

THE GEORGIA INSTITUTE OF TECHNOLOGY
BIOLOGY 2344 A, Fall 2006
GENETICS LECTURE SYLLABUS

Lecture: T, Th 9:30-11:00AM (EST L1255)

3.0 Credits

Recitation: 206 Emerson

Professor: Dr. Mirjana M. Brockett, School of Biology

Contact Information:

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Office: A114/ Cherry Emerson

Office hours: M,W,F 12:30-3:00PM

Prerequisites: Biology 1510, 1511 or 1520, 1521

Goals: To obtain an understanding and appreciation of fundamental concepts in genetics. To apply accumulated knowledge by solving problems and interpreting experiments.

Textbooks: Required—AJF Griffiths, SR Wessler, RC Lewontin, WM Gelbart, DT Suzuki, and JH Miller. **An Introduction to Genetic Analysis. 8th edition.** WH Freeman & Co. 2005. Suggested—WD Fixsen and DK Lavett.

Optional: Solutions MegaManual for An Introduction to Genetic Analysis. WH Freeman & Co. 2005.

Attendance: If you miss lecture, *you* are responsible for obtaining all notes, announcements, and assignments. I view lecture as a time when we all work together, so be courteous to your fellow students and do not disrupt class by entering and leaving the room during class, reading, talking, allowing cell phones to ring, etc. If you know that you must leave class early, sit in the back and leave quietly.

Assessments: Your grade in genetics lecture will be determined by your performance on homework problem sets, unannounced quizzes, and exams. The relative values of these assignments are:

Assessment	Number	Value
Homework	3	10%
Pop Quizzes	1-10	10%
Exams	4	80%
Total		100%

The most stringent scale used will be 90-100% an A, 80-89% a B, 70-79% a C, 60-69% a D, and 59% or less an F. This scale is subject to minor adjustment at my discretion. I will attempt to give estimates of grades periodically throughout the semester.

All homework problem sets are due on the dates specified in class. You can work in groups on the problem sets. However, the final product should be your own. Late homework will lose 10% credit per day and must be submitted directly to me or to a biology office staff member. After the third day, late homework receives no credit. Questions on pop quizzes will come directly from suggested problems in your textbook. Questions on exams will follow the homework and book problems very closely. Problems regarding grades on assignments must be handled through the regrade system. Written confirmation of a legitimate excuse, such as a severe illness, will be required to take any make-up exam or quiz. **NO EXCEPTIONS!** Your conduct in the course should conform to the

Student Honor Code (<http://www.honor.gatech.edu/>). Students caught cheating on exams will be reported to the College for disciplinary action.

Tentative Lecture Schedule: This syllabus is subject to change!

Week	Date	Day	Lecture Subject	Text	Comment
1	8/22, T	1	Introduction	1	
	8/24, Th	2	Patterns of Inheritance	2	
2	8/29, T	3	Patterns of Inheritance	2	
	8/31, Th	4	Chromosomal Basis of Inheritance	3	
3	9/5, T	5	Chromosomal Basis of Inheritance	3	
	9/7, Th	6	Eukaryotic Chromosome Mapping	4	HW I Due
4	9/12, T	7	Eukaryotic Chromosome Mapping	4	
	9/14, Th	8	Problem Practice Session		
5	9/19, T	9	EXAM I	(1-4)	
	9/21, Th	10	The Genetics of Bacteria and Viruses	5	
6	9/26, T	11	From Gene to Phenotype	6	
	9/28, Th	12	From Gene to Phenotype	6	
7	10/3, T	13	DNA: Structure and Replication	7	
	10/5, Th	14	RNA Transcription and Processing	8	HW II Due
8	10/10, T	15	Proteins and Their Synthesis	9	
	10/12, Th	16	Problem practice Session		
9	10/17, T	17	<i>FALL RECESS</i>		Holliday
	10/19, Th	18	EXAM II	(5-9)	
10	10/24, T	19	Regulation of Gene Transcription	10	
	10/26, Th	20	Gene Isolation and manipulation	11	
11	10/31, T	21	Gene Isolation and manipulation	11	
	11/2, Th	22	Transposable Elements	13	
12	11/7, T	23	Mutation, Repair, and Recombination	14	HW III Due
	11/9, Th	24	Special topics		
13	11/14, T	25	EXAM III	(10-14)	
	11/16, Th	26	Large-Scale Chromosomal Mutations	15	
14	11/21, T	27	Large-Scale Chromosomal Mutations	15	
	11/23, Th	28	Thanksgiving Day		Holliday
15	11/28, T	29	Genetics of Cancer Cells	17	
	11/30, Th	30	Special topics (cancer genetics)	reading	
16	12/5, T	31	Introduction to Developmental Genetics	18	
	12/7, Th	32	Last day of Classes (review for the Final)		
17			EXAM IV (FINAL)	(14-17)	