

**THE GEORGIA INSTITUTE OF TECHNOLOGY  
BIOLOGY 2345 A,C FALL 2011  
GENETICS LAB SYLLABUS**

**Labs: Cherry-Emerson (Biology) 206 (computer labs) and 123 (Wet labs)**

1.0 Credits

Section A: M 12:05 - 2:55

Section C: T 12:05 - 2:55

**Instructor:**

Dr. Mirjana Brockett, School of Biology

Office: 323 Cherry Emerson

Email: [mirjana.brockett@biology.gatech.edu](mailto:mirjana.brockett@biology.gatech.edu)

**Teaching assistants:**

Yu Zhang

[zhangyu1022@gmail.com](mailto:zhangyu1022@gmail.com)

Eryn Bernardy

[ebernardy3@gatech.edu](mailto:ebernardy3@gatech.edu)

**Goals:** To understand genetic analysis by conducting simulated (virtual) and actual experiments.

**Attendance:** Attendance is required for **ALL** labs. You must have a written confirmation of any legitimate excused absence, such as severe illness (note from health center) or conflict for athletic event (note from athletic department), if you miss a lab. There are **NO EXCEPTIONS!** An unexcused absence will result in a 5% reduction in your total course grade. Only students with written documentation for an excused absence will be allowed to make up the lab with another section. In the event that you miss a lab, or will need to be excused from a lab in advance of it, please email your T.A. as soon as possible. Your conduct in the course will conform to the Student Honor Code (<http://www.honor.gatech.edu>). Students caught cheating on any lab assignment, including lab notebooks and lab reports, will be reported to the Office of Student Integrity for disciplinary action.

**Assessments:**

Your grade in lab will come from the four elements described below. Overall, the most stringent scale used for your overall grade will be: 90-100% A, 80-89% B, 70-79% C, 60-69% D, 59% or less F. Grades may be adjusted at the discretion of your instructors.

- 1) Two announced tests (20% each). Midterm exam (covering material from weeks 2-8) during week 9, and a final exam (covering material from weeks 9-14) during week 15. These will test your knowledge on the theory behind the labs, and will be administered at the beginning of the lab period.
- 2) Two lab reports (15% each). Formal laboratory write-ups (typed) will be submitted for two labs (*Drosophila* and a Forensic genetics lab). The report will consist of sections on the lab objectives, background, methods, data, and conclusions. Lab reports should be 3-4 pages in length. All reports are due at the start of your lab section on the date indicated on the schedule. Late reports lose 10% credit per day. After the third day, late reports receive no credit.
- 3) Lab notebook (20%). You are expected to write in your lab notebook during every lab period. As an incentive, you may use your lab notebook on the midterm and final exams. There will be three announced notebook checks. Notebooks will be collected at the end of the lab period on the date indicated on the schedule and returned the following week. Late lab notebooks will not be accepted for credit. It should contain neat, organized, and detailed notes each week. Plagiarism from the lab notebook will not be tolerated. It must include an introduction to the each lab, detailed explanations of the methods you used, reasons for conducting particular methods, experimental results, explanation of analyses, and summaries of conclusions.
- 4) Lab performance (10%). Your performance in lab will be judged on your activity and in conducting the laboratory experiments and simulations.

**Note:**

Handouts will be posted on T-square the week before each lab. Please print out the relevant handouts each week and bring it to class.

**Tentative Lab Schedule:** This syllabus is subject to change!

Week	Lab Dates		Lab location	Lab Subject	Item to be completed:
	Mon (Section A)	Tue (Section C)			
1	22-Aug	23-Aug	206 CE	Information	Safety Agreement
2	29-Aug	30-Aug	123 CE	<b>Drosophila dihybrid cross and Sex Linkage cross</b>	
3	5-Sept NO SCHOOL Labor Day	6-Sept			
4	12-Sept	13-Sept	206/ 123	<b>Drosophila lab: experimental data analysis</b>	
5	19-Sept	20-Sept	123	<b>Lac Operon Part I</b>	
6	26-Sept	27-Sept	206	<b>Lac Operon Part II</b>	<b>Notebook checks</b>
7	3-Oct	4-Oct	123	<b>Bacterial conjugation</b>	<b>Lac Operon Report Due</b>
8	10-Oct	11-Oct	123	<b>Quiz 1</b>	
9	17-Oct NO SCHOOL (fall break)	18-Oct NO SCHOOL (fall break)			
10	24-Oct	25-Oct	206	<b>Genome Database Lab</b>	
11	31-Oct	1-Nov	123	<b>Human Karyotypes</b>	-
12	7-Nov	8-Nov	123	<b>Forensic Lab Part I</b>	
13	14-Nov	15-Nov	123	<b>Forensic Lab Part II</b>	
14	21-Nov	22-Nov	206	<b>Population Genetics</b>	<b>Notebook Checks</b>
15	28-Nov	29-Nov	123	<b>Quiz 2</b>	<b>Forensic lab Report</b>
16	5-Dec	6-Dec	-	<b>No Lab</b>	<b>(Dead - week)</b>

