

GEORGIA INSTITUTE OF TECHNOLOGY
BIOLOGY 2344 A SPRING 2007
GENETICS LECTURE SYLLABUS

Lecture: TR 8:05 - 9:25, College of Computing #17, Jan 8, 2006 - May 4, 2006. 3.0 Credits

Instructor: Dr. Michael Goodisman, School of Biology
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Office hours: Tuesday and Wednesday 1-2 PM or by appointment

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. 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. Written confirmation of a legitimate excuse, such as a severe illness, will be required to take any make-up exam or quiz. NO EXCEPTIONS! 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.

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

Assessment	Number	Value
Pop Quizzes	10-20	15%
Midterm Exams	2	50%
Final Exam	1	35%
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 adjustment at my discretion. I will attempt to give estimates of grades periodically throughout the semester.

Questions on pop quizzes will often come directly from suggested problems in your textbook. Questions on exams will follow the book problems very closely. Problems regarding grades on assignments must be handled through the regrade system.

Your conduct in the course should conform to the Student Honor Code (<http://www.honor.gatech.edu/>). Students caught cheating will be reported to the College for disciplinary action.

Tentative Lecture Schedule

Week	Date	Class	Lecture Subject	Chapter	Comment
1	9-Jan	1	Introduction: Genetics and the Organism	1	
	11-Jan	2	Patterns of Inheritance	2	
2	16-Jan	3	Patterns of Inheritance	2	
	18-Jan	4	Chromosomal Basis of Inheritance	3	
3	23-Jan	5	Chromosomal Basis of Inheritance	3	
	25-Jan	6	Eukaryotic Chromosome Mapping	4	
4	30-Jan	7	Eukaryotic Chromosome Mapping	4	
	1-Feb	8	The Genetics of Bacteria and Their Viruses	5	
5	6-Feb	9	The Genetics of Bacteria and Their Viruses	5	
	8-Feb	10	EXAM I		EXAM
6	13-Feb	11	From Gene to Phenotype	6	
	15-Feb	12	From Gene to Phenotype	6	
7	20-Feb	13	DNA: Structure and Replication	7	
	22-Feb	14	DNA: Structure and Replication	7	
8	27-Feb	15	RNA: Transcription and Processing	8	
	1-Mar	16	RNA: Transcription and Processing	8	
9	6-Mar	17	Proteins and Their Synthesis	9	
	8-Mar	18	Proteins and Their Synthesis	9	
10	13-Mar	19	Regulation of Gene Transcription	10	
	15-Mar	20	EXAM II		EXAM
11	20-Mar		No class		Spring Break
	22-Mar		No class		Spring Break
12	27-Mar	21	Regulation of Gene Transcription	10	
	29-Mar	22	Gene Isolation and Manipulation	11	
13	3-Apr	23	Gene Isolation and Manipulation	11	
	5-Apr	24	Genomics	12	
14	10-Apr	25	Genomics	12	
	12-Apr	26	Mutation, Repair, and Recombination	14	
15	17-Apr	27	Large-Scale Chromosomal Mutations	15	
	19-Apr	28	Large-Scale Chromosomal Mutations	15	
16	24-Apr	29	Population Genetics	19	
	26-Apr	30	Population Genetics	19	
17	2-May		EXAM III: 2:50-5:40		EXAM

Note that this schedule is subject to change!

Regrade Policy

The **ONLY WAY** that changes to your exams or quizzes will be considered is through the procedure below. Do not approach the professors or TAs and ask for credit for an already-graded question without a written description of the problem!

Regrades can be requested if

- (1) there has been an error in adding together your score.
- (2) you did not receive credit for an answer as given on the key.
- (3) there is a difference between your score and that of another student who gave the same answer as you.
- (4) you did not receive credit for an answer that differs from that given on the key but which is nevertheless correct.

In general, regrades will not be considered for issues concerning the amount of partial credit awarded for an answer. For example, questions such as ‘Why did I receive only two points for this answer instead of three?’ will not be addressed unless you find evidence of issue (3).

Note that if you request a regrade for a particular question, your entire exam or quiz may be regraded, which could result in a **LOWERING** of your overall score.

To have an assignment regraded, you must submit a **TYPEWRITTEN** explanation of the problem along with your original exam or quiz directly to the professor. For issues (1) and (2), it will generally suffice to simply describe the problem. For issue (3) you will need to submit an explanation of the problem, as well as both copies of the material. For issue (4) you must give a detailed and explicit account as to why your answer is correct. In general, this may require direct quotes from the text or precise mathematical treatments as to how your solution or model yields the correct ratios, genotypes, results, etc.

Deadlines for the submission of regrades will be given when assignments are handed back. **NO REGRADES WILL BE CONSIDERED AFTER THE DEADLINE!**