

Biology 860: CONCEPTS OF GENETICS

Fall 2017

Instructor: Dr. Kimberly A. Carlson Office: Bruner Hall of Science, Room 201D
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Contact Hours: M-F: 9:00 am to 5:00pm central standard time (CST). I teach on-campus classes MWF (9:05-9:55am & 1:25-2:15pm CST).

Course Materials:

Required Texts: *Genetics: A Conceptual Approach* (5th Edition), by Benjamin A. Pierce, ISBN # 978-1-4641-0946-1; *A History of Genetics*, by A. H. Sturtevant, ISBN #0-87969-607-9

Recommended Texts: *Solutions and Problem Solving Manual* to accompany the text by Choi and McCallum, ISBN #978-1-4292-3254-8

Lectures: All lectures are on Canvas.

Announcements, assignments, tests, and quizzes: All information for this class will be available on Canvas (<http://canvas.unk.edu>). You should check it regularly. You should use Google Chrome to access and use Canvas.

NOTE: The materials on the course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated. The materials on the course website may be protected by copyright, and any further use of this material maybe in violation of Federal copyright law.

Email: All students **must** use their UNK email account so that I can reach them.

Course Objectives:

1. To understand the history leading up to and following the advent of the field of genetics by reading *A History of Genetics* and writing critical overviews of the information.
2. To gain a broad understanding of the applications of classical & molecular genetics.
3. To understand Mendelian inheritance, gene interactions, and genetic transmission.
4. To understand the organization of genetic material and the role each plays in inheritance.
5. To understand advanced topics of genetics.
6. To read and critically evaluate the scientific literature pertaining to genetics.

Students will achieve these objectives through video lectures, online quizzes/tests, and writing critical overviews.

Grading Scheme:

	Points	Due Date
Exam 1	100	Friday, September 22 nd by 8:00 am CST
Exam 2	100	Friday, November 3 rd by 8:00 am CST
Exam 3	100	Wednesday, December 13 th by 8:00 am CST
Quizzes (10 @ 10 pts each)	100	See Schedule
Writing assignments (2@100 pts each)	200	See Schedule
Total Points	600	

Grade assignment: Grades will be assigned using the standard grading scale for the Department of Biology, as follows: A (93-100%), A- (90-92%), B+ (88-89%), B (83-87%), B- (80-82%), C+ (78-79%), C (73-77%), C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), and F (below 60%). FYI, I do not round up grades. Therefore, if you have an 82.6%, you have earned a letter grade of a B-, not a B. Grade assignments are final unless there is a calculation error.

Schedule: This class is a graduate level class. I assume all of you have had a Biology course that covered introductory genetics at some point in your career. Therefore, some introductory material will not be covered in depth, but is presented in the text. Some chapters will not be covered in their entirety and chapters may be combined for lectures. Only the portions of the chapters covered in lecture will be on quizzes or tests. Some lecture material is not covered in the book, therefore watching the tapes and taking notes will be helpful. The quizzes, exams, assignments, and book chapters from the Sturtevant book are listed below. This schedule is subject to change.

Week	Lecture/Book	Quiz/Test	Assignment
#1 8/21-8/25	Chapters 1 & 2 Book Chapters 1-2	No quiz or test!	
#2 8/28-9/1	Chapter 3 Book Chapters 3-4	Timed quiz #1 over Chapters 1 & 2	
#3 9/4-9/8	Chapter 4 & 6 Book Chapters 5-7	Timed quiz #2 over Chapter 3	
#4 9/11-9/15	Chapter 5 Book Chapters 8-10	Timed quiz #3 over Chapters 4 & 6	
#5 9/18-9/22		Timed Exam #1 (Ch. 1-6) Due 9/22 by 8:00 am CST	
#6 9/25-9/29	Chapters 7 & 9	No quiz or test!	
#7 10/2-10/6	Chapter 10 & 12	Timed quiz #4 over Chapters 7 & 9	Overview of Chapters 1-10 Due 10/6 by 8:00 am CST
#8 10/9-10/13	Chapter 11 Book Chapters 11-12	Timed quiz #5 over Chapters 10 & 12	
#9 10/16-10/20	Chapter 13 & 14 Book Chapters 13-14	Timed quiz #6 over Chapter 11	
#10 10/23-10/27	Chapters 15 & 16 Book Chapters 15-16	Timed quiz #7 over Chapters 13 & 14	
#11 10/30-11/3		Timed Exam #2 (Ch 7,9-16) Due 11/3 by 8:00 am CST	
#12 11/6-11/10	Chapters 17 & 18 Book Chapters 17-18	No quiz or test!	
#13 11/13-11/17	Chapter 19 Book Chapters 19-21	Timed quiz #8 over Chapters 17 & 18	
#14 11/20-11/24	No new Chapters Thanksgiving Break	No quiz or test! Thanksgiving Break!!!	
#15 11/27-12/1	Chapter 22	Timed quiz #9 over Chapter 19	Overview of Chapters 11-20 Due 12/1 by 8:00 am CST
#16 12/4-12/8	Chapter 23	Timed quiz #10 over Chapter 23	
#17 12/11-12/13		Timed Exam #3 (Ch 17-19, 22-23) Due 12/13 by 8:00 am CST	

Exams: Exams may be composed of multiple choice, true/false, application problems, case studies, and/or short essays. I believe that genetics and science exams in general should be an application of the material learned, and not simply rote memorization. The exams are not comprehensive, in that,

the questions asked will specifically address material covered since the last exam or in the case of the first exam, material since the first day of class. The material on the test will include **only** lecture material. These tests are a bit challenging and time consuming, which is why you have **an entire week** to complete them. If you have questions about the test, email me directly! Do not post questions on Canvas. If I feel it is something that needs to be shared with the entire class, I will post it on Canvas. The multiple choice/true or false portion of the exam will be taken as a timed online portion. The amount of time allotted will be announced at the time of the test. All of the questions will be given at once. If you run out of time while taking the test, you will not be given extra time. If you have a problem while taking your test, send me an email and I will deal with it as soon as possible. The computer displays a message to me that tells me what kind of problem you had, whether you took too much time or there was a computer problem. I will be available M-F from 9:00 am to 5:00 pm CST, but not constantly as I do have other teaching and research responsibilities. Everyone is expected to take all of the exams. **You must take all three exams to receive full credit. If you miss an exam, you will automatically fail and receive a letter grade of an "F".** The dates for the exams are listed on the schedule. The exam, both online and take-home portions, will be made available at 8:00 am CST on the Saturday before the Friday due date. For example, the first test will be put on Canvas at 8:00 am CST on Saturday, September 16th and you have until 8:00 am CST Friday, September 24th to take the online portion and email the take-home portion to me. **THE DEADLINE IS FINAL! THE ONLINE PORTION WILL BE REMOVED AT 8:01 AM CST ON THE FRIDAY DUE DATE.** For the take-home portion, every day the test is late, your **total** test grade (not just the take-home portion) will be dropped one letter grade. FYI, late day grading starts at 8:01 am CST on the Friday the test is due (i.e., as of this time, your test is already a day late, even though it is only one minute late). **MAKEUP EXAMS WILL BE GIVEN ONLY UNDER EXTREME OR EXTENUATING CIRCUMSTANCES, WHICH CAN BE DOCUMENTED! In any and all cases, the final validity and acceptability of any excuse for absence are at my sole discretion.**

Quizzes: Throughout the semester, you will be given ten timed quizzes worth 10 points each. The quizzes will cover **only** the lecture material listed for that week. For all quizzes, you will be allotted 5 minutes to answer 5 multiple choice or true/false questions. All of the questions will be given at once. If we have done calculations in the lecture for a certain week, make sure to have a calculator with you at the time of the test. For quizzes with calculations, you will be allotted extra time. If you run out of time while taking the quiz, you will not be given extra time. If you have a problem while taking your quiz, send me an email and I will deal with it as soon as possible. The computer displays a message to me that tells me what kind of problem you had, whether you took too much time or there was a computer problem. I will be available M-F from 9:00 am to 5:00 pm CST, but not constantly as I do have other teaching and research responsibilities. Everyone is expected to take all of the quizzes. The dates for the quizzes are listed on the schedule and will be made available at 8:00 am CST on Saturday before the 8:00 am CST of Friday due date. For example, the first quiz will be put on Canvas at 8:00 am CST on Saturday, August 26th and you have until 8:00 am CST Friday, September 1st to take the quiz. **THE DEADLINE IS FINAL! THE QUIZ WILL BE REMOVED AT 8:01 AM CST ON THE FRIDAY DUE DATE.** The purpose of these quizzes is to make sure that you are keeping up with the course material.

Sturtevant Book Chapters Overviews: You will be expected to write two overviews (one on each half of the Sturtevant book). Specific details on the writing assignments will be provided. Each of these writing assignments will be 3½ -4 double-spaced typed pages in length and worth 100 points each. **The day and time the writing assignment is due is not negotiable.** For every day the report is late, your grade will be dropped one letter grade. FYI, late day grading starts at 8:01 am CST on assigned due date (i.e., as of this time, your paper is already a day late, even though it is only one minute late).

Discussion Boards: For those of you who have taken an online class before, there is no graded discussion board for this class. There will be two discussion boards available for you. One to discuss the lecture material and one to discuss the reading assignments. These are for your use to ask questions and discuss with your classmates, if you wish, but it will not count as part of your grade and is therefore not a mandatory part of this semester's class. I will regularly check the discussion board and participate in discussions. If you have a question that you want a quick answer to, email me directly and I will get back to you as soon as possible. **Do not post questions about quizzes or tests on Canvas!**

Students with Disabilities or Those Who are Pregnant: Students with disabilities or those who are pregnant are encouraged to contact me for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities or those who are pregnant. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services Coordinator, David Brandt, in the Academic Success Office, 163 Memorial Student Affairs Building, 308-865-8214 or by email unkdso@unk.edu. For those needing accommodation due to pregnancy, you need to visit with Student Health.

Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault: Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources: **Local Domestic Violence, Sexual Assault Advocacy Agency** 308-237-2599; **Campus Police (or Security)** 308-627-4811; **Title IX Coordinator** 308-865-8655

Plagiarism and cheating: Neither will be tolerated! Contrary to popular belief, *plagiarism does not require the intent to deceive*. Anyone caught plagiarizing any exercise or cheating on any exercise will receive a 0 for that exercise. If there are subsequent violations, this will result in referral to the Vice Chancellor for Academic Affairs for dismissal from the university.

Bonus Points or Extra Credit: I do not give Bonus Points or Extra Credit to Graduate Students, please don't ask.