

Instructor: Dr. Dennis Welker BNR101, 797-3552, dennis.welker@usu.edu

Office hours: Please make an appointment! My office hours are TR from 11:15-12:30 and by appointment as needed at other times.

Text: Human Genetics and Society by Yashon and Cummings, second edition

There may be used copies of the second edition available from on-line booksellers.

Course Objectives: This course satisfies the University Studies requirement for a DSC Depth Science Class for non-science majors. It builds on previous Breadth Life Science class experiences and is intended to help develop a better understanding of the principles and issues dealing with human heredity, the use of genetics in our society, and other genetic topics. The goal is that you become able to interpret what you read and hear about genetics and be able to think about how genetics applies to you and societal issues that arise from genetic knowledge. You will need to study and learn some basic genetics to be able to achieve this goal. In particular, you will be expected to gain factual knowledge and learn to apply that knowledge to your thinking and decision making. Via the Genetics in the News Assignments you will learn to find and use resources in the public domain that relate to genetics and its use in our society.

Class Participation: This course lends itself to class participation in discussions of genetic issues. I encourage you to attend class and to participate in class discussions.

Genetics in the News Assignments: During the semester we will have four of these assignments, each worth 15 points. For each, you are to find a recent article from a newspaper or a magazine or the internet that relates to genetics. Provide a brief (300-500 word) well-written summary of the article stating the purpose of the article and how it relates to the topic of this course Genetics and Society; include a reference to the article you have chosen or attach a copy of it. My intent is that students will present many of these in class and that we will have discussions about them. Grading will be based on your demonstration of having understood the article content and your ability to express that in a well-written manner. Your summaries are to be typewritten, to have been checked using a spell-checker, and proofread to remove format, grammatical and punctuation errors. **Reports are due in class. I expect you to attend class on these days to learn about and discuss what other students have found.** I will accept reports out of class, late reports, and reports submitted by email but these reports will receive at most half credit.

Exams and quizzes: Four exams will be given. Exams will primarily be in Multiple Choice/Matching format and graded via the computer using scantron sheets (full-page size). However, any type of question may be used, i.e. short answer, matching, true-false, fill-in-blanks, short discussion, longer essay and genetic problem solving. Each exam will be worth 100 points. You are responsible for all the material presented in the lectures and posted on Canvas. Unannounced quizzes will also be given. Quizzes will account for at least 40 points, if additional quizzes are given the extra points will be used as bonus points.

Grading: Based on 500 total points

A-, A	450-500 points
B-, B	400-449 points
C-, C	325-399 points
D-, D	250-324 points
F	0-249 points

University Add/Drop Policies: The last day to add this class or to drop this class without notation on your transcript is January 30, 2017. The last day to drop a class with a “W” notation on your transcript is March 23, 2017.

The following policies will apply to this class:

Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. Faculty Code Policy #403 further defines academic freedom and professional responsibilities: [USU Policies Section 403](#)

Academic Integrity - "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students.

The Honor Pledge: To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity." A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

Grievance Process

Students who feel they have been unfairly treated [in matters other than (i) discipline or (ii) admission, residency, employment, traffic, and parking - which are addressed by procedures separate and independent from the Student Code] may file a grievance through the channels and procedures described in the Student Code: [Article VII Grievances](#)

Plagiarism

Plagiarism includes knowingly "representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged used of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

Sexual Harassment

Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at 797-1266.

Students with Disabilities

The Americans with Disabilities Act states: "Reasonable accommodation will be provided for all persons with disabilities in order to ensure equal participation within the program. If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center (797-2444), preferably during the first week of the course. Any request for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative format, large print, audio, diskette, or Braille."

Withdrawal Policy and "I" Grade Policy

Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term 'extenuating' circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

Proposed Class Schedule:

January	9	Biology Basics 1	
	11	Biology Basics 1 and 2	
	13	Biology Basics 2	
	18	Chapter 5 Gene Expression and Gene Regulation	
	20	Chapter 5 Gene Expression and Gene Regulation	
	23	Chapter 4 How Genes are Transmitted from Generation to Generation	
	25	Chapter 4 How Genes are Transmitted from Generation to Generation	
	27	Genetics in the News	
	30	Chapter 1 Sex and Development	
	February	1	Chapter 2 Assisted Reproductive Technology
3		Chapter 2 Assisted Reproductive Technology	
6		EXAM I on Biology Basics 1 and 2 and on Chapters 1, 2, 4 and 5	
8		Chapter 3 Changes in Chromosome Number	
10		Chapter 3 Changes in Chromosome Number	
13		Chapter 6 Changes in DNA: Mutation and Epigenetics	
15		Chapter 6 Changes in DNA: Mutation and Epigenetics	
17		Chapter 7 Biotechnology	
21		Chapter 7 Biotechnology	
22		Chapter 8 Genetic Testing and Prenatal Diagnostics	
24		Genetics in the News	
27		Chapter 9 DNA Forensics	
March		1	Chapter 9 DNA Forensics
	3	EXAM II on Chapters 3, 6, 7, 8 and 9	
	13	Biology Basics 3	
	15	Chapter 11 Inheritance of Complex Traits	
	17	Chapter 11 Inheritance of Complex Traits	
	20	Chapter 12 Cancer and the Cell Cycle	
	22	Chapter 12 Cancer and the Cell Cycle	
	24	Chapter 13 Behavior	
	27	Chapter 13 Behavior	
	29	Chapter 14 Immunogenetics	
31	Genetics in the News		
April	3	Chapter 14 Immunogenetics	
	5	Chapter 14 Immunogenetics	
	7	EXAM III on Biology Basics III and Chapters 11, 12, 13 and 14	
	10	Chapter 10 Genomics	
	12	Chapter 10 Genomics	
	14	Chapter 15 Genetics and Populations	
	17	Chapter 15 Genetics and Populations	
	19	Chapter 16 Human Evolution	
	21	Genetics in the News	
	24	Chapter 16 Human Evolution	
	26	Chapter 17 Different Worlds: Past, Present, and Future of Human Genetics	
28	Chapter 17 Different Worlds: Past, Present, and Future of Human Genetics		
May	5	Exam IV on Chapters 10, 15, 16 and 17 in HPER 114A	9:30 -11:20