Introduction to Biology 1 – BIOL 101

University Studies Program

Course Outline

COURSE IMPLEMENTATION DATE: **Pre 1998**
OUTLINE EFFECTIVE DATE: **September 2014**
COURSE OUTLINE REVIEW DATE: **April 2019**

GENERAL COURSE DESCRIPTION:

An introduction to the structure and function of organisms with particular reference to molecular, biochemical and physiological aspects of the living world. Designed for students seeking a degree or diploma in a field of science or technology, BIOL 101, with BIOL 102, lays the foundations on which the higher-level courses in Biology are based. It is also suitable as an elective course for general interest or arts students.

Program Information: BIOL 101 and BIOL 102 can be used as components of an Associate of Arts or an Associate of Science degree at COTR.

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	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Course Outline Author or Contact:
Betty Mosher, BA, MSc, PhD

Signature

APPROVAL SIGNATURES:

Department Head
Ildi Walkley
E-mail: walkley@cotr.bc.ca

Department Head Signature

Dean of Instruction
Darrell Bethune
E-mail: bethune@cotr.bc.ca

Dean of Instruction Signature

EDCO

Valid from: September 2014 – April 2019

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: Biology 12 or BIOL 090

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:

Raven P, Johnson G, Mason K, and Losos J. 2014. *Biology.* 10th ed. McGraw Hill.

Biology 101 Lab Packet (available at the COTR bookstore)

Please see the instructor's syllabus or check COTR's online text calculator http://www.cotr.bc.ca/bookstore/cotr_web.asp?IDNumber=164 for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

University Studies at the College of the Rockies allow students to complete their first two years of study towards a university degree. College students gain academic knowledge and skills in their chosen subjects. They also cover general problem-solving and critical thinking skills. The combination can empower them to participate as educated citizens in the economic, political, and cultural life of their communities.

Upon the successful completion of this course, students should be able to

- use the facilities of a standard undergraduate biology laboratory;
- appreciate the role that biology plays in everyday life;
- comprehend and interpret detailed scientific and/or technical information from texts;
- facilitate the creative problem-solving process using a variety of techniques, such as brainstorming, analogy, probing, attitude and analysis;
- make generalizations (transfer knowledge and training to new situations);
- conduct research and write scientific papers:
  - articulate what is meant by "professional communication";
  - search for information in the professional literature (print libraries, electronic databases, government records, internet sources, etc.);
  - organize information for a specified audience to use in a meaningful way;
  - use of proper scientific citation techniques;
  - record numerical data and perform simple statistical operations;
  - read, understand and create simple graphs;
  - evaluate and validate research results; and
  - construct a discussion section to compare results to previously documented work of others;
- develop informed responses to local and global issues; and
- demonstrate an understanding of interconnected local and global issues.

Note: Biology 101 and 102 together constitute a first year, university level, general biology course designed primarily to lay the groundwork for further studies in the sciences.

This course should help students

- use written and oral communication skills effectively, employing methods appropriate to message and context;
- think clearly and critically, fusing experience, knowledge and reasoning into considered judgment;
- identify, interpret and solve problems, effectively implementing and evaluating proposed strategies;
- comprehend and interpret detailed scientific and/or technical information from text;
- search for information in the professional literature;
- assess and apply potential mathematical strategies for suitability and effectiveness;
- work effectively with others in a laboratory situation;
- receive, comprehend and interpret a sequence of instructions;
- plan and sequence a number of overlapping activities; and
- use equipment requiring careful procedures.

COURSE TOPICS:

- Introduction
- Scientific Experimentation
- Cell Biology
- Membranes and Cell Physiology
- Basic Biochemistry
- Enzymes
- Cellular Respiration
- Photosynthesis
- Plant Form and Function
- Animal Form and Function

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

ESSENTIAL SKILLS DEVELOPED IN THIS COURSE:
Students can expect to develop the following skills in this course:

Computer Skills
- Access COTR's online learning resources

Skills for Busy Students
- Use support systems and College resources

Writing Skills
- Scientific Citation Methods

Research Skills
- Use the library catalogue; renew materials and place holds on resources
- Use the OUTLOOK database (database providing access to all libraries in BC)
- Use full-text online database to locate current journal and magazine articles
- Place interlibrary loans

- Use the internet to locate and evaluate information
- Understand what constitutes *plagiarism* in academic writing
- Cite, save and print information for research

EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Lab Component	37%
Midterms	35%
Final Exam	28%
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.

Notes: Retests for failed exams are not available in this course.
Late assignments are penalized by 10% per each 24-hour period.

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 will endeavour to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.