

Instructor	Dr. Jerald D. Hendrix Science 332 or Science 372 http://science.kennesaw.edu/~jhendrix phone 770-423-6437 email jhendrix@kennesaw.edu <i>Voice mail and email messages are generally answered within two business days.</i>
Office Hours	Monday, Tuesday, & Wednesday 10:00 am – 12:00 pm <i>Other times by appointment</i>
Prerequisite	BIOL 2107 and BIOL 2108
Textbook	<i>Genetics: Analysis and Principles, 2nd ed.</i> by Brooker
Laboratory Handouts	Biology 3300 Custom Labs <i>Available for download online.</i>
Lecture	Monday & Wednesday, 12:30 – 1:45 pm SC 214
Laboratory	Section 01: Monday 2:00 – 4:00 pm Section 02: Wednesday 2:00 – 4:00 pm Science 358

Catalog Description

BIOL 3300.Genetics.3-2-4. *Prerequisite: BIOL 2107,2108.*

Principles of genetics including classical, molecular, population genetics, and cytogenetics. Importance of genetics as a foundation for other divisions of biology is stressed. The laboratories will explore concepts in both transmission and molecular genetics. Laboratory exercises will demonstrate the principles of segregation and independent assortment. Sex linkage, epistatic relationships, and the principles of human karyotyping will also be examined. Exercises in molecular genetics will introduce students to the process of recombinant DNA technology and will demonstrate the principles involved in molecular separation techniques.

General Class Policies: Maximizing your Chances for Success

1. Learning is the responsibility of the student. The instructor's role is to facilitate learning (by lecturing, answering questions, etc.) and to evaluate learning (by quizzes, exams, and other graded assignments). Remember that you are doing this work for yourself (to prepare for future endeavors), *not* for the instructor.
2. Success in this class will require a time commitment outside of class time. Each student should schedule specific blocks of study time devoted exclusively for this class. Ideally, there should be scheduled time between each lecture period for review and preparation. The amount of study time required will vary with individual students.
3. You must study assigned chapters in the textbook and other assigned readings before the lecture in which they are discussed.
4. Regular lecture attendance is essential for success in this class. If you must miss class, it is your responsibility to get the notes you miss from another student.
5. Be on time for class. Students who are chronically late may be refused admission.
6. Cellular telephones, pagers, and similar devices must be turned off during class.

7. During lecture, avoid conversation and other disruptions that distract other students from listening and learning. If you have a question or comment, direct it to the professor.
8. Occasionally, it may be necessary for the instructor to make corrections or changes to the syllabus. Corrections or changes to the syllabus will be announced in class, and an updated syllabus will be posted on the web.

Laboratory Policies

1. **Laboratory attendance is required. Unexcused absence from more than one laboratory period will result in a final grade of "F" for the quarter, regardless of other work.** The instructor must give approval of the absence prior to the lab time. There is no make up for lab work missed due to unexcused absence. Lab reports will not be accepted for lab exercises not completed.
2. You must attend the laboratory section in which you are registered.
3. You must plan to attend laboratory for the full period each lab session. Students who arrive in lab late or leave lab before being dismissed may not receive credit for the lab.
4. Some exercises (in particular, the *Drosophila* exercise) may require time commitments outside of the scheduled lab times.
5. Students are required to obey all safety regulations during laboratory, as published in the laboratory safety handout and posted in the laboratory. In particular:
 - **Food and beverages are not permitted in the laboratory. This includes unopened food packages and beverage containers.**
 - **Students are required to purchase and wear safety glasses.**
 - **Shorts and open-toed shoes (or bare feet) are prohibited.**
 - **All waste must be disposed in properly labeled containers as directed by the instructor or lab assistant.**
 - **Failure to obey safety regulations will result in a 1% deduction from the final class average per offense.**
6. There are four different lab units, each of which is worth 25 pts. The determination of the lab grade will vary from lab to lab, but in general will consist of a combination of quiz questions (possibly closed book), worksheets, and a discussion/conclusion writeup. It is critical that you read each lab exercise before the lab begins.

Examination and Grading Policies

1. The grade in this class is determined by the total number of points earned on examinations and laboratory work as listed below in "Grade Determination." There is no opportunity for extra credit.
2. Examinations may consist of multiple-choice questions, short-answer questions, essay questions, and genetics problems. Exam questions cover both lecture and laboratory material.
3. The dates for examinations and other activities are listed below. Please mark them on your calendar.
4. **Makeup policy:** Makeup examinations will only be given for excused absences when the student has contacted the instructor prior to the examination. Written verification for the reason the exam is missed may be required. Makeup examinations consist exclusively of essay questions, and they are usually more difficult than the scheduled examination.

Grade Determination

2 examinations @ 100 pt	=	200 pt
Final Examination	=	100 pt
4 lab grades @ 25 pt	=	100 pt
Total		400 pt

A = 90 – 100 % of total points; B = 80 – 89 % of total points;
C = 70 – 79 % of total points; D = 60 – 69 % of total points;
F = Below 60 % of total points

The deadline for withdrawal without academic penalty is October 18, 2004. See the college catalog for information pertaining to withdrawal from classes.

Biology 3300 Tentative Laboratory Schedule for Fall 2004

Dates	Laboratory
Aug 23 & Aug 25	No Lab
Aug 30 & Sept 1	Patterns of Inheritance in Maize
Sept 6 & Sept 8	Labor Day – No Lab
Sept 13 & Sept 15	Patterns of Inheritance in Maize (continued)
Sept 20 & Sept 22	Patterns of Inheritance in Maize (continued)
Sept 27 & Sept 29	The Virtual Fly Lab
Oct 4 & Oct 6	The Virtual Fly Lab (continued)
Oct 11 & Oct 13	The Virtual Fly Lab (continued)
Oct 18 & Oct 20	Nucleosome Structure of Chromatin
Oct 25 & Oct 27	Nucleosome Structure of Chromatin (continued)
Nov 1 & Nov 3	Nucleosome Structure of Chromatin (continued)
Nov 8 & Nov 10	Genotype to Phenotype
Nov 15 & Nov 17	Genotype to Phenotype (continued)
Nov 22 & Nov 24	Thanksgiving Break – No Lab
Nov 29 & Dec 1	Genotype to Phenotype (continued)
Dec 6 & Dec 8	Genotype to Phenotype (continued)

Genetics – Fall 2004 Tentative Lecture Schedule

<i>Date</i>	<i>Lecture Topic</i>	<i>Textbook, Brooker</i>	<i>Textbook, Klug & Cummings</i>
Aug 23	Introduction to Genetics	1	1
Aug 25	Mendelian Inheritance	2	3
Aug 30	“		
Sept 1	Mitosis	3	2
Sept 6	Labor Day – No class		
Sept 8	Meiosis	3	2
Sept 13	“		
Sept 15	Extensions of Mendelian Inheritance	4	4
Sept 20	“		
Sept 22	Sex Chromosomes and Sex Determination	3	7
Sept 27	“		
Sept 29	Exam 1		
Oct 4	Linkage and Mapping in Eukaryotes	5	6
Oct 6	“		
Oct 11	Variation in Chromosome Structure & Number	8	8
Oct 13	Nucleic Acid Structure	9	9
Oct 18	“		
Oct 20	DNA Organization and Chromosome Structure	10	11
Oct 25	“		
Oct 27	DNA Replication	11	10
Nov 1	“		
Nov 3	Exam 2		
Nov 8	DNA Technologies	18	18
Nov 10	“		
Nov 15	Transcription	12	12
Nov 17	“		
Nov 22	“		
Nov 24	Thanksgiving Break – No class		
Nov 29	Translation	13	13
Dec 1	“		
Dec 6	Gene Regulation in Bacteria	14	17
Dec 8	Gene Regulation in Eukaryotes	15	21
Dec 13	Final Exam, 12:30 pm – 2:30 pm		

**NEW ACADEMIC WITHDRAWAL POLICY
EFFECTIVE FALL SEMESTER 2004**

Students may withdraw from one or more courses anytime before the last three weeks of the semester. ***However, as of Fall 2004, students will be allowed a maximum of eight total withdrawals if they enter KSU as a freshman. Transfer students will be allowed one withdrawal per fifteen credit hours attempted, for a maximum of eight.*** Students who choose to pursue a second degree at KSU will be allowed two additional withdrawals. Students who entered KSU before the Fall of 2004 will be allowed one withdrawal per fifteen credit hours attempted for a maximum of eight. To withdraw, the student should complete an official withdrawal form in the Office of the Registrar. Students who officially withdraw from courses on or before the last day to withdraw without academic penalty will receive a "W". Students who officially withdraw after the last day to withdraw without academic penalty (and before the last three weeks of the semester) will receive a "WF", which will be counted as an "F" in calculation of their grade point average.

The only exceptions to these withdrawal regulations will be for instances involving unusual circumstances, which are fully documented. ***Students may appeal to the academic standing committee for consideration of unusual circumstances.***

**LAST DATE TO WITHDRAW WITHOUT ACADEMIC PENALTY
FALL 2004**

October 18, 2004

Academic Integrity

Every KSU student is responsible for upholding the provisions of the Student code of Conduct, as published in the Undergraduate and Graduate catalogs. Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an "Informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement.