



# COURSE OUTLINE

**Course Name:** Introduction to Ecology

**Course Number:** BIOL 2104

**Number of Credits:** 3.0

**Effective Date:** September 2016

**Course Description:**

This course introduces abiotic and biotic environmental relationships and dynamics; ecological concepts; population dynamics, variation, adaptation and evolution. Topics include distribution of organisms, food chain and food web dynamics, energy and matter flow and cycles. Additional topics include species interactions such as competition, predation and symbiosis, and behavioural ecology.

**School or Centre:**

School of Arts and Sciences

**Year of Study:**

2nd Year Post-secondary

**Course History:**

New Course

**Name of Replacing Course (if applicable):**

**Course Pre-requisites (if applicable):**

Biology 1100 and Biology 1200 both with a C- minimum.

**Course Co-requisites (if applicable):**

**PLAR (Prior Learning Assessment & Recognition)**

No  Yes (details below):

**Instructional Strategies:**

The course will have lectures, clicker questions, in class discussions and participation activities. Tutorials will include case studies, independent written assignments, and group discussions.

**Course Learning Outcomes:**

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

1. Explain patterns observed in nature by applying fundamental ecological theories.
2. Communicate clearly about ecological systems and processes by applying appropriate ecological terminology.
3. Describe the contributions of important ecologists and the historical development of the discipline in order to understand contemporary ecological issues in a modern context.
4. Critically evaluate primary ecological literature and interpret case studies in the context of ecological theory.
5. Formulate solutions to modern ecological problems by applying ecological theory.
6. Navigate spreadsheets in Excel, calculate means and standard errors, construct appropriate graphs, and describe trends in ecological data.
7. Find electronically, read for comprehension, and critically analyze primary scientific papers on a specific ecological topic.
8. Develop and present a research proposal (including a review of literature, statement of hypothesis and predictions, appropriate research methodology, and anticipated results) on an ecological topic.

**Program Learning Outcomes:**

If this course is taken as a requirement or an elective in the following first-year University Transfer Certificate programs, the learning outcomes are found in the relevant Program Content Guides available at the Counseling and Advising Service areas:

University Transfer Environmental Studies Certificate  
University Transfer Science Certificate

### Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		D

### Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Midterm Exam	40	Two midterm exams
Participation	10	Participation in in-class activities
Final Exam	20	Final exam
Assignments	30	Two written assignments
<b>Total</b>		<b>100</b>

### Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	60	
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<b>Total</b>		<b>60</b>

### Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

## Course Topics:

- Overview of modern ecology in an historical context
- Models predicting population distribution and abundance
- Island biogeography
- Biotic and abiotic effects on species distribution and dispersal
- Population ecology including demographics, growth, and metapopulations
- Interactions between species including competition and predation

## VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at [www.bctransferguide.ca](http://www.bctransferguide.ca).

### FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	August 16, 2016	Approved by Education Council:	n/a
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