COLLEGE OF THE ROCKIES

Biology of the Environment - BIOL 151

University Studies Program

Course Outline

COURSE IMPLEMENTATION DATE:	**September 2009**
OUTLINE EFFECTIVE DATE:	**September 2019**
COURSE OUTLINE REVIEW DATE:	**April 2024**

GENERAL COURSE DESCRIPTION:

Biology 151 focuses on environmental and ecological topics within biology from a local perspective. BIOL 151 helps inform students about local and global environmental issues, current events, and new and emerging technologies from a scientific perspective. Students, with the help of their instructor, will design and implement a research project that focuses on a local environmental issue and present it to members of the community.

Program Information: This course is designed as a one semester lecture/lab offering for non-science majors. This course is a required course for the Environmental Studies Certificate and is a lab science elective for the Teacher Education Program, Bachelor of Business Administration Degree Program, Sustainable Business Program, and other Arts majors with an interest in environmental issues.

Note: BIOL 151 does not meet the requirements for a science major's course and therefore cannot be substituted for BIOL 101 or BIOL 102.

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	
Formal Work Experience	
Other	
Total	

Course Outline Author or Contact:
Lynnette Kuervers, B.Sc., Ph.D.

Signature

APPROVAL SIGNATURES:

Department Head
Erin Aasland Hall
E-mail: aaslandhall@cotr.bc.ca

Department Head Signature

Dean of Business and University Studies
Darrell Bethune
E-mail: bethune@cotr.bc.ca

Dean Signature

EDCO

Valid from: September 2019- April 2024

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT

Prerequisites: None

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:

Withgott, J., Laposata, M. and Murck, B.(2017). *Environment: The Science Behind the Stories (3rd* Canadian Edition*).* Pearson Education

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

- apply the scientific method to complete a group research project that focuses on an environmental problem that exists in the local community and communicate the results of the project to members of the local community. Recommend strategies that may improve sustainability regarding the environmental issue;
- incorporate the concept of the triple bottom line, nested systems of sustainability, and environmental ethics to an environmental problem that occurs in the community;
- identify potential problems that may affect the biodiversity of the ecosystem as well as factors that may contribute positively to the health of the system;
- identify the major subsystems within a given ecosystem and discuss how living and nonliving entities interact within the system;
- identify multiple environmental biology groups and/or advocates within the local community and describe their specialties and roles in environmental biology;
- critically analyze non-peer reviewed articles regarding environmental topics for accurate and comprehensive information, expertise of the presenting author, as well as provide an opposing point of view;
- research new and emerging technology in the field of environmental biology and use the concepts presented in the course to make an informed opinion on their value and potential impact;
- design and implement scientific experiments related to environmental biology using common laboratory equipment and procedures within a small group; and
- critically evaluate results from scientific experiments.

COURSE TOPICS:

- Overview of Human Activities, Sustainability, and Biodiversity
- The Scientific Method
- Basic Ecological Principles
- Abiotic and Climate Factors
- Ecosystems
- Biotic Factors and Species Interactions
- Climate and Terrestrial Biodiversity
- Aquatic Biodiversity
- Sustaining Biodiversity
- Environmental Ethics

- Agricultural Sustainability
- Current events and new technology regarding environmental biology issues

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

EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Lecture	
Assignments	10%
Midterms	20%
Final Exam (Cumulative)	30%
Lab	
Lab Assignments/Lab Quizzes	20%
Lab Project	20%
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.

Note: Attendance at all laboratory sessions and exams is required. However, arrangements can be made for documented illness or bereavement. Lecture attendance is strongly recommended and students are responsible for all course material covered in lecture and assigned readings. Lab skills are essential to the further understanding of the course material, therefore, in order to pass the course, a passing grade (50% or greater) is required for **both** the laboratory portion and lecture portion of the course.

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.