COLLEGE OF THE ROCKIES

Introduction to Ecology – BIOL 204

University Studies Program

Course Outline

COURSE IMPLEMENTATION DATE: **Pre 1998**
OUTLINE EFFECTIVE DATE: **January 2017**
COURSE OUTLINE REVIEW DATE: **September 2022**

GENERAL COURSE DESCRIPTION:

This course studies of the interactions between organisms and their environment at the organismal, population, community and ecosystem levels. Topics considered include energy flow, nutrient cycling, ecological succession, population dynamics and evolutionary processes. Local examples may be used to illustrate some of the principles.

Program Information: This course is required as part of the core courses for a science degree in biology. Once this course is mastered, one would be prepared for related third and fourth year courses at the university level.

Delivery: This course is delivered face-to-face.

COTR Credits: 3

Hours for this course: 90 hours

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	45
Seminars / Tutorials	
Laboratory / Studio Hours	45
Practicum / Field Experience Hours	
Other Contact Hours	
Total	90

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Course Outline Author or Contact:
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Signature

APPROVAL SIGNATURES:

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EDCO

Valid from: January 2017 – September 2022

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: BIOL 101 and BIOL 102

Corequisites: None

Flexible Assessment (FA):

Credit can be awarded for this course through FA ☑ Yes ☐ No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit http://www.cotr.bc.ca/Transfer.

Students should also contact an academic advisor at the institution where they want transfer credit.

Prior Course Number: N/A

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Ricklefs. 2014. *Economy of Nature*, (Canadian Ed). Freeman.

BIOL 204 Lab Outlines

Please see the instructor's syllabus or check COTR's online text calculator http://go.cotr.bc.ca/tuition/tCalc.asp for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

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

- conduct simple ecological measurements;
- conduct field research to carry out sample ecological studies;
- record numerical data and perform simple statistical operations;
- work effectively with others in a laboratory or field situation;
- facilitate the creative problem-solving process using a variety of techniques such as brainstorming, analogy, probing, attitude and analysis;
- critically evaluate information for accuracy, relevance and importance;
- think critically and act logically to evaluate situations;
- make generalizations (transfer knowledge and training to new situations);
- search for information in professional literature (print libraries, electronic databases, company records, internet tools, etc.);
- comprehend and interpret detailed scientific and/or technical information from text;
- create and produce a variety of documents, including summary reports, posters, fact sheets and formal scientific write-ups;
- communicate effectively at different educational levels;
- organize information so that it can be used in a meaningful way by a specified audience;
- evaluate and validate research results;
- assess potential mathematical strategies for suitability and effectiveness;
- apply a variety of mathematical techniques with the degree of accuracy required to solve problems and make decisions;
- transfer the use of mathematical strategies from one situation to another;
- present a formal presentation to a general audience;
- deliver a message to a small group;
- facilitate effective interaction in a variety of situations;
- work towards accomplishing collective goals and responsibilities;
- communicate and collaborate to work effectively within a group;
- develop informed responses to local and global issues; and
- understand some or a variety of interconnected local and global issues.

This course should help students

- use written and oral communication skills effectively, employing methods appropriate to message and context;

- think clearly and critically, fusing experience, knowledge and reasoning into considered judgment;
- identify, interpret, and solve problems, effectively implementing and evaluating proposed strategies;
- facilitate effective interaction in a variety of situations;
- work towards accomplishing collective goals and responsibilities;
- critically examine statements and information and evaluate and validate research results;
- record numerical data and perform simple statistical operations; and
- participate as a citizen in the class, college, and larger community.

Note: Biology 204 is an introductory course which lays the framework for further ecological study. The knowledge and skills obtained in this course will assist you in understanding the intricate ecological relationships in the world around you. It is hoped that you will continue your education in biology so that you may obtain the maximum benefit from the start you have made in this course.

COURSE TOPICS:

- Scope and Basis of Ecology.
- Organisms and Their Environment
- Energy/Trophic Structure
- Communities
- Population Dynamics
- Competition
- Life History Patterns
- Predation
- Succession
- Species Diversity
- Ecosystems

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Midterms	40%
Presentations	10%
Lab Write ups	25%
Final Exam	25%
Total	100%

Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments, and use of electronic aids.

EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Mark (Percent)	≥ 90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	< 50

A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.