Grande Prairie Regional College
Department of Science

Course Outline : GN1970 Heredity
Fall 1993

Course Description:

The objective of this course is to gain an understanding of the basic principles of the transmission of genetic information in prokaryotes and eukaryotes. Topics discused will include: Mendelian inheritance, microbial genetics, cytoplsmic inheritance, genetic mapping and the genetic code.

Instructor: Sean Irwin
Office: J223
Phones: 539-2860 (Office)
538-1278 (Home)

Prerequisite: Biology 30

Required Text: P.J. Russel, Genetics, (3rd ed.), Harper Collins Publishers, New York, 1992.

Optional Text: R.C. King and W.D. Stanfield, A Dictionary of Genetics (4th ed.), Oxford University Press, New York, 1990.

Lab Manual: U. of A. 1993-94 Genetics 197 Lab Manual

Lectures: Place: J226
Time: Tues. and Thurs. 13:30-14:50

Labs: L1: Wed. 15:00-17:50
Rm. J126
L2: Fri. 15:00-17:50
Rm. J130

Evaluation:

Assignments/Reports	20%
Mid-Term Exam	30%
Final Lab Exam	15%
Final Exam	35%

Students are advised to attend all lectures and labs as they will be responsible for all course material presented in lectures labs and assignments. All assignments are to be handed in by the date specified. Late assignments will not be accepted.

CLASS SCHEDULE

(Tenative)

Lecture	Date	Topic	Text Ch.
1	Sept 7	Intoduction	
2	Sept 9	Cells\Mitosis	1
3	Sept 14	Meiosis	1
4	Sept 16	Mendelian Inheritance	2
5	Sept 21	Monohybrid Crosses	2
6	Sept 23	Dihybrid Crosses\Problems	2
7	Sept 28	Chromosomes\Sex Determination	3
8	Sept 30	Sex Linkage\Problems	3
9	Oct 5	Gene Interactions	4
10	Oct 7	Epistasis\Problems	4
11	Oct 12	Linkage\Recombination	5
12	Oct 14	Special Lecture	
13	Oct 19	Gene Maping\Problems	5
14	Oct 21	Mid-Term	
15	Oct 26	Advanced Mapping	6
16	Oct 28	DNA Chemistry\Structure	9
17	Nov 2	Chromosomes (Prokaryotes)	10
18	Nov 4	Chromosomes (Eukaryotes)	10
19	Nov 9	DNA Replication	11
	Nov 11	Remembrance Day	1-11
20	Nov 16	Transcription	12
21	Nov 18	RNA Chemistry\Processing	13
22	Nov 23	Translation	13
23	Nov 25	The Genetic Code	14
24	Nov 30	Recombination (Prokaryotes)	7
25	Dec 2	Mapping	7,6
26	Dec 7	Recombinant DNA Technology	15
27	Dec 9	Recombinant DNA Technology	15