1990-91

GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF SCIENCE
BIOLOGY INSTRUCTIONAL GROUP

GENETICS 375
WINTER 1991

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PREREQUISITE Biology 297

TRANSFERABILITY: Direct Equivalent of U. of A. Genetics 275

TEXTBOOK: Suzuki, D.T., A.J. Griffiths, J.H. Miller, and R.C. Lewontin. An Introduction to Genetic Analysis. Freeman. New York.

LAB MANUAL: University of Alberta Genetics 375 (275) Laboratory Manual.

COURSE OBJECTIVES:

A. To provide students with some basic knowledge of neo-mendelian inheritance, molecular genetics, and population genetics.

B. To introduce current topics illustrating the dynamic nature of the science of genetics.

COURSE NATURE: Genetics 375 consists of three hours of lecture and three hours of laboratory each week. Classes will be used for lectures, discussions, problem-solving sessions, and quizzes. You are expected to read text material before class. Emphasis is placed on laboratory exercises and assignments; thus your attendance is imperative.

A term paper (which will also be presented as a class seminar) is required for this course. your topic should be selected before the end of January. It should be well researched and library materials located by the end of February (you will probably need to use interlibrary loans). Term papers must follow the format used in the journal Genetics (available in the LRC).

COURSE REQUIREMENTS AND EVALUATION:

Requirement	Value	Assigned Date
Laboratory	25%	As required
Class Assignments and Quizzes	15%	As required
Midterm Exam	20%	February 20
Term Paper (Seminar Schedule TBA)	20%	April 4
Final Exam	20%	TBA

CLASS SCHEDULE

DATE	TOPIC	TEXT CHAPTER
Jan 3	Introduction	
8	Review	1 - 7
10	Chromosomal Mutations	8 - 9
15	Quiz	1 - 9
17	Genetics of Bacteria and Phages	10
22	LRC Orientation for Research Topic	
24	Gene Chemistry	11
29	Gene Chemistry	12
31	Gene Chemistry	
Feb 5	Gene Function	13
7	Gene Funnction	
12	Eukaryote Chromosomes	14
14	Eukaryote Chromosomes	
19	Gene Manipulation	15
21	Gene Manipulation	
26	READING WEEK	
28	READING WEEK	
Mar 5	Gene Expression	16
7	Gene Expression	
12	Mutations	17
14	Recombination	18
19	Transposable Elements	19
21	Extranuclear Inheritance	20
26	Differentiation	21 - 22
28	Genes and Cancer	21 - 22
Apr 2	Quantitative Genetics	23
4	Quantitative Genetics	
9	Population Genetics	24
11	Population Genetics	