

Syllabus

Instructor: Mark Hiller mhiller@goucher.edu 337-6306 HS G42

Readings: Textbook: Strachan and Read. Human Molecular Genetics 3.
Third edition, 2004. Garland Science.

Additional required reading material will be provided in class or in the BIO 327 Blackboard as a PDF file. Check the **Blackboard** regularly for updates.

Useful additional reading:

Hartl and Jones. Genetics. The textbook from BIO 220.

Hartwell et al. Genetics: from Genes to Genomes. 2000. McGraw-Hill Company.
-a useful undergraduate genetics textbook on reserve in the Goucher Library

<http://www.ncbi.nlm.nih.gov/Entrez/>

useful links to genetic information and data on the Internet hosted by the National Center for Biotechnology Information

Attendance: Participation in all classes is required.

Grades: 35% Class Discussion (including student presentations journal paper discussions)
45% in class exams (25% for the best of the two exams and 20% for the lowest)
20% comprehensive final

Discussion: Active participation in all class sessions is essential for success in BIO 327. Discussing lecture material in class is encouraged (asking questions as well as answering them). In addition, we will read and discuss several examples of primary literature during the semester. The extent of participation, demonstrated depth of knowledge and degree of preparation will determine the grade. Working with other students to prepare for class discussion is encouraged.

Presentations: Each student will present short talk (20 minutes) to the class. The topics for each student will be explained in more detail later in the course. The depth, accuracy, clarity and organization of the content will determine the grade.

Exams: Each exam and the final will be a combination of in class and take home problems. No outside help (from other students, books, scientific literature, or internet sites) may be used on the exams unless expressly stated on the exam.

Lecture Schedule: Attached to this syllabus is a schedule of lecture/discussion topics. Updates to the schedule and dates for primary literature discussion are listed in Blackboard. You must check the BIO 327 Blackboard several times a week.

Reminder: All students are bound by the standards of the Academic Honor Code, found at www.goucher.edu/documents/General/AcademicHonorCode.pdf

Important dates:

<u>Date</u>	<u>Topic</u>
September 2	Introduction
September 4	Molecular Techniques - A brief review
September 14	Genetic Analysis of the Cell Cycle: From Classic Genetic Analysis to the Microarray Applications to Cancer Research
September 25	Genetic Analysis of Human Traits and Disease
October 9	Gene Expression – it's an RNA World
October 14	Exam #1
October 9	Midterm Break
November 4	Genetic Variation Complex Diseases, Advanced Genetic Analysis, and Evolution
November 13 to November 20	Student Presentations – specific dates for each student will be assigned
November 23	Genetic Variation (continued)
November 25	Thanksgiving
December 2	Exam #2
December 9	Last day of class