

California State University | Stanislaus

BIOL 2310, HUMAN GENETICS FALL 2019

Instructor:	Nora Hallquist Hulse, Ph.D.	Office Hours:	R 9:30-10:30 am, F 9:00-10:00 am
Office:	N254		Or by appointment
Phone:	(209) 667-3476	Class Meeting Days:	TR
E-Mail:	nhallquisthulse@csustan.edu	Class Meeting Hours:	8:00-9:15
Website:	http://www.csustan.edu/hallquist	Class Location:	N101
Prerequisite:			

COURSE INFORMATION

University Course Catalog Description

Basic concepts of human genetics will be covered including inheritance patterns of traits, genetic diseases, chromosome aberrations, prenatal diagnosis, the Human Genome Project, and evolutionary genetics. Emphasis will be placed on DNA technology as it relates to current genetic issues. This course will not meet the upper-division genetics requirement, nor may it be used as an elective for the major.

Course Prerequisites/Requirements

None. However, a semester of college entry level biology and chemistry are beneficial.

Criminal Justice majors: This course is required for students with a Forensic Science Concentration.

Biology majors: This course does not meet the upper-division genetics requirement, nor may it be used as an elective for the major. Satisfies G.E. area B2.

GE Outcome Alignment and Assessment

GE area B2 courses are to meet Learning Goals 2.1 and 2.2. Specifically, Learning Goal 2 is to develop broad knowledge of biological and physical sciences, humanities and creative arts, and social sciences. Students attain these goals (goal 2.1) by explaining and applying the basics scientific method and (goal 2.2) by demonstrating an understanding of the living and non-living physical world, for example the effect of the environment on gene expression. Students will be assessed in their knowledge of the scientific method (goal 2.1) with iClicker responses followed by a take-home assignment, and in understanding the living and nonliving physical world (goal 2.2) in tests #2 and #3 of a total of 3 tests.

Required Texts and Materials

Human Heredity: Principles and Issues, 11th ed. is an online book.

Access is purchased through the bookstore. Publisher: CENGAGE Learning

ISBN-13: 978-1-305-25105-2 ISBN-10: 1-305-25105-9

If you have other classes using Cengage books, purchasing [Cengage Unlimited](#)

allows you access to all Cengage books without paying extra. 

iClicker class response system - buy or rent this from the bookstore

ISBN: 9781464120152 or the iClicker app called iClicker REEF



More about iClicker registration:

Whether you choose to use a remote or the Reef app, you must register online with iClicker through Blackboard to allow your grades from iClicker to sync with Blackboard.

Register for iClicker – by following these 4 steps:

1. Log in to BlackBoard.
2. Click the link for Human Genetics.
3. Go to <Documents and Content>.
4. Click iClicker Reef and follow the instructions.

More about MindTap from Cengage:

This course requires MindTap from Cengage. MindTap is available for purchase on its own, or through Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks for \$119.99 per term, \$179.99 per year or \$239.99 for two years. No matter how many Cengage products you use, they are included in Cengage Unlimited at no additional cost. Prefer print? You also get a textbook rental with your activation through Cengage Unlimited for \$7.99 + free shipping.

Register for your MindTap course- and your Cengage Unlimited trial - by following these 4 steps:

1. Log in to BlackBoard.
2. Click the link for Human Genetics.
3. Click any link to Cengage content to continue the registration process.
4. I put “Getting started in Cengage...” in the <Information and Syllabus> section. There’s also a video.

To explore Cengage Unlimited, click on the Cengage Unlimited link within your BlackBoard course or click on ‘My Home’ in the left navigation menu you'll see in your Cengage course or while working on a Cengage assignment. If you'd like to subscribe to Cengage Unlimited, click ‘Subscribe Now’ in the banner at the top of the Cengage Unlimited Dashboard or in the left navigation menu.

COURSE ASSIGNMENTS AND GRADING

Grades will be based on in-class iClicker responses, online assignments, paper assignments, and three exams.

Class attendance is highly recommended; missing classes may result in poor performance in the course. You are responsible for any information or assignments you missed in your absence. You will also miss iClicker points for questions given during lecture; there is no making up missed iClicker points. **I highly recommend reading the assigned chapters before coming to class.**

iClicker questions: Each lecture, you will be asked to respond to a number of questions using the iClicker student response system. The questions will come from lecture material that was covered either in the previous or present lecture, so it is in your best interest to keep up with the material. You will receive one point for answering the questions asked each day (participation points) and an additional point for each correct answer (information points). Your iClicker grade appears in the column in Blackboard called “Aggregate total.” iClicker keeps a running total that I cannot alter, so you need to be present to receive points.

Online assignments and quizzes: The CENGAGE/MindTap Online Learning Platform will be used for assignments and chapter quizzes/tests. Each chapter has a total of 45 points and there are 19 chapters.

Genetic Disease Podcast: We have an opportunity to learn from each other while using a unique presentation platform. Students will work in groups of 3 to construct a KCSS radio podcast. If you are an expert in this type of media, please tell me. We may be able to use your expertise. The assignment is to review a Genetic Disease from the list I posted on Blackboard. The “Info-mercial” will contain an overview of the Genetic Disease, with symptoms and a prognosis. It will talk about the genetic and physiological basis of the symptoms and give a brief overview of the treatment for the condition if there is any. The presentation should take no more than 5-8 minutes. The group will also turn in a 3-page paper through the Turnitin link on Blackboard. No late submissions will be accepted. We will gather these presentations and post them on our Blackboard site. After the presentation the group that will present next will do a written peer review answering questions that I will supply; and the group that did the presentation will do a reflection stating, “What part of this assignment challenged you the most, the scientific content, the technical necessities of a podcast, speaking in public, or another aspect?” Also, “What did you learn in Human Genetics that will influence you for many years to come?”

Exams: There will be three exams during the term, worth 45% of your grade (15% per test). The final will be comprehensive. Exams may consist of any of the following: multiple choice, definitions, fill-in-the-blank, matching, and short answer essay questions.

There will be no make-up exams: Failure to appear at exam time will result in zero points for that exam. This grade will be adjusted with appropriately-documented university-sanctioned excuses, such as medical emergencies.

Course Grading Grades will be assigned as follows (points and percentages may be adjusted somewhat):

Assessment	Percent
iClicker responses	6%
Paper Homework/Assignments (possible presentation – 5% taken from above)	4%
Online Assignments/Quizzes	45%
In-class Exams	45%
Total	100%

I will use plus/minus grading.

Grading Scale (%)	
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0 - 59	F

Course Policies: University catalog

Academic Dishonesty and Misconduct: Exams, reports, and presentations are indicators of individual performance. Copying off another student's exam, plagiarized reports, presentations or papers constitutes cheating. There is zero tolerance for cheating. Cheating in any capacity in this class will result in penalties ranging from a minimum of a zero on the assignment or exam to a maximum of expulsion from California State University, Stanislaus as indicated by the official University Policy regarding dishonesty and misconduct.

Grades of "Incomplete"

From The University Catalog –

An Incomplete signifies (1) that a portion of required coursework has not been completed and evaluated in the prescribed time period due to unforeseen but fully justified reasons beyond the student's control, and (2) that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. The conditions for removal of the Incomplete shall be put in writing by the instructor and given to the student, with a copy placed on file with the department chair. A final grade will be assigned when the work agreed upon has been completed and evaluated.

Any Incomplete must be made up within the time limit set by the instructor; in any case, no more than one calendar year following the end of the term in which the Incomplete was assigned. An Incomplete should never be used to (1) give a failing student an opportunity to redo unsatisfactory work or complete additional work; or (2) give a student more time to complete his/her work when the reasons for the delay have been within his/her control. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an incomplete reverting to a grade of NC for grading options 1 and 2, and to a grade of IC for grading option 3. (See the Academic Standards section of this catalog and the Schedule of Classes Informational Guide for grading options.)

In cases of prolonged illness or any emergency which necessitates an extension of time to complete the course, the student may petition through the academic department where the course was offered. Students may not be permitted to graduate until all Incompletes are removed or evaluated as "IC" grades. Students are not to reregister in courses in which they have an Incomplete.

http://catalog.csustan.edu/content.php?catoid=12&navoid=541&returnto=search#indi_stud_cour

Email

Please direct questions regarding course materials to me at nhallquisthulse@csustan.edu. Please put BIOL 2310 in the subject line as I get many emails every day and I want to be sure to respond to yours quickly. For issues with BlackBoard, please contact the helpdesk, linked from the BlackBoard login page. For technical issues with CENGAGE Learning, please use their help desk; Cengage Technical support located on Blackboard in the Contents and Documents area.

Netiquette

Please review and follow the netiquette provided at the following link:

<http://www.csustan.edu/blackboard/Netiquette.html>.

COURSE POLICIES: PLAGIARISM

University Academic Conduct Policy

There will be zero-tolerance for plagiarism/cheating. Plagiarism and/or cheating will result in a 0.0 for the class. For further information, please see the CSU Stanislaus catalog for Student Code of Conduct http://catalog.csustan.edu/content.php?catoid=3&navoid=115#stud_cond

RESOURCES

Disability Resource Services

CSU Stanislaus respects all forms of diversity. By university commitment and by law, students with disabilities are entitled to participate in academic activities and to be tested in a manner that accurately assesses their knowledge and skills. They also may qualify for reasonable accommodations that ensure equal access to lectures, labs, films, and other class-related activities. Please see the instructor if you need accommodations for a registered disability. Students can contact the Disability Resource Services office for additional information. The Disability Resource Services website can be accessed at <http://www.csustan.edu/DRS/>
Phone: (209) 667-3159

Recording Policy:

Audio or video recording of classes (tape and digital format) or use of cameras/phones to photograph or record lectures is not permitted. An exception is made for students registered with Disability Resource Services, who are approved for this accommodation. In such exceptions, DRS students will be asked to sign a "Recording Agreement" which disallows them from sharing recordings with other individuals unless approved by the DRS program.

COURSE SCHEDULE

Tentative Lecture Schedule

Materials will be active online with due dates, please check Blackboard and Cengage frequently to make sure you don't miss any assignments. Assuming 60 students, working in groups of 4.

DATE	TOPIC	Chapter	Presentations
Aug 22	Introduction and A Perspective on Human Genetics	1	
Aug 27	Cells and Cell Division	2	
Aug 29	Transmission of Genes from Generation to Generation	3	
Sept 3	Pedigree Analysis in Human Genetics	4	
Sept 5, 10	Inheritance of Complex Traits	5	
Sept 12	Cytogenetics: Karyotypes and Chromosome Aberrations	6	
Sept 17, 19	Development and Sex Determination	7	
Sept 24	EXAM 1		
Sept 26	The Structure, Replication, and Chromosomal Organization of DNA	8	P1
Oct 1, 3	Gene Expression and Gene Regulation	9	P2,P3
Oct 8	No classes		
Oct 10	From Proteins to Phenotypes	10	P4
Oct 15, 17	Genome Alterations: Mutation and Epigenetics	11	P5,P6
Oct 22, 24	Genes and Cancer	12	P7,P8
Oct 29, 31	An Introduction to Genetic Technology	13	P9
Nov 5	EXAM 2		
Nov 7	Biotechnology and Society	14	P10
Nov 12	Genomes and Genomics	15	P11,P12
Nov 14	Reproductive Technology, Genetic Testing, and Gene Therapy	16	P13
Nov 19, 21	Genes and the Immune System	17	P14,P15
Nov 26	Genetics of Behavior	18	
Nov 28-29	Thanksgiving Break		
Dec 3, 5	Population Genetics and Human Evolution	19	
Dec 10	Hardy-Weinberg Equations; make-up presentations		
Dec 11	Reading Day		
Thur, Dec 12	FINAL EXAM 8:30-10:30		