COURSE IMPLEMENTATION DATE: November 1993
COURSE REVISED IMPLEMENTATION DATE: September 2007
COURSE TO BE REVIEWED: August 2011
(Four years after UPAC final approval date) (MONTH YEAR)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
Shaded headings are subject to change at the discretion of the department and the material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT:	**Faculty of Science, Health & Human Services/Biology**	
BIO 210		4
COURSE NAME/NUMBER	FORMER COURSE NUMBER	UCFV CREDITS

Introduction to Ecology
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

This course is an introduction to the basic principles of ecological theory relating to the structure and function of ecosystems. This course includes field trips. A required weekend field trip will be held on the third weekend of the fall semester.

PREREQUISITES: BIO 112
COREQUISITES:

SYNONYMOUS COURSE(S)
(a) Replaces: **n/a** *(Course #)*
(b) Cannot take: **n/a** *(Course #)* for further credit.

SERVICE COURSE TO:
(Department/Program)
(Department/Program)

TOTAL HOURS PER TERM:	**90**	
STRUCTURE OF HOURS:		
Lectures:	**45**	Hrs
Seminar:		Hrs
Laboratory:	45	Hrs
Field Experience:		Hrs
Student Directed Learning:		Hrs
Other (Specify):		Hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE:
HOURS PER DAY:

MAXIMUM ENROLLMENT:	**24**	
EXPECTED FREQUENCY OF COURSE OFFERINGS:	**annually**	
WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only)	☒ Yes	☐ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department)	☐ Yes	☐ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE:	☒ Yes	☐ No

AUTHORIZATION SIGNATURES:

Course Designer(s): Edith Camm
Chairperson: Art Last *(Science Curriculum Committee)*
Department Head: Barbara Moon
Dean: Wanda Gordon
UPAC Approval in Principle Date:
UPAC Final Approval Date: Aug. 31, 2007

LEARNING OBJECTIVES / GOALS / OUTCOMES / LEARNING OUTCOMES:

Upon completion of this course, successful students will be able to:

1. Explain how global climate patterns determine the distribution of Earth's major biomes
2. Discuss basic ecological processes that affect individuals, populations, and communities of organisms
3. Identify local plant species
4. Conduct basic vegetation surveys
5. Make assessments of stream habitat and water quality
6. Apply statistical analyses to ecological data and present this information in both written and oral formats

METHODS:

Instruction will include a combination of lectures, group work in class, video and oral presentations, laboratory and field exercises, and as well as design and execution of a group field investigation.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR (Please check:) ☒ Yes ☐ No

METHODS OF OBTAINING PLAR:

Examination

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

Ecology: Concepts and Applications, 4th Edition, Manuel Molles Jr. McGraw-Hill publishers
Plants of Coastal British Columbia – revised. Jim Pojar and Andy MacKinnon. Lone Pine Publishing

SUPPLIES / MATERIALS:

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

Midterm exam	20%
In-class participation	5%
In-class oral presentation	5%
Assignments	10%
Stream ecology report	15%
Field trip written report	15%
Final exam	30%

COURSE CONTENT:

[Course content varies by instructor. An example of course content might be:]

Life and the physical environment
- Physical conditions, climate patterns,
- Climate diagrams and the major terrestrial biomes
- Life in water – zonation and nutrient flow

Response to changing essential conditions
- Temperature
- Water
- Energy and nutrients
- Succession

Population processes
- Distributions and life history patterns
- Growth and dynamics
- Dispersal and metapopulations

Interactions
- Competition
- Parasitism and mutualism

Communities
- Community structure and food webs
- Nutrient cycling

Landscape ecology and conservation

Laboratory Exercises
1. Tree, shrub, and ground cover identification in the woodlot. Students will be introduced to sampling methods and local plant identification.
2. Plant diversity in a raised bog. Students will travel to Derby Reach to investigate plant diversity in this unique community and apply statistical measures to look for variance and correlations in sampling.
3. Soil invertebrates. The class will collect litter/soil samples and learn to use a key to identify the common invertebrates present.
4. The class will learn stewardship techniques for monitoring and improving habitat quality in local streams by quantifying physical conditions as well as assessing the invertebrate community and phytoplankton levels.
5. A field trip component will also introduce students to developing and testing their own hypotheses. Groups of students will develop their own investigation on the consequences environmental gradients have on the makeup of communities.