

HUMAN GENETICS, BIO 1318, Fall, 2005, MC 2.410 (TR 9:30-10:45)**Textbook: *Essential Genetics: A Genomics Perspective*, 4th ed., by Hartl & Lewis, 2006*****Instructor: Dr. Lee Bulla (FN3.112), 972.883.4226, lee.bulla@utdallas.edu****Office hours: Tue & Thur 11:00-12:00****Teaching Assistant: Dr. A. Dixit, and044000@utdallas.edu**

Genetics is the study of biologically inherited traits. Each species of living organisms is united by a common set of inherited traits, observable characteristics that set it apart from all other species of organisms. In this course, we will address three major questions. What is the chemical nature of the genetic material? How is the genetic material transmitted? And what does it do? These questions will be examined and discussed from a genomics perspective.

Five exams will be given throughout the semester. The final grade will be based on the average of four of the five exams. **No make-up exam will be given for absence from an exam other than for official university business or illness (both require either a written university authorization or a physician's statement). All hand-held electronic devices, including cell phones, must be stored away during exams. Lecture outlines will be posted on the course web site. It is fully expected that students will attend and participate in the lectures and discussions.**

LECTURE SCHEDULE

LECTURE	DATE	TOPIC	CHAPTER
1	18 Aug	The Genetic Code of Genes and Genomes	1
2	23 Aug	Transmission Genetics: Heritage from Mendel - 1	2
3	25 Aug	Transmission Genetics: Heritage from Mendel - 2	2
4	30 Aug	The Chromosomal Basis of Heredity - 1	3
5	1 Sep	The Chromosomal Basis of Heredity - 2	3
	6 Sep	EXAM 1	1, 2, & 3
6	8 Sep	Human Chromosomes and Chromosome Behavior	5
7	13 Sep	DNA Structure, Replication and Manipulation - 1	6
8	15 Sep	DNA Structure, Replication and Manipulation - 2	6
9	20 Sep	DNA Structure, Replication and Manipulation - 3	6
	22 Sep	EXAM 2	5 & 6
10	27 Sep	The Molecular Genetics of Gene Expression - 1	8
11	29 Sep	The Molecular Genetics of Gene Expression - 2	8
12	4 Oct	Molecular Mechanisms of Gene Regulation - 1	9
13	6 Oct	Molecular Mechanisms of Gene Regulation - 2	9
	11 Oct	Review for Exam 3 EXAM 3	8 & 9
14	13 Oct	Genomics, Proteomics and Genetic Engineering - 2	10
15	18 Oct	Genomics, Proteomics and Genetic Engineering - 2	10
16	20 Oct	The Genetic Control of Development - 1	11
17	25 Oct	The Genetic Control of Development - 2	11
18	27 Oct	Molecular Mechanisms of Mutation and DNA Repair	12
	1 Nov	EXAM 4	10, 11 & 12
19	3 Nov	Molecular Genetics of the Cell Cycle and Cancer - 1	13
20	8 Nov	Molecular Genetics of the Cell Cycle and Cancer - 2	13
21	10 Nov	Molecular Evolution and Population Genetics - 1	14
22	15 Nov	Molecular Evolution and Population Genetics - 2	14
23	17 Nov	The Genetic Basis of Complex Inheritance	15
	22 Nov	EXAM 5	13, 14 & 15