COQUITLAM COLLEGE
Established 1982

COURSE OUTLINE

Effective Semester: Spring 2024

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 is designed as the complementary second half to Principles of Biology I (BIOL 101) and provides a detailed examination of the evolutionary history of life and the diversity of living things. This course also includes a mandatory laboratory component exploring concepts from the lectures.

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 regarding 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 tother 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	52
Seminars/Tutorials	
Laboratory	39
Field Experience	
Other (*specify):*	
Total	91

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

Specify passing grade: 50%

Evaluation Activities and Weighting (total must equal 100%)

Assignments: % *Specify number of, variety, and nature of assignments:*	Lab Work: Reports: 10%	Participation: 5% *Specify nature of participation:*	Project: % *Specify nature of project:*
Quizzes/Test: 10%	Midterm Exam: 20%	Final Exam: 30%	Other: Lab Exam: 25%

TEXT(S) AND RESOURCE MATERIALS

Textbook: Freeman, S., Allison, L., Black, M., Podgorski, G., Taylor, E., Harrington, M., Sharp, J. C. (2018). Biological Science, Third Canadian Edition. Pearson.

Lab Manual: Morgan, J. G., Carter, M. E. G. C. (2001). Investigating Biology Laboratory Manual, Fifth Edition. Pearson

COURSE TOPICS

List topics and sequence covered.

Week	Topic
Week 1	Diversity of Life
Week 2	Evolution
Week 3	Phylogeny and the Origin of Life
Week 4	Meiosis and the Chromosomal Basis of Inheritance
Week 5	Mendel and Genetics
Week 6	Evolution of Populations

Week 7	**Mid-term**
Week 8	Diversification of Life: Protists and Fungi
Week 9	Diversification of Life: Animals
Week 10	Principles of Ecology
Week 11	Population and Community Ecology
Week 12	Ecosystems and Global Ecology
Week 13	Biodiversity and Conversation Biology
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
3. This is a lab course. Weekly lab assignments will be introduced and conducted during the lab. Some lab assignments will be completed during class, and some will be completed and submitted on a later date. The goals of the labs are to prepare for the lab exam, support concepts in biology and encourage the development of analytical, practical skills. Students are expected to attend all lectures and labs.
4. Attendance in the labs is mandatory and any missed work will be assigned a zero grade.
5. Students must achieve a minimum of 50 % to pass the course, which includes both lecture and lab components. If a student fails the lab component of the course, a maximum of "P" grade will be given irrespective of the grade received in the lecture component.

Last Reviewed: January 2024
Last Revised: January 2024