Grande Prairie Regional Regional College
Department of Science

Course Outline : GN 1650 Genetics and Human Welfare Fall 1994

An introduction to the genetics of human development and variability. The analysis of human DNA, genes and chromosomes will lead to discussions of: human diseases; prenatal diagnosis; viruses; cancer and applications of biotechnology.

Instructor: Dr. Sean Irwin
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Prerequisite: Biology 30

Required Text: Michael R. Cummings, Human Heredity: Principles and Issues, (3rd or 2nd Ed.), West Publishing Co., St. Paul, MN, 1994.

Lectures: Place: J 226
Time: Mon., Wed. and Fri. 12:00 - 12:50

Evaluation:

Assignments (4)	20%
Mid-Term 1	20%
Mid-Term 2	25%
Final Exam	35%

Course Outline

Lecture	Date	Topic	Chapter
1	Sept 7	Introduction	
2	Sept 9	Eukaryotic Cells	2
3	Sept 12	Structure of DNA	7
4	Sept 14	Chromosomes	7
5	Sept 16	DNA Replication	7
6	Sept 19	Cloning Genes	8
7	Sept 21	Genes and Protein	9
8	Sept 23	Transcription	9
9	Sept 26	Translation/Assignment 1	9
10	Sept 28	Enzymes and Metabolic Pathways	10
11	Sept 30	Metabolic Disorders	10
12	Oct 3	Metabolic Disorders	10
13	Oct 5	Review	
14	Oct 7	Midterm 1	
15	Oct 10	Mutation	11
	Oct 12	Thanksgiving Day	
16	Oct 14	Mutation/Assignment 2	11
17	Oct 17	Mutagens and Carcinogens	12
18	Oct 19	Hereditary Tumors	13
19	Oct 21	Genes and Cancer	13
20	Oct 24	Genes and Cancer	13
21	Oct 26	Mendelian Genetics/Mitosis	2
22	Oct 28	Meiosis	2
23	Oct 31	Monohybrid Crosses	3
24	Nov 2	Dihybrid Crosses/Assignment 3	3
25	Nov 4	Variations in Mendelian Ratios	3
26	Nov 7	Midterm 2	
27	Nov 9	Sex Determination	5
28	Nov 11	Sex Linkage	5
29	Nov 14	Pedigree Analysis	4
	Nov 16	Remembrance Day	
30	Nov 18	Pedigree Analysis/Assignment 4	4
31	Nov 21	Gene Linkage	4
32	Nov 23	Gene Mapping	4
33	Nov 25	Chromosome Aberrations	6
34	Nov 28	Chromosome Aberrations	6
35	Nov 30	Prenatal Diagnosis	6
36	Dec 2	Genetic Screening	18
37	Dec 5	Genetic Counselling	18
38	Dec 7	Legal/Ethical Issues	19
39	Dec 9	Review	