CAMOSUN COLLEGE
School of Arts & Science
Department of Biology

BIOL 103 RH05 SIPP
Non-Majors General Biology
Fall 2021

COURSE OUTLINE

Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions

This course is for the student interested in learning about the basics of the structure and function of living beings. Topics include cell biology, human anatomy and physiology, basic principles of biochemistry, genetics and nutrition.

1. Instructor Information

(a) Instructor	Annette Dehalt *MSc*		
(b) Office hours	T 6:05–7:00pm OR 7:50-8:45pm (after labs)		
(c) Location	OBHS classroom OR F252A (Fisher Bldg)		
(d) Phone	N/A	**Alternative:**	
(e) E-mail	dehalt@camosun.ca		
(f) Website	annettedehalt.opened.ca		

2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Describe the concept of homeostasis.
2. Explain how basic physicochemical changes can impact cell function.
3. Work in a culture of scientific endeavor and use critical thinking skills.
4. Identify the critical roles played by water in the maintenance of life on earth.
5. Explain the structures and roles of biological macromolecules, particularly carbohydrates, proteins and lipids.
6. Describe the complexity and diversity of cellular ultrastructure and the functions of significant cellular organelles, in particular chloroplasts, mitochondria, ribosomes, Golgi apparatus, cilia and flagellae.
7. Describe basic metabolism and energy producing pathways within the cell.
8. Explain the concept of the gene in the contexts of both Mendelian inheritance as well as the biochemical expression of genetic information.
9. Relate the structure of nucleic acids to the storage and replication of genetic information.
10. Explain the mechanisms used to regulate and translate genetic information into the assembly of functional proteins.
11. Describe the interactions between the environment and long-term changes in genetic information, particularly in consideration to neoplasia.
12. Describe the anatomy of the human digestive, cardiovascular and excretory systems and explain how the physiology of these organ systems is related to organization at the molecular and cellular level.
13. Describe the structure and explain the functions of the human immune system. Apply this knowledge to immune dysfunction, particularly allergies and AIDS.

3. Required Materials

(a) **Textbook**: BIOLOGY NOW (Houtman, Scudellari, Malone; 2021), FREE e-copy provided
(b) **Lab Manual**: Biology 103 Lab Manual (Fall 2021), Camosun College. Individual labs are available to download from the course website – please bring a paper copy to lab
(c) **Lecture Outlines**: Lectures will be delivered in PowerPoint and are available in pdf format on the course website.

4. Course Content and Schedule

Lectures: M 9:00-10:20am, Th 10:20-11:35am & 6 Fridays 9:00-10:20
Lab: T 3:15-6:05 pm (OBHS) **OR** 5:00-7:50 pm (CC F226)

Wk	Dates	LECTURE TOPICS	Textch #	Lab #	LAB TOPICS	Lab loc
1	Sept 10	Course Introduction				
2	Sept 13 – 17	Science; Biochemistry; Water &pH; Organic Macromolecules	1 3	1	Science	OBHS
3	Sept 20 - 24	Cell Biology Cell Membranes/Transport	4	2	Water & pH	OBHS
4	Sept 28 – 29 *M=Pro-D* *Th=Truth&Rec*	*No 103 classes due to new Truth & Reconciliation holiday and Camosun lab rescheduling of ALL Bio 103 labs that week and following weeks*				
5	Oct 4 - 8	Energetics & Enzymes Cellular Respiration Photosynthesis	5	3	Macromolecules	CC
6	Oct 12 – 15 *M=Thanksg.*	**MIDTERM 1 (Th Oct 14)**		4	Microscopes & Cells	OBHS
7	Oct 18 – 21	Cell Division: Mitosis/Meiosis; Cancer	6	5	Diffusion & Osmosis	OBHS
8	Oct 25 - 29	Inheritance Patterns: Mendelian Genetics +	7		**LAB EXAM 1**	CC
9	Nov 1 - 5	Inheritance Patterns: Sex-linked Traits +	8	6	Enzymes	CC
10	Nov 8 – 10 *Th=Remembr.*	DNA Replication Mutations	9	8	Genetics	OBHS
11	Nov 15 - 19	Protein Synthesis: Transcription/Translation	10	7	Mitosis	OBHS
12	Nov 22 - 26	Gene Expression/Control **MIDTERM 2 (Th Nov 25)**	10	9	Digestion & Nutrition	CC
13	Nov 29-Dec 3	Homeostasis Digestion & Nutrition	22 23	10 A&B	Anatomy	CC
14	Dec 6 - 10	Circulation Respiration Excretion	24		**LAB EXAM 2**	CC
15	Dec 13	Immune System	25			

Note: Scheduled dates, topics and lab locations are subject to change

FINAL EXAM TBA

5. Basis of Student Assessment (Weighting)

Assignments:	15%
Midterm 1	15%
Midterm 2	15%
Lab Exam 1	15%
Lab Exam 2	15%
Final Exam:	25%

Midterms 1 and 2, as well as the lab exams, will be unit exams.
The final lecture exam will be cumulative for all lecture material.
Exams should be completed in pen.

6. Grading System

[X] Standard Grading System (GPA)

[ ] Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

N/A

8. College Supports, Services and Policies

Immediate, Urgent, or Emergency Support
If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ http://camosun.ca/about/mental-health/emergency.html or http://camosun.ca/services/sexual-violence/get-support.html#urgent

College Services
Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at http://camosun.ca/

College Policies
Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at http://camosun.ca/about/policies/. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS *http://camosun.ca/about/policies/index.html*

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at http://camosun.ca/about/policies/index.html for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	*In progress*: A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	*Compulsory Withdrawal*: A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

Academic Conduct: Be sure that you are familiar not only with the Student Conduct Code (http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf.), but also with the General Department Safety Policies, which will be provided in lab. **Cheating or plagiarism will not be tolerated in any form, and will result in "0".**

Attendance: You are expected to attend all classes and labs, and be on time. It is your responsibility to acquire all information given during a class missed, incl. notes, hand-outs, assignments, laboratory data, exam information etc. A 1% final grade penalty applies to any unexcused absence from lab. Frequent lates may count as an absence. Should you miss roll call at the beginning of lab, please identify yourself to the instructor as "late" or you may remain marked "absent."

Exams: Exams have to be written when scheduled. There are no make-up exams during the term. **A missed exam results in "0" except in case of *documented* emergency or illness** (**doctor's note** required stating that student is too sick to attend class during a specified time period). Valid documentation of illness/emergency needs be received **within 1 week** of the illness/emergency. With a valid excuse, the weighting of the missed exam will be added to the final exam, along with additional questions on course material of that unit. Please note: holidays or scheduled flights are not considered to be emergencies! **Please bring a pen to all exams. No programmable devices are allowed in exams.**

Laboratories: It is absolutely necessary to read and mentally **work through each exercise before coming to lab**. Otherwise you may not be able to finish on time, annoy your lab partner, or flunk a pre-lab pop quiz. Please also come prepared with a pen and pencil, and a printed copy of the lab. Under NO circumstances will students ingest food or drink in the lab. Taking oral medication or applying makeup or lip balm in the lab is also prohibited. You may leave the lab at a convenient time if you are thirsty, need a snack or require medication. For safety reasons students are required to wear closed-toe shoes and pants in all lab times. Flip flops, sandals or shoes with holes are not acceptable. Lab assignments can only be handed in for labs actually attended (except in cases of documented illness/emergency). You are encouraged to discuss assignments with your lab partner, however, **each assignment has to be your individual work – beware of plagiarism.**

Assignments: Unless otherwise stated, all assignments are due by the ***beginning*** of the lab/class of the due date. A **10%/day non-negotiable late penalty** (rounded to the nearest full mark) applies, except in cases of documented illness/emergency. Late assignments will **not** be accepted after marked assignments have been returned to the rest of the class – usually one week after the due date. A **professional format** is expected, i.e. a **neat, legible, clean** paper copy word-processed or in **pen**. If the assignment is more than one page, separate pages must be **stapled**. "Rough" drafts risk rejection and a subsequent late penalty or reduced marks. Electronic submissions will not be accepted unless the instructor specifically grants an exception.

Study Habits: You will probably find this course not very difficult, but surprisingly labor-intensive. Good (and regular!!) study habits are required to do well in this course. One hour/day is a good starting point. Joining a study group can help make this time more fun. Some **"study hints"** (beyond reading, highlighting and making flash cards!) for efficient use of study time are posted on the course web site. Lecture outlines should be used as a study guide, not as your sole source of information! It is recommended to print these (multiple slides/page) prior to class in order to help follow the lectures and add supplementary notes. You will need to write down key words and short statements for examples and explanations given during lecture. It is also good practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook or other sources. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material. Exam questions will be based on material covered in class. However, studying additional details in the corresponding textbook sections will help you understand the material more thoroughly, and get extra marks for potential bonus questions. It is not sufficient simply to memorize point-form notes! Please keep up with your readings, and take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.