COURSE OUTLINE

Course Name: Introductory Biology - Part 1

Course Number: BIOL 1061 **Number of Credits:** 3.0 **Effective Date:** January 2018

Course Description:

This course provides an introduction to biology from an ecological perspective. Students study evolution; the origin of life; cell biology; viruses, bacteria, protists and fungi; local land and aquatic ecosystems, including native species identification. Field trips are an important part of this course.

Both Biology 1061 and Biology 1071 are required for covering the biology topics contained in high school courses up to and including the Grade 11 level. Biology 1061 will include a minimum of four labs and two field trips. Field trips allow students to explore local ecology in order to meet intended learning outcomes such as - Conduct field procedures safely and ethically - Analyze and interpret data collected - Native species identification.

Biology 1061 and Biology 1071 can be taken at the same time or in any order.

School or Centre:

School of Arts and Sciences

Year of Study:

1st Year Post-secondary

Course History:

New Course

Name of Replacing Course (if applicable):

Course Pre-requisites (if applicable):

- English 10 or equivalent
- Math 10 (VCC MATH 0750/0751, Foundations of Math & Precalculus 10, or equivalent)

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition) ☒ No ☐ Yes (details below):

Instructional Strategies:

Class-based course uses a lecture-based model, but significant class time will be spent throughout the course on hands-on laboratory activities and field-work to complement the lectures.

Course Learning Outcomes:

Biology learners will:
- Apply findings from all lab activities and field trips to broader concept of mechanisms of evolution
- Demonstrate use of basic field equipment in local forest, bog and/or pond habitats
- Experience local ecology through field trips and identify local flora using field guides
- Demonstrate compound light microscope and dissection microscope skills
- Culture, stain, observe, and identify bacteria
- Observe live cultures of a variety of Protists
- Identify structures of a variety of fungi in the Fungus Lab

By participating in the activities outlined above and studying the background theory inherent in the core topics, students will have the opportunity to:
- Demonstrate awareness of the diversity and interconnectedness of organisms
- Use scientific method to evaluate, interpret, and analyze information and experiences
- Communicate about life sciences in their own words and cite references appropriately
- Work independently and also as part of a team, where appropriate
- Evaluate media regarding issues in biological sciences
- Demonstrate an awareness of ethical issues relevant to life sciences
- Conduct lab and field procedures safely and ethically / Collect and record data effectively

Program Learning Outcomes:

N/A

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%):
-		Class-based
Field Experience	20	Essay/report and plant identification
Quizzes/Tests	65	3 tests and a number of quizzes
Assignments	15	
Total	**100**	

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
		College Foundations
L - Classroom	60	classroom, lab and field work
-		
Total	**60**	

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:

1. Classification Systems and Major Taxonomic Groups
2. Evolution (Evidence and Mechanisms)
3. Origins of Life
4. Cell Biology, including:
• Cell Theory,
• Major Structures/Functions In Prokaryotic And Eukaryotic Cells
• Levels of Biological Organization
• Introduction to Photosynthesis and Cellular Respiration
• Cell Division
5.Viruses & Bacteria (*bacteria and microscopy laboratory)
6. Protists (*Laboratory - microscopic observation of living and prepared protists)
7. Fungus
8. Algae, Bryophytes, Ferns, Gymnosperms, and Angiosperms
9. General Ecology (Energy flow, Nutrient cycling, Biosphere, Biomes, Climate, Succession)
10. Ecosystems and Local Ecology (Forests, Bogs, Freshwater Ecosystems) (*at least two Field trips to forest, bog and or pond ecosystems including field note taking, experimental methodology)

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.

FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	June 20, 2017	**Approved by Education Council**:	September 12, 2017