

Honors 298
Social Eye for the Biology Guy (or Gal)
Tentative Syllabus

Instructor:

Adam M. Hott, M.S.

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Phone:

285-8854

Office Hours:

M/W 2:00-3:00

others by appointment

Room:

CL 126

Time:

MW 9-9:50

T 9-10:50

General Course Description:

Basic introduction to principles in life sciences (BIO, HSC) emphasizing relationship of the sciences to human concerns and society. Included are social and ethical consequences of scientific discoveries and their applications to critical issues confronting contemporary society. Open only to Honors College students except by permission of the chairperson of the sponsoring department or the dean of the Honors College.

Specific Course Goal:

This course is designed to elucidate some of the current social issues faced by the world regarding genetic modification and manipulation. The goal of the course is to provide not only factual information regarding general biology but also offer an opportunity to investigate various views of social issues in the field of genetic research.

Course Objectives:

- 1- Students will be able to describe basic cellular functions, including cell reproduction
- 2- Students will be able to relate mitosis and meiosis to sexual and asexual reproduction
- 3- Students will be able to determine simple Mendelian inheritance patterns
- 4- Students will be able to determine inheritance patterns from human pedigrees
- 5- Students will be able to academically debate social issues involving genetic research
- 6- Students will be able to use proper terminology involved in genetic research
- 7- Students will be able to present scientific information in a professional manner
- 8- Students will be able to demonstrate an understanding the ethical, legal and social implications of genetic manipulation and modification to animals, plants, microbes, and humans

Texts:

Watson, J. (2003) DNA: the secret of life. Alfred A. Knopf, New York.

Attendance Policy:

Complete attendance is expected. If you are not present after the first 15 minutes of class, you will be counted as absent. Excessive absenteeism will be dealt with on an individual basis and may result in a lowered grade. If extenuating circumstances require you to miss class at any time, notification prior to your absence is requested. Attendance in class is the only way to achieve in this course. Please be responsible and come to class.

Grading:

Your grade will be determined on a 90, 80, 70, 60-grade scale. Your grade will be determined using the point distribution below.

2 Quizzes:	25 points each	50 points
5 Pre-reaction papers:	10 points each	50 points
5 Post-reaction papers:	10 points each	50 points
1 Group Research Paper:		100 points
1 Group Presentation:		50 points
3 Research Outlines:	25 points each	<u>75 points</u>
Total:		375 points

Structure:

The structure of the course depends greatly on the students. It is expected that each student participate in the course to the fullest extent possible. Groups will be used to research and present on a particular topic. Those same groups will be used to discuss various topics within the course. Individual work is expected as well and mastery of the material should be on an individual basis. This course requires a great amount of in class discussion and will often rely on the students to bring information to the course. A classroom environment that facilitates learning by both the instructor and the students will be established and maintained throughout the course. To the best of the instructor's ability, a comfortable and open environment will be established so that all students and the instructor are free to exchange ideas and opinions without fear of ridicule by others.

Class Philosophy:

The material covered in this course can only be presented to the best of my ability, requiring the student to be engaged in his/her own learning. To put it simply, **you will get out of the class what you put into it.**

Late or Missing Work/Exams:

Excused absences for University-related functions, such as field trips, must be arranged in advance. If you must miss a quiz, you need to contact me (amhott@bsu.edu) prior to the time of the class you will miss. You may contact me by email (the best way) or by leaving a message for me on the phone. Please be sure to leave your name and day you are missing as well as the assignments/quizzes you need to makeup. It is the student's responsibility to obtain copies of any information, announcements, assignments, etc., which are missed due to any absence. Makeup quizzes will only be given one week following the scheduled day. All assignments need to be completed by the day of class. Late assignments will not be awarded credit.

Class Policies and Regulations:

Students are asked to turn off cell phones and beepers while in the classroom. These can be very disruptive not only to the owner but also to everyone in the classroom.

Academic dishonesty, plagiarism, cheating or copying material that is not your own will not be tolerated in any fashion. The actions set forth in the Ball State University Student Handbook will be strictly followed. If you have any question regarding academic dishonesty, plagiarism, cheating, or copying material, please consult the Ball State Student Handbook.

Respect is a necessity when working in any group environment. I will give each student the utmost respect and courtesy that he or she deserves. I expect in return only the same. We will be discussing many issues that may facilitate personal feelings and sharing of personal beliefs. We will all be respectful of each individual's opinion and there will be no attacking of personal ideas or beliefs. We will maintain respect for everyone in the class. If a respectful relationship is maintained, the class will run much more smoothly which will benefit all who are involved. If there are individual questions or problems feel free to see me at anytime during the semester to discuss these issues.

The Learning Center:

The Learning Center may arrange for a supplemental instructor if requested for the basic areas of biology and chemistry necessary for the initial review portion of this course.

Eligibility for Accommodation and Adaptations:

If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible.

Week	Topic	Date
Week 1	Introduction, Cell Structure and Function <i>Groups Formed, Presentation Topics Determined</i>	8/23 – 8/25
Week 2	Cell Reproduction, Mitosis/Meiosis <i>Quiz 1</i>	8/30 – 9/1
Week 3	<u>NO CLASS MONDAY,</u> Pedigree Analysis <i>Pre-Reaction Paper #1 Due (Gene Therapy)</i>	9/7 – 9/8
Week 4	Human Genetic Disease, Gene Therapy <i>Quiz 2, Post-Reaction Paper #1 Due (Gene Therapy)</i>	9/13 – 9/15
Week 5	Stem Cell Research <i>Pre-Reaction Paper #2 Due (Stem Cell Research)</i>	9/20 – 9/22
Week 6	Stem Cell Research <i>Group 1 Presentation</i>	9/27 – 9/29
Week 7	Stem Cell Research <i>Post-Reaction Paper #2 Due (Stem Cell Research)</i>	10/4 – 10/6
Week 8	Human Cloning <i>Pre-Reaction Paper #3 Due (Human Cloning)</i>	10/11 – 10/13
Week 9	Human Cloning Group 2 Presentation	10/18 – 10/20
Week 10	Human Cloning <i>Post-Reaction Paper #3 Due (Human Cloning)</i>	10/25 – 10/27
Week 11	Genetically Modified Animals <i>Pre-Reaction Paper #4 Due (GM Animals)</i>	11/1 – 11/3
Week 12	Genetically Modified Animals Group 3 Presentation	11/8 – 11/10

Week 10	Genetically Modified Animals <i>Post-Reaction Paper #4 Due</i> <i>(GM Animals)</i>	11/15 – 11/17
Week 11	<u>NO CLASS WEDNESDAY</u> Genetically Modified Crops <i>Pre-Reaction Paper #5 Due</i> <i>(GM Crops)</i>	11/22 – 11/23
Week 12	Genetically Modified Crops Group 4 Presentation	11/29 – 12/1
Week 13	Genetically Modified Crops <i>Post-Reaction Paper #4 Due</i> <i>(GM Crops)</i>	12/6 – 12/8
Week 14	Wrap-up/Review <i>Group Research Paper Due</i>	12/13
Finals Week	Final Exam	TBA