

ORIGINAL COURSE IMPLEMENTATION DATE: REVISED COURSE IMPLEMENTATION DATE: May 1994 September 2020 March 2026

COURSE TO BE REVIEWED (six years after UEC approval): Course outline form version: 05/18/2018

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: BIO 111	Ν	Number of Credits: 5 Course credit policy (105)						
Course Full Title: Introductory Biology I								
Course Short Title:								
(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)								
Faculty: Faculty of Science	D	Department (or program if no department): Biology						
Calendar Description:								
A detailed overview of current concepts in biology designed for students majoring in biology or applying to professional programs. Emphasizes cellular basis of life, biochemical processes, cell structure, and genetics.								
Prerequisites (or NONE):	bllowing: ([one one of Chemis and Physiolog 1, Chemistry 1	ving: ([one of Life Sciences 11, Biology 11, or BIO 083 with a C+ or of Chemistry 12, CHEM 093, or CHEM 110 with a C or better]) or ([one Physiology 12, Biology 12, or BIO 093 with a C+ or better] and [one of hemistry 12, CHEM 083, CHEM 093, or CHEM 110 with a C or better]).						
Corequisites (if applicable, or NONE):								
Pre/corequisites (if applicable, or NONE):								
Antirequisite Courses (Cannot be taken for additional credit.) Former course code/number: Cross-listed with: Dual-listed with: Equivalent course(s): (If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit			Special Topics (Double-click on boxes to select.) This course is offered with different topics: □ No □ Yes (If yes, topic will be recorded when offered.) Independent Study If offered as an Independent Study course, this course may be repeated for further credit: (If yes, topic will be recorded.) □ No □ Yes, repeat(s) □ Yes, no limit					
			Transfer Credit					
Typical Structure of Instructional Hours			Transfer credit already exists: (See <u>bctransferguide.ca</u> .)					
Lecture/seminar hours		45						
Tutorials/workshops		12	12 Submit outline for (re)articulation:					
Supervised laboratory hours		45						
Experiential (field experience, practicum, int	ternship, etc.)		Grading System					
Supervised online activities			Letter Grades Credit/No Credit					
Other contact hours:	Total hours	102	Maxim	um enrolment (for infor	mation only): 36			
	Expected Frequency of Course Offerings:							
Labs to be scheduled independent of lecture	hours: 🗌 No	X Yes	Every s	emester (Every semeste	r, Fall only, annually, etc.)			
Department / Program Head or Director: Anthony Stea				Date approved:	December 2019			
Faculty Council approval				Date approved:	January 10, 2020			
Dean/Associate VP: Lucy Lee				Date approved:	January 10, 2020			
Campus-Wide Consultation (CWC)				Date of posting:	March 20, 2020			
Undergraduate Education Committee (UEC) approval				Date of meeting:	April 24, 2020			

BIO 111

Learning Outcomes:

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

- a) Demonstrate a foundational understanding of core concepts in Biochemistry (e.g. chemical bonding, cellular macromolecules, enzymes, and metabolism).
- b) Demonstrate a foundational understanding of core concepts in Cell biology (e.g. cellular organelles, cell membranes, cell division).
- c) Demonstrate a foundational understanding of core concepts in Genetics (e.g. Meiosis, chromosomal inheritance, Mendelian genetics, DNA and biotechnology, intro to gene expression).
- d) Engage in hypothesis testing and experimentation using biological equipment (e.g. microscopes, spectrophotometers, etc.).
- e) Work collaboratively in small groups to divide experimental lab work, gather evidence, and analyze data.
- f) Write lab assignments and formal lab reports to summarize main scientific findings from experiments.

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

Typical Instructional Methods (Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.) Lectures and tutorials which will include: demonstrations, small group discussions, audiovisual presentation, the use of models, videos, overhead transparencies, and charts. The tutorials will be used for general discussions, amplification of materials in the lectures and reading assignments, answering student queries, small group discussions, and quizzes. Laboratory exercises, in a series of three hour laboratory sessions, will complement the materials given in lectures.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Ту	Typical Text(s) and Resource Materials (If more space is required, download Supplemental Texts and Resource Materials form.)						
	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year		
1.	Freeman	Biological Science Custom Volume 1 with Mastering and Components	\boxtimes	Pearson	2019		
2.	In House	Lab Manual	\boxtimes	UFV			
3.							
4.							
5.							
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Required Additional Supplies and Materials (*Software, hardware, tools, specialized clothing, etc.*) Students are required to buy a lab coat.

Typical Evaluation Methods and Weighting

Final exam:	30%	Assignments:	%	Field experience:	%	Portfolio:	%
Midterm exam:	25%	Project:	%	Practicum:	%	Other:	%
Quizzes/tests:	10%	Lab work:	35%	Shop work:	%	Total:	100%

Details (if necessary):

Typical Course Content and Topics

Lecture topics:

- The use of the scientific method in the study of biology
- Chemical bonding overview
- Water and the environment
- Macromolecules
- Metabolism and enzymes
- The cell
- Cell membranes
- Cellular respiration
- Photosynthesis
- Cellular communication
- Mitosis
- Cancer
- Meiosis

- Genetics
- Chromosomal basis of inheritance
- DNA and Biotechnology
- Gene expression

Lab topics:

- Measurement: scientific method
- Microscopy and cells
- Enzymes
- Genetics
- Membrane transport
- Energy transformations
- Cell division