

## BISC336: Genetics (Spring 2015)

Professor Sarah Liljegren  
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Class: MWF 9:00 – 9:50 am Turner 205 (Auditorium)  
 Office Hours: M 9:50 – 11 am (after class in Turner, continued in Shoemaker)  
 W 12:00 - 1 pm  
 Text: Essentials of Genetics (8<sup>th</sup> edition, Klug et al.)

<b>Week 1:</b> Jan 21	<b>Chapters 1-3:</b> <i>Introduction to Genetics, Mitosis &amp; Meiosis, Mendelian Genetics</i>
<b>Week 2:</b> Jan 26	<b>Chapters 4-5:</b> <i>Modification of Mendelian Ratios, Sex Chromosomes</i>
<b>Week 3:</b> Feb 2	<b>Chapter 6:</b> <i>Chromosome Mutations. Special Topics 1: Epigenetics.</i> <b>Chapter 7:</b> <i>Linkage &amp; Chromosome Mapping in Eukaryotes</i> (linkage on Exam 1, mapping on Exam 2)
<b>Week 4:</b> Feb 9	Feb 9: Finish & Review for Exam 1 (Jan 21-Feb 9); <b>Exam 1 Feb 11</b> ; Feb 13: <b>Chapter 7:</b> <i>Chromosome Mapping in Eukaryotes</i>
<b>Week 5:</b> Feb 16	<b>Chapter 8-9:</b> <i>Genetic Analysis &amp; Mapping in Bacteria, DNA Structure &amp; Analysis</i>
<b>Week 6:</b> Feb 23	<b>Chapter 10-11, 17:</b> <i>DNA Replication &amp; Recombination, Chromosome Structure &amp; DNA Sequence Organization, Recombinant DNA Technology</i>
<b>Week 7:</b> Mar 2	<b>Chapters 17, 19:</b> <i>Recombinant DNA Technology, Applications &amp; Ethics of Biotechnology. Special Topics 2: DNA Forensics</i>
<b>Week 8:</b> Mar 16	Mar 16: Finish & Review for Exam 2 (Feb 13-Mar 16); <b>Exam 2 Mar 18</b> ; Mar 20: <b>Chapter 12:</b> <i>The Genetic Code &amp; Transcription</i>
<b>Week 9:</b> Mar 23	<b>Chapters 12-13:</b> <i>The Genetic Code &amp; Transcription, Translation &amp; Proteins</i>
<b>Week 10:</b> Mar 30	<b>Chapters 14-15:</b> <i>Gene Mutation, Transposition &amp; DNA Repair, Regulation of Gene Expression</i> ; NO CLASS Apr 3
<b>Week 11:</b> Apr 6	<b>Chapters 15, 22:</b> <i>Regulation of Gene Expression, Population &amp; Evolutionary Genetics</i>
<b>Week 12:</b> Apr 13	Apr 13: Finish & Review for Exam 3 (Mar 20-Apr 13); NO CLASS Apr 15; <b>Exam 3 Apr 17</b>
<b>Week 13:</b> Apr 20	<b>Chapters 18, 20:</b> <i>Genomics, Bioinformatics, &amp; Proteomics, Developmental Genetics. Special Topics 3: Personalized Medicine</i>
<b>Week 14:</b> Apr 27	<b>Chapters 16, 23:</b> <i>Cancer &amp; Regulation of the Cell Cycle, Conservation Genetics</i> May 1: Finish & Review for Exam 4 (Apr 20-May 1)
<b>Week 15:</b> May 6	<b>EXAM 4 (FINAL)</b> <b>Wednesday, May 6 at 8 am</b>



**Course Description:** This course is designed to present an overview of genetics for Biology majors and students planning careers in medical fields. Students are expected to become familiar with the form and function of DNA, RNA, and proteins, as well as modes of inheritance, change, and variability.

**Blackboard:** Log on at [www.olemiss.edu](http://www.olemiss.edu). This is the first place to look for any information regarding the course during the semester. PowerPoint slides will be posted before the lectures, but they will deliberately be missing some keywords and bullet points. Slides with practice exam test questions will be omitted.

**Lectures:** Regular attendance is expected. Use of cell phones is not permitted, including texting. Please turn them off during class. Using your laptop computer for taking notes is fine, but it is not appropriate to be on Facebook or Amazon, etc.

**Grading:**

**Lecture: 75 points.** Four exams (including the final) will be given. Your lowest exam score will be dropped, and the three remaining exams will worth 25 points each. Exams will be primarily based on material covered in class (90%); material covered in the assigned reading will also be included (10%). The final itself will not be cumulative, but may include extra-credit questions on material covered throughout the semester.

The plus/minus grading system will be used. Overall grades will be determined using standard cutoffs, ie. A/A- (90-100); B+/B/B- (80-89).

**Lab: 25 points.** See the lab syllabus.

**Exams: Bring your student ID, #2 pencil, calculator, and a scantron (F-289; red print) to each exam.** Other than calculators, no electronic devices are allowed to be turned on during exams. This includes cell phones, laptops, iPads, etc.

Students with a disability certified through the Office of Student Disability Services should contact Dr. Liljegren by the second week of classes to arrange exam accommodations.

**Make up exam policy:** No written make up exams will be given. If you are seriously injured or ill (ie. admitted to the hospital) or if you have a school function (ie. sports, music), you will need to provide documentation BEFORE the day of the exam. Oral make up exams must be taken at a date and time chosen by Dr. Liljegren, generally within 1-2 days of the original exam date.

**Cheating:** Bad idea. Cheaters will be assigned a 0 for the test in question.

*Syllabus revisions will be posted on Blackboard.*

