

Last Revised: September 2020

COURSE INFORMATION

Course Title: Principles of Biology II

Course Number: BIOL 102

Credits: 4

Total Weeks: 14 (Fall, Spring)
12 (Summer) **Total Hours:** 91

Course Level: First Year Second Year
 New Revised Course
 Replacement Course

Department: Science **Department Head:** S. Girdhar

Former Course Code(s) and Number(s) (if applicable):
N/A

Pre-requisites (If there are no prerequisites, type NONE): BIOL 104 or Anatomy and Physiology 12 (Biology 12) or equivalent and Chemistry 12 recommended

Co-requisite Statement (List if applicable or type NONE): None

Precluded Courses: N/A

COURSE DESCRIPTION

This course provides an introduction to the biological concepts of continuity of life, unity and the diversity of living things, change of organisms through time and interactions of living things. Three-hour labs are an integral part of the course.

LEARNING OUTCOMES

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

- Understand fundamental concepts that characterize biology, including concepts that characterize cell, plant and animal physiology, genetics, evolution, ecology, diversity, and molecular biology.
- Describe and practice laboratory safety guidelines relating to working with chemicals, microorganisms, and other biological specimens.
- Assess personal needs in regard to study time and methods and accept personal responsibility for the learning process.
- Improve confidence in scientific knowledge and ability to apply knowledge to related situations.
- Understand the relationship between science and other subject areas, including interdisciplinary approaches to global issues and the relationship of core concepts from chemistry, statistics, geology, and other disciplines to life science concepts.
- Read and discuss articles related to current issues in biology.
- Take an active role in one's own education by taking personal responsibility for learning, learn to explain topics in student's own words, understanding the need to stay on top of material given.
- Work well independently and in small groups. Show self-direction and motivation and contribute to group work.
- Understand the scientific method and critically evaluate scientific information as related to real world problems.

INSTRUCTION AND GRADING

Instructional (Contact) Hours:

Type	Duration
Lecture	39
Seminars/Tutorials	
Laboratory	
Field Experience	
Other (<i>specify</i>):	
Total	39

Grading System: Letter Grades Percentage Pass/Fail Satisfactory/Unsatisfactory Other

Specify passing grade: 50%

Evaluation Activities and Weighting (total must equal 100%)

Assignments: 20% <i>Specify number of, variety, and nature of assignments:</i>	Lab Work: Reports: 8%	Participation: % <i>Specify nature of participation:</i>	Project: % <i>Specify nature of project:</i>
Quizzes/Test: %	Midterm Exam: 20%	Final Exam: 25%	Other: Lab Exam: 20% Evaluative Review of a Scientific Article: 7%

TEXT(S) AND RESOURCE MATERIALS

Provide a full reference for each text and/or resource material and include whether required/not required.

Required Textbook: Reece J.B., Taylor M.R., Simon E.J., Dickey J.L. 2012 7th Ed. Biology: Concepts and Connections. Pearson
Lab manual: Dickey J., 2002 Laboratory Investigation for Biology. Pearson

COURSE TOPICS

List topics and sequence covered.

Week	Topic
Week 1	Evolution and Themes in Biology, The cell cycles
Week 2	Meiosis and sexual life cycles genetics
Week 3	Chromosomal Basis of inheritance Genomic evolution
Week 4	Animal development
Week 5	Darwinian evolution and population genetics

Week 6	The Origin of Species The history of life on Earth
Week 7	Principles of classification Evolutionary relationships and biological diversity – Bacteria and Archaea Mid-term
Week 8	Diversity – Protista, Fungi
Week 9	Diversity – Plants
Week 10	Diversity – Animals 1
Week 11	Diversity -Animals II
Week 12	Principles of ecology 1
Week 13	Principles of ecology II
Week 14	Final Exam

NOTES

1. Students are required to follow all College policies. Policies are available on the website at: [Coquitlam College Policies](#)
2. To find out how this course transfers, visit the BC Transfer Guide at: bctransferguide.ca