BY 210/501-2D GENETICS
(Fall, 2007)
Dr. Lucy G. Andrews

Office: Room 165 Campbell Hall **Office Hours:** T&W 3–5 p.m. and by appointment.
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Textbook: Genetics, A Conceptual Approach, 2nd ed., Benjamin A. Pierce (Freeman)
Recommended: **Solutions MegaManual**

TENTATIVE SCHEDULE OF LECTURE TOPICS

DATE	TOPIC	CHAPTER
	Introduction to Genetics (on your own)	Ch. 1
August 23	Chromosomes and Cellular Reproduction (Mitosis and Meiosis)	Ch. 2
Aug. 28-30	Basic Principles of Heredity: Mendelian Genetics	Ch. 3
Sep. 4	Sex Determination and Sex –Linked Characteristics	Ch. 4
Sep. 6	Extensions and Modifications of Basic Principles	Ch. 5
Sep. 11	Pedigree Analysis and Applications	Ch. 6
Sep. 13	**Exam I (Ch. 1-6)**	
Sep. 18-20	Linkage, Recombination and Eukaryotic Gene Mapping	Ch. 7
Sep. 25-27	Bacterial and Viral Genetic Systems	Ch. 8
Oct. 2	Chromosome Variation	Ch. 9
Oct. 4	DNA: The Chemical Nature of the Gene	Ch. 10
Oct. 9	Chromosome Structure and Transposable Elements	Ch. 11
Oct. 11	**Exam II (Ch. 7-11)**	
Oct. 16	DNA Replication and Recombination	Ch. 12
Oct. 18	Transcription	Ch. 13
Oct. 23-25	RNA Molecules and RNA Processing	Ch. 14
Oct. 30	The Genetic Code and Translation	Ch. 15
Nov. 1	Control of Gene Expression	Ch. 16
Nov. 6	Gene Mutations and DNA Repair	Ch. 17
Nov. 8	**Exam III (Ch. 12-16)**	
Nov. 13-15	Recombinant DNA Technology	Ch. 18
Nov. 20	Genomics	Ch. 19
Nov. 22	**Thanksgiving Holiday**	
Nov. 27	Advanced Topics in Genetics (Cancer)	Ch. 21
Nov. 29	Quantitative Genetics	Ch. 22
Dec. 4	Population and Evolutionary Genetics	Ch. 23

Dec. 11 (Tuesday) **FINAL EXAM (10:45-1:15)**

Evaluation for Undergraduate Credit (BY210):

Exam I	25%.
Exam II	25%
Exam III	25%
Final Exam (**not** comprehensive)	25%
Total	**100%**

Evaluation for Graduate Credit (BY501):

$$\textbf{Final Average} = \frac{1^{st}\ \text{exam} + 2^{nd}\ \text{exam} + 3^{rd}\ \text{exam} + \text{Final exam} + \text{Term Paper}}{5}$$

Students taking the course for graduate credit will be given instructions for selecting topics and writing the paper which will be due the last day of classes.

Final Grade:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

Grading: Examinations will be primarily on lecture material. Portions of the lecture material (subject to testing) may not be in the text or on PowerPoint slides; therefore, regular class attendance is recommended. The text assignment is to be read **PRIOR TO** the lecture in order to obtain maximum benefit from the lecture. Exams must be taken on the date indicated during the regular class schedule. Makeup exams will only be given in exceptional circumstances (i.e., medical or family emergency documented in writing).

Withdrawal Policy: You may withdraw and receive a grade of W up to and including October 22. After that date you may not withdraw unless you are taking the course as a graduate student. See the most recent undergraduate catalog for the full text of this policy.

Class Notes: The PowerPoint presentations that accompany each lecture are on the internet. The URL is: **http://www.dpo.uab.edu/~landrews/genetics.htm**. You should print out the pdf version and bring it to class to follow during the lecture and add marginal notes.
The website that accompanies the textbook is **www.whfreeman.com/pierce**. The animations and practice tests are especially helpful.

Supplemental Instruction: I am pleased to announce that this course has supplemental study sessions led by a student who has successfully completed the course and has had extensive training. These sessions will be invaluable to you in this course as well as providing study skills that will help you in other courses.