

BIOL 133

Genetics and Evolution of the Human Species

Sample Syllabus

Description

This course is an overview of our current knowledge of human heredity, genetic issues, genetic diseases, and human evolution. Background information that is necessary for understanding these issues will be taught including cell structure, the structure and function of DNA and chromosomes, patterns of inheritance, population genetics, human evolution, and genetic technologies. This course is intended for non-biology majors and does not include a detailed analysis of human genetics. This course will include Canvas readings, web-based readings and videos, and web-based interactive exercises. There are ample opportunities for individual problem-solving while group assignments are offered as discussion forums. Students will also research genetic conditions and have the opportunity to share what they have learned.

Objectives

By the end of this course students should have gained sufficient scientific knowledge to...

- Read and describe popular science articles pertaining to genetic issues.
- Discuss genetic issues intelligently.
- Make informed decisions about genetic issues relating to their personal health.
- Illustrate the impact of genetic technologies on our everyday lives.
- Identify where to find information and web pages relating to genetic issues.
- Summarize the major theories and findings of human evolution.

Materials

All course materials can be accessed through Canvas, the PSU Learning Management System. You will need your Penn State access account username and password for access to Canvas. You do not need to purchase any textbook.

Format

Each week you will be expected to...

- Read the text on content pages of at least one module in our Canvas course site.
- Complete additional activities such as a web activity, a case study, participate in a group discussion forum, or watch a short NOVA/PBS video and answer questions about it.
- Take a quiz after reading the text and completing the associated assignments.
- Complete all assignments by 11:00 PM Eastern time on Monday following each week.

Quizzes

Quizzes consist of multiple choice and true/false questions based on the weekly text readings and web assignments. These will be available in Canvas for a designated period during which you may log in and open a quiz one time. Your answers must be submitted within time frame specified for each quiz. For one quiz, you will be required to use the PSU online proctoring system, Examity. Please see additional specific information below.

In this class you will take one assessment that will be proctored by a service called Examity®. Review the Student Quick-Guide, which is available in the modules tab, for instructions on how to use Examity®. Please log in as soon as possible to set up your profile. You will not be able to schedule exams until your profile is complete.

Web Activities

Web Activities are assigned for almost all modules via links to web resources to learn more about a specific topic. Each web site has associated questions to be submitted to Canvas to be evaluated for a grade.

Videos

Several short videos produced by PBS NOVA are quite relevant to several of our discussions. Watch each video and complete the associated quiz in Canvas.

Writing Assignment

You must complete one writing assignment relating to genetic issues. This writing should be approximately 500 words and be submitted via the appropriate place in Canvas. Unless prior arrangements are made, late assignments will have points deducted.

Case Studies

Several short case studies will be completed during the course. These exercises will give you the opportunity to apply your learning to a real life situation.

Discussion Forums and Surveys

Your participation in these will be awarded points. To encourage discussion, opinions are welcomed and will not be graded.

Grading

All assignments are worth approximately 500 total points. Weekly assignments sets are due on Monday at 11:00PM Eastern Time. Late assignments will be accepted for two weeks beyond the due date and 5 points will be deducted from each assignment that is late. After two weeks the drop box for each assignment will expire and no points will be awarded. Emergencies do arise, so please contact Dr. Topper if you experience an emergency situation where you need extra time to complete an assignment. Please do not put yourself in danger, such as going out in the dark to find internet access to complete an assignment. Each request will be considered on an individual basis. *No extra credit

will be offered. If you are concerned about your grade, please contact Dr. Topper as quickly as possible and state your concerns.

Assignment	Number	Points(Each)	Total Points
Quizzes	~12	15-40	~250
Web Activities	11	10-20	~100
NOVA Videos	5	15-20	~80
Writing Assignments	1	35	35
Discussion Forums, Polls & Surveys	3	10	~30

Grade Scale

Letter Grade	Percentage
A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	70-76%
D	60-69%
F	< 60%

Academic Integrity

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle

for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.

Academic integrity includes a commitment by all members of the University community not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

Accommodating Disabilities

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The [Student Disability Resources \(SDR\) website](#) provides contact information for every Penn State campus . For further information, please visit [Student Disability Resources website](#).

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: [See documentation guidelines](#) . If the documentation supports your request for reasonable accommodations, your campus disability services office will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early as possible. You must follow this process for every semester that you request accommodations.

Counseling and Psychological Services

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times,

including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

- [Counseling and Psychological Services at University Park \(CAPS\)](#): 814-863-0395
- [Counseling and Psychological Services at Commonwealth Campuses](#)
- Penn State Crisis Line (Available 24 hrs, 7 days a week): 877-229-6400
- Crisis Text Line (Available 24 hrs, 7 days a week): Text LIONS to 741741

Educational Equity / Report Bias

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the [Report Bias website](#).