



## BIOL-204 – Introduction to Ecology

University Arts and Science

**Effective Term & Year:** Fall 2022  
**Course Outline Review Date:** 2022-09-01

**Program Area:** Math and Sciences

### 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 Methods:** On-campus (Face-to-Face)

**Credit Type:** College of the Rockies Credits

**Credits:** 3

**Course type/s:** Lab Sciences, Sciences

### Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	45
Seminar/Tutorials	
Laboratory/Studio	45
Practicum/Field Experience	

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Co-op/Work Experience	
Other	
Total	90

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**Course Requisites:**

- Completed the following:
  - BIOL101 – Introduction to Biology 1 (3)
  - BIOL102 – Introduction to Biology 2 (3)

**Flexible Assessment:** Yes

In some cases students may be able to apply for recognition of prior learning outside the classroom. This flexible assessment process provides equivalent course credit. It is a rigorous process that may include external evaluation, worksite assessment, demonstration, standardized test, self-assessment, interview, products/portfolio, and challenge exam, or other measures as appropriate. Tuition fees apply. Contact an education advisor for more information.

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**Course Transfer Credit:**

For information about receiving transfer credit for courses taken at other BC institutions, please see <http://www.bctransferguide.ca>. All requests for course transfer credit from institutions in BC or elsewhere should go to the College of the Rockies Enrollment Services office.

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**Textbook 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 <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.*

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**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.

## 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 Assessments

### Assessment Type: On-Campus (face-to-face)

Assessment Type	% of Total Grade
Midterms	40%
Presentations	10%
Lab Write ups	25%
Final Exam	25%
Total	100%

### Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

**Pass requirements:** None

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

### Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a "0" on the exam.

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### **Academic Policies:**

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.4.3 Students with Documented Disabilities
  - Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
  - Policy 2.5.8 Academic Performance
  - Policy 2.5.3 Grade Appeal
  - Policy 2.4.9 Student Concerns Re Faculty
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### **Course Changes:**

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.