subject, covered in your presentation. *The purpose of the essay is to allow you to discuss information in your paper and demonstrate your reading and writing skills.* The essay is not meant to be just a simple summary of the papers you read. Rather, the essay should also represent a thoughtful discussion and analysis of the topic. The essays will be handed in at the very beginning of class the week after your class presentation.

The essays should be typed, single-spaced with one inch margins, written using 11 point Arial font, and not exceed two pages. Five points will automatically be lost if margins are incorrectly set or incorrect font is used. Strong essays will address many of the following questions: (a) what are the underlying questions or ethical problems surrounding the topic, (b) what information is relevant to the issues, (c) what information is provided in the paper you read, (d) how does the information bear on the relevant ethical issues, (e) what did the paper discover, (f) what methodologies did the paper use, (g) what is your opinion on how the relevant issues should be resolved, (h) what arguments support your ideas, (i) what objections run counter to your views and how would you refute such arguments? *Essay grades will be based on understanding your paper, identifying the associated biological and ethical topics, providing cogent arguments, and producing proficient writing.*

Class participation

Class participation in the form of discussing issues, raising questions, evaluating peer presentations, commenting on topics, and taking pop quizzes based on class readings will make up a substantial part of your grade. However, you will not be graded, nor will you be judged, on your specific convictions. Rather, you will receive participation credit if it is clear that you have thought carefully about the subject matter and contributed to the class.

In general, bioethical discussions often involve questions of values. Such discussions sometimes become personal, subjective, and emotional. However, it is essential to understand and develop skills in making rational decisions and arguments. It is also important to remain respectful of others when they speak. *Bioethical discussions are not meant to lead to decisions regarding particular issues. Rather, they should result in understanding the perspectives, ideas, and arguments of individuals with differing viewpoints.*

Exams

You will take one midterm and one final exam. The exams will be based on the assigned readings of the class and are meant to test if you have thoroughly understood and followed the subject matter discussed in class. The exams will consist of short answer questions and essays. The midterm exam will take place during the Oct 19 class period. The final exam will take place during exam week but will not be comprehensive.

Name: _____ Date: _____

Evaluation Form for Oral Presentations

Speaker: _____

Paper: _____

Overall score: _____

Scale: 100 90 80 70 60
 Outstanding Excellent Good Fair Inadequate

ITEM	COMMENTS	SCORE
DELIVERY: Poised, well-rehearsed, good eye contact, no distracting mannerisms, loud and clear, not too fast or slow, stayed on time, used scientific language, recognized audience reaction and adjusted delivery accordingly		
ORGANIZATION: Logical presentation of ideas. Ability to transfer information in an interesting and accurate way <i>Introduction:</i> Captured audience interest, gave background and importance <i>Body:</i> Described points and arguments of article clearly <i>Closing:</i> Summarized main points, gave interpretations, discussed implications		
VISUAL AIDS: Simple, legible, organized logically, important point stood out, made appropriate use of technology		
THOROUGHNESS OF RESEARCH: Showed knowledge of the subject, cited prior and subsequent studies, accurately put article in larger context, able to answer questions, understood ethical importance of study		
WHAT WAS THE MAIN MESSAGE OF THE TALK?		
WHAT DID THE SPEAKER DO WELL?		
WHAT COULD THE SPEAKER IMPROVE?		