COLLEGE OF NEW CALEDONIA

Division of Business and Technology

Forest Resource Technology

FORS 202
Forest Ecology

Prepared by	: Angus McLeod, RPF, P.Ag	Original by	: Angus McLeod
Date	: 121207	Credit	: 3
Term	: Spring	Lecture Hrs	: 3
Revised	: 121207	Lab Hrs	: 2
Prerequisite	: FOR 155, 157	Co-requisite	: FORS 111, 112
Instructor	: Angus McLeod, RPF, P.Ag	Office Hours	: Posted
Lecture	:	Office	: 3-232
Lab	:	Phone	: 562-2131 Loc 5552
		E-Mail	: mcleod@cnc.bc.ca

CALENDAR DESCRIPTION:
This course will provide an introduction to the ecosystem concept, energy biomass and nutrient cycling, the physical environment, population and community ecology, and ecological succession. It will also introduce the biogeoclimatic classification of BC and examples of Central Interior ecosystem.

COURSE GOAL:
To develop basic skills and knowledge of forest ecosystem concepts.

LEARNING OBJECTIVES:
Upon successful completion of this course, the student will be able to:

1. Appreciate the importance of managing forests on an ecosystem bases;
2. Understand the basis of production ecology, and the role of nutrient cycling in determining production and yield;
3. Know the major physical factors that determine ecosystem structure and function, and the major categories of effects they have;
4. Understand the basic principles of population and community ecology and be able to apply them to an analysis of forest plant communities;
5. Understand the processes, rates and patterns of ecosystem change (ecological succession);
6. Know the major features of the biogeoclimatic classification of British Columbia, and assigned indicator plants.
7. Plan, organize and deliver oral presentations of technical information to a technical audience;
8. Demonstrate listening skills in giving and taking directions and instructions;
9. Work and communicate effectively in teams.

REQUIRED REFERENCE:
Kimmins, J.P. *Forest Ecology: A Foundation for Sustainable Forest Management and Environmental Ethics in Forestry*, 3rd Edition, Prentice Hall New Jersey (Available in C.N.C. bookstore).

RECOMMENDED REFERENCE:
Ecosystems of British Columbia, 1991. Edited by D. Meidinger and J. Pojar. Special Report Series 6, B.C. Ministry of Forests. (You will sign out a lab copy for the term).
Burns, M. and B. H. Honkala. *Silvics of North America, Agriculture Handbook* 654. 1990. Forest Service, U.S.D.A. Washington, DC. (You will sign out a lab copy for the term).

COURSE FORMAT /COMPUTER USE:
The course consists of 15 weeks in one semester. Most of the lab time will be used for instructional purposes, demonstrations, hands-on training, and for individual tutoring. Additional computer lab hours, outside of class, will be required for independent study and completion of assignments and projects.

STUDENT EVALUATION		**LETTER GRADE / PERCENTAGES**	
Concept Quiz	5%	A+	90 % - 100 %
Lab Plant Quizzes	10%	A	85 % - 89.9 %
Final Lab Exam	15%	A-	80 % - 84.9 %
Oral Presentations	5%	B+	76 % - 79.9 %
Midterm	30%	B	72 % - 75.9 %
Final Exam	35%	B-	68 % - 71.9 %
		C+	64 % - 67.9%
		C	60 % - 63.9%
		C-	55 % - 59.9%
		D	50 % - 54.9%
		F	0 % - 49.9%

N.B. 1 Students must obtain a "C" grade or better in the prerequisites for this course (i.e. FOR 155 and FOR 157) in order to enrol in and take FORS 202 or obtain Instructor's permission.

N.B. 2 Lab assignments must be submitted on time unless the instructor extends the deadline. Late assignments will receive a 50% marks reduction. Assignments more than 3 days late will be given a zero mark. In extenuating circumstances the deadline may be extended by the Instructor. Accident or illness - notify instructor as soon as possible.

Work substantially copied from others is considered to be plagiarized. All parties involved in the work will receive a failure for that assignment.

All assignments must be completed or an incomplete will be given for the course.

Policy: Missed Exams, Labs, and Assignments.

Except for reasons of major illness or major personal or family emergencies, exams must be written at the scheduled time. Holidays, appointments, dysfunctional alarm clocks, airline seat sales bookings etc. are not valid reasons for rescheduling of exams.

If you have unusual health or other problems that could result in missing labs, lectures, or having late assignments, the general expectation is that you notify your instructor well in advance, preferably in person, or else by phone. If there are chronic conditions that might affect your ability to meet your obligations, then you may be asked to provide documentation.

TERM TIME TABLE

(Subject to Change)

Week #	Date	Lecture	Lab
1	Jan 7-11	Introduction and course objective. The importance of ecology in forest management. Forest ecology in a global perspective. Video: (Global Warming 1 Jan. 7.	Introduction to Biogeoclimatic Classification System (BEC)
2	Jan.14-18	Biological organization and integration. Ecosystem concepts. Video: (Global Warming II) Jan. 17	Work on Oral Presentations
3	Jan.21-25	Production Ecology. Video: (Global Warming III) Jan. 24	Ecosystem Concepts
4	Jan.28-Feb.1	Biogeochemistry. **CONCEPT QUIZ** (5%) Feb. 7	SBS Zone. Ecosystem Transect Video: (First Eden I) (Soil/Plant Quiz #1 3%)
5	Feb. 4-8	Ecological role of radiation.	AT, BWBS & SWB zones. Video: (First Eden II)
6	Feb. 11-15	Ecological role of temperature and water.	Video: (First Eden III) IDF and SBPS zones

7	Feb. 18-22	**SPRING BREAK**	
8	Feb.25-29	Ecological role of wind **MIDTERM** (30%) Feb. 28.	ESSF & MS zones. (Soil/Plant Quiz #2, 3%)
9	Mar. 3-7	Ecological role of fire and soil	Video: (First Eden IV) ICH, PP and BG zones Oral Presentations
10	Mar. 10-14	Population Ecology. Determination and regulation of population size.	MH, CWH & CDF zones. (Soil/Plant Quiz #3, 4%) Oral Presentations
11	Mar. 17-20	Population Ecology. Community Ecology Structure and growth forms.	Good Friday
12	Mar. 25-28	Community Ecology. Concepts of diversity and stability. Video: (Living Plant: Tropical Rainforest) Mar. 27.	No lab scheduled
13	Mar. 31-Apr. 4	Succession. Video: (Mt. St. Helens) Apr. 3.	Final Lab Exam (15%) Apr. 4
14	April 7-9	Succession.	Field Week
15	April 10-16	Field Week	
16	April 17-25	Exam Week. **Final Exam** to be scheduled. (35%)	