1990-91

Registration

SEP 12 1990

GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF SCIENCE
COURSE OUTLINE FALL 1990

COURSE: Botany 205-Plant Biology

PREREQUISITE: ~~Biology 30~~

CLASS MEETS: M-W-F, 12:00-12:50 p.m.

LABORATORY: R, 8:00-10:50 a.m.

TRANSFERABILITY: U of A-Botany 205; U of C-Botany 225; U of L-Botany 2000; Athabasca U-Jr.Science; Camrose Luth.-Jr. Botany

INSTRUCTOR: Paul Lemay
J 224 Phone: Office-539-2863 (main)
539-6330 (nursing)
Home-532-3766

LAB TECHNICIAN: Rick Scott Lab-539-2953

NATURE OF COURSE:
Botany 205 is an introduction to the biology of plants, emphasizing the relationships between form and function. The first half of the course deals with the evolutionary history of plants, concentrating on the major adaptive and distinguishing features and reproductive strategies of important representative plant divisions. The second part of the course stresses plant function with emphasis on the physiological processes of plants including nutrient and energy relations and growth and development.

COURSE OBJECTIVES:
To learn the evolutionary relationships and the structures and functions of the major plant groups.

REQUIREMENTS:
A. Since presence at lectures and labs, participation in classroom discussions and projects, and completion of assignments are important components of this course, students will serve their interests best by regular attendance. Attendance in laboratories is required for credit.

B. There will be a midterm and a final exam, a laboratory final exam, two quizzes, and lab. reports required.

EVALUATION:

Quizzes	15%	Lab reports	15%
Midterm exam	15%	Final lab exam	15%
Final exam	40%		

TEXTBOOKS/RESOURCES

Wessells, Norman K., and J.L. Hopson 1988 Biology Random House, Inc. New York.

Botany 205 Laboratory Manual. 1990 University of Alberta

References:

Ray, P.M. 1972 The Living Plant Saunders College Pub. Toronto

Stern, Kingsley R. 1979 Introductory Plant Biology 2nd Edition W.C. Brown Publishers.

Greulach, Victor A. 1973 Plant Function and Structure Collier Macmillan Publishers New York.

BOTANY 205 Fall 1990 CLASS SCHEDULE

DATE	TOPICS
Sept. 7	Introduction
Sept 10-14	Historical development of plant biology: plant cells: cell theory, prokaryotes and eucaryotes, review of cell division and meiosis; Plant classification: Plant Reproduction:general concepts (Text Chapters 5.6,9, and Appendix A)
Sept. 17-21	Major Plant Groups: evolution, characteristics, structure, reproduction and ecology- A. Algae:Prokaryotes, Cyanobacteria Chloroxybacteria, Methanobacteria, Sulfolobales. Eukaryotes-Protista (Text Chapter 23)
Sept. 24-28	B.Fungi, Eukaryotes (Text Chapter 22)
Oct. 1-5	FIRST QUIZ-OCTOBER 1 C. Plants -Bryophytes, Psilophyta (Text Chapter 23)
Oct. 10-15	OCTOBER 8-THANKSGIVING HOLIDAY Lycophyta,Sphenophyta,Pteridophyta
Oct. 17-21	Seed Plants:Cycadophyta Gnetophyta Coniferophyta

Oct. 24-28	Anthophyta (Angiosperms):Flowering plants (Text Chapter 24)
	MIDTERM EXAM OCTOBER 26
Oct 29-Nov. 2	Vascular Plant Structure (Text Ch. 27)
Nov. 12-16	Photosynthesis (Text Chapter 8)
	SECOND QUIZ-NOVEMBER 16
Nov. 19-23	Nutrition and Transport in plants (Text Ch. 29)
Nov. 26-30	Growth and Development in plants (Text Ch. 28)
Dec. 3-7-	Growth and development (con't)
	FINAL EXAM

BOTANY 205 FALL 1990

LABORATORY SCHEDULE

Date	Laboratory
Sept. 13	Field Trip
Sept 20	#1 Orientation
Sept. 27	#7A Algae
Oct. 4	#6 Fungi
Oct. 11	#7B Bryophytes
	#8 Ferns and fern allies
Oct. 18	#9 Cycads and Gymnosperms
Oct. 25	#10 Reproduction in flowering plants
Nov. 1	#3 Soft Stems and Intercellular Water Movement
Nov. 8	#2 Leaves, Photosynthesis, and Respiration
Nov. 15	#4 Woody Stems and Transpiration
Nov. 22	#5 Roots and Plant Hormones
Nov. 29	FINAL LABORATORY EXAM