COLLEGE OF THE ROCKIES

Introduction to Ecology – BIOL 204

University Studies Program

Course Outline

COURSE IMPLEMENTATION DATE:	**Pre 1998**
OUTLINE EFFECTIVE DATE:	**September 2023**
COURSE OUTLINE REVIEW DATE:	**March 2028**

GENERAL COURSE DESCRIPTION:

This course studies the interactions between organisms and their environment at the organismal, population, community, and ecosystem levels. Topics considered include energy flow, nutrient cycling, organismal ecology, population growth, regulation and dynamics, species interactions, community structure, ecological succession, biodiversity, conservation, and evolutionary processes. Lab activities support lecture material allowing students to apply ecological concepts and theories by testing ecological hypotheses. Students gain local natural history knowledge and employ various quantitative methods to collect, analyze, and interpret ecological data from field studies and experiments.

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: September 2023– March 2028

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:

Relyea. 2021. Ecology: The Economy of Nature, 9th edition. 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

- Explain the interactions between and within trophic levels as well as habitat shape distribution and abundance of organisms in ecological systems;
- Explain the interrelationship between organism form and function, ecological interactions, and habitat tolerance within an evolutionary context;
- Assess how habitat, organisms and complex interactions influence energy flow and cycling of matter within ecosystems;
- Apply ecological principles to develop responses to local and global issues in ways that recognize the impacts of human activity on ecological processes as well as solutions drawn of different worldviews;
- Develop hypotheses, design and conduct ecological studies in field and laboratory settings;
- Apply various techniques to collect data and apply appropriate statistical analysis to analyze and interpret data;
- Search for primary scientific literature and critically evaluate the scientific and/or technical information being communicated for accuracy, relevance, importance, and generalizability;
- Present information in a variety of written and oral formats to effectively communicate concepts and research findings to different audiences;
- Engage in creative problem-solving processes to evaluate situations logically and critically through techniques such as brainstorming, analogy, probing, attitude and analysis; and
- Work with others toward accomplishing collective goals and responsibilities through effective communication and collaboration in a laboratory or field situation.

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.