

Fall, 2009

WOMEN AND BIOLOGY
BIOL 250

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Course Description

This course will critique the practices of modern biology from a feminist perspective. The course will start with an examination of the scientific method and feminist criticisms of science will be presented. Following this introduction, three topics will be discussed in more detail: reproductive biology, genetics and heredity and ecology. These topics have been selected because of their potential to impact women's lives and because they have been the focus of feminist critiques of biology. Students will be expected to master the factual basis of biological thought in each of these areas as well as understand the major issues in feminist criticism.

Objectives:

1. To understand the scientific method and how it is used
2. To define feminism and explain its relationship to the biology of women
3. To be able to explain the role of hormones in human reproductive biology
4. To explain the major stages in human development
5. To discuss recent advances in manipulating human reproductive biology, including cloning
6. To explain the mechanism of human heredity at a molecular and organismal level
7. To discuss recent advances in the manipulation of human heredity
8. To explain the growth of the human population
9. To discuss the interrelationship between humans and their environment

Cross Listing as a Women's Studies Course

This course is cross-listed as a Women's Studies course. As such, it is designed to meet the requirements of the Women's Studies program. These are reproduced here for your information.

- To analyze academic disciplines from a feminist and antiracist perspective.
- To encourage original scholarship and research about women that takes into consideration gender, race, class and sexual orientation.
- To integrate self exploration with academic skills.
- To provide a non-authoritarian learning environment that values students' ideas and encourages an open exchange of information and opinion.
- To promote an individual and critical approach to learning.
- To promote knowledge of the diversity of women's experiences.

Text:

BIOLOGY: CONCEPTS AND CONNECTIONS. N.A. Campbell, L.G. Mitchell and J.B. Reece, Benjamin Cummings, 5th Edition, 2006. Two copies of the 4th edition will be available from the instructor—there are insignificant differences between the 4th and 5th editions.

Additional readings and articles will be assigned in class and will be available to you on Web CT.

Course Requirements:

Many of the course materials such as lecture outlines and study guides will be found on the course web site. To access this, you will need to activate your student computer account. E-Learning Blackboard is accessed via My I.P.F.W.

There will be three midterm exams (the last will be given during finals week). The midterms will be worth 70 points each. These exams will cover the material presented in the preceding unit. Exams will consist of a mixture of multiple choice and short answer questions. These tests will focus on understanding of the biological material and will be objective in nature.

Students will be required to write five short position papers, worth 20 points each. These papers will be reaction papers to assigned readings or to videos shown during lecture. There will actually be six opportunities to write papers. Students will have the option of dropping their lowest score. Papers based on assigned readings will be prepared in advance of the discussion date indicated on the schedule. For these papers, students will select one of the short readings in the handouts. You will be required to select one of the papers in the assigned chapter, write a reaction to it, then come to class prepared to contribute to the class discussion. In your reaction paper, you will explain the scientific issue that is being addressed, discuss why you selected this paper, state whether you agree with the author or not, and then briefly state why you agree or disagree. One of the papers will be based on viewing the movie **Gattaca**, which will be shown in class. I will hand out a set of questions prior to viewing the film, and you will write answers to those questions. This

paper will be due on the next lecture date after showing the video.

All papers are to be typed double-spaced with standard 12-point font and 1" margins. Do not include a separate title page. Type your name and number of the paper in the upper right hand corner of the first page. Type the title of the paper you are reacting to in the title line of your paper. Papers should be 2-3 pages in length. Staple pages together—do not use paper clips or report binders. **Papers submitted via email will not be accepted.**

Special notice to WOST majors: All WOST majors should prepare duplicate copies of papers to allow for inclusion in their WOST portfolio housed in CM 272.

Grading:

Your grade will consist of the following:

Three midterms	210 pts
Papers (5 @ 20 points each)	100 pts
Total	310 pts

It will be based on the following scale:

A	90-100%	279-310
B	80-<90%	248-278
C	70-<80%	217-249
D	55-<70%	171-216
F	<55%	<171

Please note that I do not round up. For every grade, there is a cut-off. It is your responsibility to make sure that you are not on the wrong side of the cut off for the grade you want to receive. Because you have the opportunity to earn bonus points (see section below), these cut offs are firm. Under no circumstances will I negotiate with individual students regarding their grade.

Bonus Points:

Students will have the opportunity to earn bonus points during the course of the semester. One way will be to participate in discussions of the assigned readings. Other opportunities will consist of short in-class writing assignments. Only students in class on that day are eligible to participate. You are encouraged to take full advantage of these opportunities.

Make-up Exam and Late Work Policy:

If students are unable to take exams at the scheduled time, arrangements can be made to take the exam at another time, provided this is done before the graded exams are returned to the class. If this is not feasible, a make-up exam will be given during the time allotted for the final exam. The make-up exam will consist of essay questions over the same material covered in the exam which was missed.

Papers are due on the date listed in the schedule. If a student does not hand in the paper in time, that paper will be the score that is dropped. If more than one paper is missed, a score of 0 will be recorded for the additional papers which are missed.

Absences:

Regular attendance is encouraged. If you miss a class, it is your responsibility to obtain the material you missed. The acceptable way to do this is to obtain lecture notes from another student. I will regularly post announcements and lecture topics to the web site. In order to encourage class attendance, I will be passing out an attendance sheet during each lecture. If your grade is within 5 points of the next highest grade, I will check these attendance sheets. If you do not have more than three absences (excused or unexcused), I will give you the higher grade.

Academic Honesty:

Students are required to abide by the University guidelines for academic honesty, as discussed in the Student Handbook (pp 183-185). Examples of academic dishonesty include copying or attempting to copy answers from exams or assignments and plagiarism of issue papers. Plagiarism means copying any portion of a reading and utilizing it as your own work. Changing a few words here and there is also plagiarism. The goal of these issue papers is for you to write your opinion in your own words. Plagiarism in any form will result in a grade of zero for the assignment. Persistent plagiarism will result in disciplinary action.

Students with Disabilities:

If you require disability-related accommodations in this class, if you have emergency medical information you wish to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class or at my office during schedule office appointment hours. The Services for Students with Disabilities Department (SSD) is the campus office responsible for verifying that students have disability-related needs for academic accommodations and for planning appropriate accommodations in cooperation with the students themselves and their instructors. Students who require academic accommodations should request authorization letters from SSD. The IPFW SSD Department office is located in Walb Student Union, Room 113 (voice telephone 219-481-6657).

Cell Phones

Please turn off your cell phone during class. Five points will be deducted from your grade if your cell phone rings during class.

SCHEDULE

Unit 1: Reproductive Biology

- Week 1: Introduction to the course
Women in Science
Video: Women Biologists
- Week 2: Paper 1
Biology as a Science (Chapter 1)
Cell Division (parts of Chapter 4 and all of Chapter 8)
- Week 3: Labor Day holiday
Human Reproduction (Chapter 27)
- Week 4: Human Development (Chapter 27)
Video: Birth, Sex and Death
Paper 2
- Week 5: Finish Human Development
Feminist Critique (selected readings)
- Week 6: Wrap-up
Exam 1 (September 30)

Unit 2: Human Heredity

- Week 7: GATTACA continued: Paper 3
Patterns of Inheritance (Chapter 9)
- Week 8: Molecular Biology of the Gene (Chapter 10)
Video: Children By Design
- Week 9: Control of Gene Expression (Chapter 11)
DNA Technology (Chapter 12)
- Week 10: Video: Mouse That Laid the Golden Egg
Paper 4
- Week 11: Feminist Critique (selected reading)
Wrap-up
Exam 2 (November 4)

Unit 3: Ecology

- Week 12 The Biosphere (Chapter 34)
 Human Populations (Chapter 36)
- Week 13: Communities and Ecosystems (Chapter 37)
 Video: Six Billion and Beyond
- Week 14: Paper 5
 Conservation Biology (selected topics from Chapter 38)
- Week 15: Feminist Critique (selected readings)
 Paper 6 (due Dec 9 or day of final?)
- Week 16: Exam 3: 12-14 from 1-2:15

