



**CAMOSUN COLLEGE**  
**School of Arts & Science**  
**Department of Biology**

**BIOL-090-D01A/B**  
**College Prep Biology**  
**Fall 2020**

**COURSE OUTLINE**

---

The course description is online @ <http://camosun.ca/learn/calendar/current/web/biol.html>

Ω 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.

---

**1. Instructor Information**

(a) Instructor	Dr. Kate Pettem
(b) Office hours	Mon. 6 – 7pm. By appointment: Tues. 9am – 12pm; Wed. 10am – 1pm; Thurs. 2pm – 5pm
(c) Location	Online
(d) Phone	N/A
	<b>Alternative:</b>
(e) E-mail	<a href="mailto:pettemk@camosun.ca">pettemk@camosun.ca</a>
(f) Website	<a href="https://online.camosun.ca/d2l/home">https://online.camosun.ca/d2l/home</a>

**2. Intended Learning Outcomes**

Upon successful completion of this course, a student will be able to meet the following learning outcomes, as outlined in the 2018-19 BC ABE Articulation Guide (<http://www.bctransferguide.ca/search/abe>):

1. Explain the roles for the various molecules and macromolecules in cellular function;
2. Explain the structure and functions of cells and subcellular structures and compartments;
3. Describe the cellular and molecular processes of cell division, including mitosis, meiosis, DNA replication and gene expression;
4. Describe the cellular and molecular requirements for cell metabolism and the processes of cellular respiration, photosynthesis and carbon fixation;
5. Use the principles of Mendelian inheritance to solve genetics problems;
6. Using examples, explain how human body systems are under controlled by mechanisms of homeostasis;
7. Explain how and why the human body is organized at the cellular, tissue and organ levels;
8. Describe the structure and function of the digestive, cardiovascular, respiratory, endocrine, renal and reproductive systems;
9. Demonstrate effective use of laboratory reagents, equipment and microscopes;
10. Demonstrate the ability to accurately collect and process data in the laboratory setting;
11. Communicate experimental results, interpretations and conclusions effectively, including through formal lab reports.

### 3. Required Materials

- (a) Recommended Textbook: OpenStax Concepts of Biology, 1<sup>st</sup> Canadian Edition. Available (FREE) online: <https://opentextbc.ca/biology/>
- (b) Lab Instructions and Lecture Outlines will be available on D2L.
- (c) Some labs require the use of common household supplies. Please see lab instructions on D2L for details.

### 4. Course Content and Schedule

- (a) Labs: D01A: Mon. 10:30am – 1:20pm  
D01B: Tues. 10:30am – 1:20pm
- (b) Tutorials: Collaborate tutorials will be held weekly on a rotating basis at 12pm (noon).

#### **Additional Information: Course Content and Schedule**

##### **A. Office Hours and Optional Synchronous Activity**

- Each week, we will have a scheduled “live” tutorial on Collaborate. The tutorials will be offered at 12pm (noon) and will rotate each week (Tuesday, Wednesday or Thursday) to try to allow as many students to attend “live” should they wish to. The tutorials will also be recorded and posted on D2L under each week’s module for later viewing and review. There will be specific content reviewed during these sessions, and they are also great time to ask questions about the week’s module and lab activities and connect with other students.
- Office hours will be held on Collaborate every Monday 6 – 7pm. You can sign in during this time to verbally ask questions or type in questions. There is no official content covered during this time and they will not be recorded. In addition, I will be available by appointment for 1-on-1 or small group Collaborate sessions (30 min blocks) during the following times:
  - Tuesdays: 9am – 12pm
  - Wednesdays 10am – 1pm
  - Thursdays: 2pm – 5pm

Please email [pettemk@camosun.ca](mailto:pettemk@camosun.ca) to set up an appointment.

##### **B. Lecture Content**

- The “lecture” portion of the course is divided into 12 modules. The content for each module consists of course notes package (in PowerPoint format). At the top of each Module, you will find “You Should Be Able To” statements. These are the essential points and skills you are expected to acquire and that you will be tested on.
- Each module has a section of “Additional Resources.” These consist of short online explainer videos, video lectures by other Camosun faculty, and links to textbook readings. The content is ordered in approximately the same sequence as the notes. These resources are intended to augment your understanding of the course notes packages – but any additional content not mentioned in the course notes “You Should Be Able To” statements will not be tested.
- Each module has 1-2 review assignments. These assignments are open for the week that we cover the module. You have 3 attempts for each assignment, and the highest mark will be kept. Once the deadline passes, submissions can no longer be made through D2L and will automatically be marked as zero.
- Copies of all assignments can be found in the “Practice” section under quizzes. These are only for review purposes and not for marks. You are allowed unlimited attempts. Each becomes available after the due date of the marked assignment.
- The PowerPoint notes and additional resources for the entire course are available once the course starts. However, the assignments only become available the week we cover that module.

##### **C. Laboratory Content**

- The laboratory portion of the course consists of a mix of individual assignments and tutorials (completed on D2L) and group exercises and assignments (completed at home, written in digital form, and submitted on D2L). Please see the Appendix A below to see group vs. individual labs.
- You are welcome and encouraged to consult with other students or your lab group members for the individual labs, as such, each student will always need to submit their individual assignments to get marks.
- The labs that are completed in groups can be done in whatever way suits your group best. Some labs have “at home” components that are intended to be completed with typical household / kitchen supplies. You can coordinate with your group to determine who will do which part and how you will share your findings (taking pictures or videos, arranging a video call while doing the lab, etc). These labs have a written assignment portion, which are to be completed in your group as well (one assignment per group). Only a single submission is required for the entire group.
- Unless you notify your instructor otherwise, your lab group will be assigned randomly and remain constant for the full term.
- Camlink has assigned a time for your lab (see above); you are welcome to use this time to do your lab or coordinate within your group. Each lab is available for one week.

#### D. Exams

- The two lecture midterms, the two lab exams and the final lecture exam will all be on D2L. They are open book format, timed (either 1.5 or 2 hours) and allowed one attempt each. The dates for each exam are listed in Appendix A; each exam will be available for 24 hours. If you are a CAL student and need an accommodation of extra time for your exam, please contact your instructor at the beginning of the term to arrange for this.
- Study guides for each exam can be found on D2L.
- There is also a final reflective essay assignment in the last few weeks of class; please see D2L for details.

#### E. Course Schedule

- \*Note on Dates: New lecture and lab assignments start each Monday at 11:59pm and are available until the following Monday at 11:59pm, unless otherwise posted. Lab Exams and midterms are open for 24 hours for one attempt and are due on Friday at 11:59pm, as listed in Appendix A. All deadlines appear in the D2L Calendar tool.

**IMPORTANT: PLEASE SEE APPENDIX A ON THE LAST PAGE FOR DETAILED LAB AND LECTURE SCHEDULE, ASSIGNMENT DUE DATES AND EXAM DATES**

### 5. Basis of Student Assessment (Weighting)

- |  |     |
|--|-----|
| (a) Lecture Assignments (Individual)       | 20% |
| (b) Lab Assignments (Individual and Group) | 20% |
| (c) Lecture Midterm 1                      | 10% |
| (d) Lecture Midterm 2                      | 10% |
| (e) Lab Exam 1                             | 10% |
| (f) Lab Exam 2                             | 10% |
| (g) Final Reflective Essay                 | 5%  |
| (h) Final Lecture Exam                     | 15% |

## 6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

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

Please see additional notes under Section 4 (Course Content and Schedule) above.

## 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	<i>Incomplete:</i> 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	<i>In progress:</i> 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	<i>Compulsory Withdrawal:</i> 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.

## APPENDIX A: BIOLOGY 090 FALL 2020 COURSE SCHEDULE

WEEK #	START DATE	DUE DATE	LECTURE MODULE	TUTORIAL DATE	LECTURE ASSIGNMENT(S)	LAB	LAB FORMAT
1	Sept. 7	Sept. 14	Module 1: Intro and Scientific Method	Wed. 9 <sup>th</sup>	- Intro Discussion Post - Course Outline - Intro and Scientific Method	-	-
2	Sept. 14	Sept. 21	Module 2: Chemistry of Life and Macromolecules	Thurs. 17 <sup>th</sup>	- Chemistry Matching - Macromolecules	Lab 1: Science, Data and Graphs	Individual: D2L Tutorial Group: Student Worksheet
3	Sept. 21	Sept. 28	Module 3: Cell Structure and Function	Tues. 22 <sup>nd</sup>	- Tour of the Cell - Cell Energetics and Transport Crossword	Lab 2: Properties of Water	Group: Student Worksheet
4	Sept. 28	Oct. 5	Module 4: Cellular Respiration and Photosynthesis	Wed. 30 <sup>th</sup>	- Cellular Respiration - Photosynthesis Matching	Lab 3: Microscopes and Cells	Individual: D2L Tutorial
5	Oct. 5	Oct. 12	Review <b>LECTURE MIDTERM 1 (Fri. Oct. 9<sup>th</sup>)</b>	Thurs. 8 <sup>th</sup>	-	Lab 4: Diffusion and Osmosis	Group: Formal Lab Report ( <i>Note: formal lab report</i> )
6	Oct. 12	Oct. 19	Module 5: Mitosis and Meiosis	Tues. 13 <sup>th</sup>	- Mitosis and Meiosis	Lab 5: Enzymes	Group: Student Worksheet
7	Oct. 19	Oct. 26	Module 6: Genetics	Wed. 21 <sup>st</sup>	- Genetics	<b>LAB EXAM 1 (Fri. Oct. 23<sup>rd</sup>)</b>	Individual: D2L Tutorial
8	Oct. 26	Nov. 2	Module 7: Transcription and Translation	Thurs. 29 <sup>th</sup>	- Transcription, Translation and Mutations	Lab 6: Mitosis	Individual: D2L Tutorial
9	Nov. 2	Nov. 9	Module 8: Gene Control	Tues. 3 <sup>rd</sup>	- Gene Control and Cancer	Lab 7: Mendelian Genetics and Blood Typing	Group: Student Worksheet
10	Nov. 9	Nov. 16	Review <b>LECTURE MIDTERM 2 (Fri. Nov. 13<sup>th</sup>)</b>	Tues. 10 <sup>th</sup>	-	Lab 8: Case Study (COVID-19)	Individual: D2L Tutorial
11	Nov. 16	Nov. 23	Module 9: Homeostasis and Urinary System	Thurs. 19 <sup>th</sup>	- Tissues and Urinary System Crossword	Lab 9: Human Anatomy and Physiology with Reproduction	Individual: D2L Tutorial
12	Nov. 23	Nov. 30	Module 10: Digestive System	Tues. 24 <sup>th</sup>	- Digestive System	Review	-
13	Nov. 30	Dec. 7	Module 11: Circulatory and Respiratory System	Wed. 2 <sup>nd</sup>	- Circulatory and Respiratory Crossword	<b>LAB EXAM 2 (Fri. Dec. 4<sup>th</sup>)</b>	Individual: D2L Tutorial
14	Dec. 7	Dec. 14	Module 12: Reproductive System	Thurs. 10 <sup>th</sup>	- Reproductive System	<b>FINAL REFLECTIVE ESSAY (Fri. Dec. 11<sup>th</sup>)</b>	Individual: D2L Tutorial
15	Dec. 14 <sup>th</sup>		<b>FINAL EXAM (Mon. Dec. 14<sup>th</sup>)</b>	-			