

ORIGINAL COURSE IMPLEMENTATION DATE: REVISED COURSE IMPLEMENTATION DATE: September 1988 September 2018 June 2022

COURSE TO BE REVIEWED (six years after UEC approval): Course outline form version: 10/27/2017

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

Course Code and Number: BIO 093	I	Number of Credits: 3 Course credit policy (105)				
Course Full Title: Provincial-Level Biology						
Course Short Title:						
Faculty: Faculty of Access and Continuing E	ducation I	Department: U	lpgrading	and University Preparati	on	
Calendar Description:						
Mammalian organ systems will be studied in detail. Organic and basic chemical processes will be used as a basis of study for the organ systems investigated. Laboratory skills are developed in a series of laboratory sessions designed to enhance the learning outcomes associated with the lecture material.						
Prerequisites (or NONE): One of the following: (C- or better in one of Anatomy and Physiology 12 or Biology 12)						
(C+ or better in one of Biology			ogy 11, L	gy 11, Life Sciences 11, or BIO 083).		
	Note: Chemistry 11 or CHEM 083, and/or Principles of Mathematics 11, Applications of Mathematics 11, Foundations of Mathematics 11, Pre-calculus 11, or MATH 085 are highly recommended. (<i>Prerequisites updated in 2019.</i>)				ematics 11, Applications of us 11, or MATH 085 are	
Corequisites (if applicable, or NONE):	NONE					
Pre/corequisites (if applicable, or NONE):	NONE					
Antirequisite Courses (Cannot be taken for additional credit.) Former course code/number: N/A Cross-listed with: N/A Dual-listed with: N/A Equivalent course(s): N/A			Special Topics This course is offered with different topics: No Yes If yes, different lettered courses may be taken for credit: No Yes, repeat(s) Yes, no limit			
Typical Structure of Instructional Hours			Transfer credit already exists: (See <u>bctransferguide.ca</u> .)			
Lecture/seminar hours			No Yes Submit revised outline for rearticulation:			
Tutorials/workshops						
Supervised laboratory hours 45			🛛 No 🔲 Yes			
Experiential (field experience, practicum, int	ernship, etc.)		Grading System			
Supervised online activities			∠ Letter Grades □ Credit/No Credit			
Other contact hours: Expected Frequency of			ed Frequency of Cours	e Offerings:		
Total hours 90 Every semester					-	
Labs to be scheduled independent of lecture hours: 🛛 No 🗌 Yes						
Department / Program Head or Director: Greg St. Hilaire				Date approved:	January 10, 2018	
Faculty Council approval				Date approved:	January 31, 2018	
Dean/Associate VP: Sue Brigden				Date approved:	January 31, 2018	
Campus-Wide Consultation (CWC)			Date of posting:	February 16, 2018		
Undergraduate Education Committee (UEC) approval				Date of meeting:	February 23, 2018	

Learning Outcomes:

Human Biology:

- A. Cell Biology
 - Explain the role of molecules, including water, carbohydrates, proteins, lipids, and nucleic acids
 - Describe major structures and functions of cells and their components, including the basic mechanisms of protein synthesis, the basic mechanisms of membrane transport, and the basic mechanisms of DNA replication
 - Describe the role of enzymes and their importance to cellular processes
 - Outline the processes of cellular respiration
 - Describe and compare mitosis and meiosis
 - B. Genetics

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- Describe the principles of inheritance
- Solve basic genetics problems
- Describe the role of DNA
- C. Human Biology
 - Apply the concept of homeostasis
 - Demonstrate knowledge of integration of tissues, organs, and systems
 - Identify structures and describe functions of at least six of the following:
 - Skeleto-muscular system
 - Digestive system
 - Cardiovascular system
 - Blood and immunity
 - Respiratory system
 - Endocrine system
 - Nervous and sensory system
 - Excretory system
 - Reproductive system

Options

The following topics may be included:

- Bioethics
 - Biotechnology
 - Cancer
 - Human development
 - Local topics
 - Nutrition
 - Photosynthesis
 - Public health issues

Laboratory Skills

All biology courses must include a minimum of seven dedicated laboratory and /or fieldwork activities, wherein biology learners will:

- Write a formal lab report
- Demonstrate familiarity with common lab and field equipment and its use
- Conduct lab and field procedures safely and ethically
- Demonstrate microscope skills
- Collect and record data effectively
- Analyze and interpret data collected
- Communicate results and conclusions

Prior Learning Assessment and Recognition (PLAR)

Yes INO, 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, demonstrations, small group discussion, student participatory activities, laboratory sessions (3hrs/week), MS PowerPoint slides, overhead transparencies, and audiovisual presentations will be used to present the course material.

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

Typical Text(s) and Resource Materials							
	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year		
1.	Mader	Inquiry Into Life	14	McGraw Hill	2015		
2.		BIO 093 Lab Manual UFV course pack			2015		
Re	quired Additional Supplies a	nd Materials (Software, hardware, tools, special	ized clothing, etc.)				
Lat	o coats						

BIO 093		Un	iversity of the Fras	ser Valley Of	ficial Undergraduate C	Course Ou	tline	Page 3 of 3		
Typical E	Evaluation Me	thods and	d Weighting							
Final ex	am:	30%	Assignments:	%	Field experience:	%	Portfolio:	%		
Midterm	exam:	20%	Project:	%	Practicum:	%	Other:	%		
Quizzes	/tests:	15%	Lab work:	35%	Shop work:	%	Total:	100%		
Details (i	Details (if necessary):									
Typical C	Course Conte	nt and To	pics							
Typical Course Content and Topics Lecture Topics: Scientific Method Classification of Life Energy and laws of thermodynamics Measurement and the metric system Basic Chemistry Organic Chemistry (the 4 basic types of macromolecules) Cell Structure and Function Cell Membranes Cell Cycle and Mitosis Photosynthesis Enzymes CellUar Respiration Human Organization Human Organization Human Organization Nutrition Cardiovascular system Digestion Nutrition Cardiovascular system Excretory System Excretory System Immed System Meisois Genetics, including basic problem solving DNA Structure and Protein Synthesis Cancer Laboratory Topics (at least 7 labs will typically be chosen). Examples include: Microscopy and measurement pH and Buffers Osmosis Cell Structure Organic Chemistry										