

SCHEDULE

1. Aug 23 **Introduction:** Genes, Genomes and Genetic Analysis (KB)- Ch1
2. Aug 25 **DNA: the Molecule of Heredity** (KB) Ch6 (6.1-6.3)
3. Aug 30 **How traits are transmitted:** Mendelian Inheritance (KB) Ch 2
4. Sep 01 **How traits are transmitted:** Extensions to Mendel (KB) Ch3
5. Sep 06 **The chromosome theory of Inheritance** (KB) Ch 4
6. Sep 08 **Genetic Linkage and Chromosome Mapping** (KB) Ch 5
7. Sep 13 **Molecular Biology of DNA Replication** (KB) Ch 6
8. Sep 15 **Molecular Biology of DNA Recombination and Exchange** (KB) Ch 6
Sep 20 **Exam 1** (Covers lectures # 1-7 inclusive)
9. Sep 22 **Molecular Mechanisms of Mutation and DNA Repair** (KB) Ch7
10. Sep 27 **Mapping the Human Genome** (KB) Ch10
11. Sep 29 **Mapping Disease Loci** (KB) Ch11
12. Oct 04 **Human Genetics Molecular Organization of Chromosomes** (KB) Ch 13
13. Oct 06 **Human Karyotypes and Chromosomal Behavior** (KB) Ch 14
Oct 11 **Exam 2** (Covers lectures # 8-13 inclusive)
14. Oct 13 **How Genes Travel- Bacterial Genetics** (GS) Ch15
15. Oct 18 **Bacterial Genetics cont.;** **Gene Expression:** the flow of genetic information (GS) Ch 8
Oct 20 **Fall Break**
16. Oct 25 **Gene Expression- Transcription** (GS) Ch 8
17. Oct 27 **Gene Expression- Transcription** (GS) Ch 8
18. Nov 01 **Gene Expression- Translation** (GS) Ch 8
19. Nov 03 **Gene Regulation in Prokaryotes** (GS) Ch 17
20. Nov 08 **Gene Regulation in Prokaryotes II and in Eukaryotes I** (GS) Ch 17 +18
21. Nov 10 **Gene Regulation in Eukaryotes II** (GS) Ch18
Nov 15 **Exam 3** (Covers lectures # 14-20 inclusive) (GS)
22. Nov 17 **DNA recombinant technology: entering a new era** (GS) Ch
23. Nov 22 **DNA recombinant technology: A PHD in 75 minutes** (GS) Ch 9
Nov 24 **Thanksgiving**
24. Nov 29 **Developmental Genetics:** why don't we have duck feet? (GS)
25. Dec 01 **Molecular Genetics of Cancer** (GS) Ch19
26. Dec 06 **Molecular Genetics of Cancer II** (GS) Ch19

Dec 13 12:00pm **Final Exam** (semi-cumulative, including lectures # 20-25)

ATTENDANCE

Students are expected to attend and participate in lectures and recitations. While the course follows the textbook, some of the material discussed in lecture may not be found in the text. You are responsible **for all material and announcements made in lectures and recitations**. You are not responsible for textbook material that was not covered in class, **unless it was specifically assigned**. Homework and assigned readings will be posted on Blackboard under "assignments".

GRADING

95% of your grade will be based on your exams and 5% on recitations and discussions. There are three midterm exams and one final. The final will be a semi-cumulative exam: half of the exam will cover the material taught in the last quarter of the course and half will be cumulative. All the exams are graded equally.

Grades will not be assigned for individual exams, only points; you will be able to see how you did from a posted distribution of scores after each test. Final grades will be assigned on a curve based on the total number of points for the entire semester. In case the class average will be higher than the standard 75, we will use standardized grading (A: 93-100; A-: 90-92; B+: 87-89; B: 83-86; B-: 80-82; C+: 77-79; C: 73-76; C-: 70-72; D+: 66-69; D: 60-65; F <60)

Exams must be taken on the dates indicated during the regular class period; no makeup exams except in special circumstances, i.e., medical or family emergency documented in writing. The makeup test may be an oral exam.

COURSE WEBSITE

<http://blackboard.unc.edu> For general announcements and assignments, visit the Bb site
Class Slides will be posted on Bb.

POLLEVERYWHERE

In this class you will use a polling system to answer questions that I pose during class. You can submit your responses using a mobile phone, laptop or other mobile device with a WiFi connection, such as an iPod Touch or an iPad. Before you can participate, you'll need to create an account.

For instructions on how to register to Polleverywhere, please follow the guidelines found on Blackboard and the course website under "Course information".