

COURSE SYLLABUS



COURSE TITLE: BIOL-151: Human Physiology

CLASS SECTION: 001A/B

TERM: Summer 2023

COURSE CREDITS: 3

DELIVERY METHOD(S): In-person lectures and labs

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here. Learn more about Camosun's [Territorial Acknowledgement](#).

For COVID-19 information please visit <https://camosun.ca/about/covid-19-updates>

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

INSTRUCTOR DETAILS

NAME: Laura Biggs

EMAIL: biggs1@camosun.ca

OFFICE: Fisher 352, Lansdowne Campus

HOURS: Mondays 12:30-2pm, Tuesdays 8:30-9am and 4:30-5:30pm, Wednesdays and Thursdays 8:30-9am

(Other meeting times can be arranged on campus or online if these times don't fit with your schedule.)

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

This course is the companion to BIOL 150. It provides an overview of functional relationships within the human body. Physiological processes are studied at both the cellular and organ system level, with an emphasis on the maintenance of homeostasis. Laboratory exercises illustrate basic physiological principles.

PREREQUISITE(S):

All of:

- C in BIOL 150

And one of:

- C in Chemistry 11
- C in Camosun Alternative

CO-REQUISITE(S):

Not Applicable

EXCLUSION(S):

Not Applicable

COURSE LEARNING OUTCOMES / OBJECTIVES

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

1. Describe the concept of homeostasis and explain how it operates in the major physiological systems of the human body.
2. Demonstrate an understanding of the functioning of the major physiological systems of the human body at the cellular and systemic levels.
3. Explain how the major physiological systems of the body interact to bring about biological behaviors.
4. Understand how physiological processes are altered in injury or disease.
5. Apply anatomical vocabulary in a physiological context.
6. Perform laboratory procedures relevant to physiology (observe physiological phenomena, measure physiological data, organize / record / analyze results of physiological experiments).
7. Utilize critical thinking to apply physiological concepts to specific problem solving situations.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

a) **Required Materials:**

i) Lab manual:

Biol 151 Lab Manual S2023 (available for purchase at Lansdowne Campus Bookstore).

ii) Textbook:*

Martini, Nath, & Bartholomew. (2018). *Fundamentals of Anatomy & Physiology*, 11th Ed. Pearson Education, Inc. [available in print and digital versions]

*Note: This is the same textbook that is commonly used for Biol 150 Human Anatomy at Camosun College. If you have an anatomy-only textbook from a previous course, you may choose to purchase a physiology-only textbook for this course.

(b) **Optional Materials:**

i) Lab coats are encouraged but are not required for this course.

ii) OpenStax Anatomy & Physiology (<https://openstax.org/details/books/anatomy-and-physiology>) is a free online textbook.

(c) **Lecture Resources:**

Lectures are based on PowerPoint slides and will be delivered in person. The slides will be posted on the course D2L website, along with additional resources for review and activities to complete. Slides may be downloaded or printed to help follow the lectures.

(d) **Knowledge of Prerequisite Material:**

It is important that you are familiar with material that has already been covered in the prerequisite courses, including Biol 150 (Human Anatomy) and Chemistry 11 (or equivalent). This information is necessary in order to understand many of the concepts covered in Biol 151. Students are expected to review the prerequisite material on their own, as needed, using Chapters 2 and 3 in the textbook and other resources as necessary.

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Lectures: 001AB Mondays and Wednesdays 9:30am-12:20pm F302

Labs: 001A Tuesdays and Thursdays 9:30am-12:20pm F224
001B Tuesdays and Thursdays 1:30pm-4:20pm F224

| WEEK # | DATES | LECTURE TOPICS | LAB TOPICS |
|--------|---------------|---|--|
| 1 | May 1-2 | Course Introduction, Homeostasis, Cell membranes & transport (Ch.1 & 3) | Lab 1: Introduction to physiology lab |
| 1 | May 3-4 | Neural physiology (Ch.12 & 13) | Lab 2: Movement of molecules |
| 2 | May 8-9 | Sensory perception (Ch.15 & 17) Cardiovascular physiology (Ch.20 & 21) | Lab 3: Nervous system |
| 2 | May 10-11 | Cardiovascular physiology cont'd | Lab 4: Senses |
| 3 | May 15-16 | Cardiovascular physiology cont'd Respiratory physiology (Ch.23) | Lab 5: Cardiovascular system and ECG |
| 3 | May 17-18 | Respiratory physiology cont'd Renal physiology (Ch.26 & 27) | Lab 6: Respiratory system and buffers |
| 4 | May 22-23 | NO LECTURE – VICTORIA DAY | NO LAB |
| 4 | May 24-25 | Renal physiology cont'd | Lab 7: Osmoregulation and urinalysis |
| 5 | May 29-30 | LECTURE MIDTERM EXAM Digestion (Ch.24) | Lab 8: Dive reflex |
| 5 | May 31-June 1 | Digestion cont'd Metabolism (Ch.25) | Lab 9: Digestion |
| 6 | June 5-6 | Metabolism cont'd Muscular physiology (Ch.10) Immunology (Ch.22) | Lab 10: Muscle contraction and EMG |
| 6 | June 7-8 | Immunology cont'd Hematology (Ch.19) | Lab 11: Immunology, hematology, and blood glucose regulation |
| 7 | June 12-13 | Endocrine system (Ch.18) Reproductive physiology (Ch.28 & 29) | LAB REVIEW |
| 7 | June 14-15 | Reproductive physiology cont'd Lecture wrap-up and review | LAB FINAL EXAM |
| | June 19-21 | LECTURE FINAL EXAM (Date and time scheduled by College Registrar) | |

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced notice is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

EVALUATION OF LEARNING

| DESCRIPTION | WEIGHTING |
|--------------------------------------|--------------|
| Lecture Quizzes (x 12) | 15% |
| Lecture Assignments (x 4-5) | 10% |
| Lab Assignments (x 11) | 20% |
| Lecture Midterm Exam (Monday May 29) | 15% |
| Lab Final Exam (Thursday June 15) | 15% |
| Lecture Final Exam (TBD) | 25% |
| | TOTAL |
| | 100% |

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information.
<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

Notes about evaluation methods:

- Lecture Quizzes on D2L are open-book and use of the PowerPoint slides is encouraged. Quizzes will be available shortly after each lecture and due two days later at 11:59pm (**no late submissions accepted**). Each quiz allows for **2 attempts**, with your highest grade of the two being kept. A missed submission will result in a grade of zero for that quiz.
- Lecture Assignments will be posted online and announced in class. These assignments must be completed **individually**. Late assignments will be graded but marks equivalent to **10%** of the total value of the assignment will be deducted for each day past the deadline, including weekends. Late assignments will not be accepted once marked assignments have been returned to the class.
- Lab Assignments will be handed out during the lab and are normally due by the end of the lab period, unless otherwise specified by the instructor. Lab Assignments are generally completed in small groups, with one copy submitted per group. Any exceptions will be explained in class.
- The Lecture Midterm Exam takes place during regular lecture hours, whereas the Lecture Final Exam takes place during the final exam period (as scheduled by the College Registrar) and is cumulative. These exams are strictly based on lecture content and are all closed-book exams. The use of phones, smart watches, or other electronic devices during exams is NOT permitted and will result in a zero on the exam.
- The Lab Final Exam takes place during regular lab hours. This exam is strictly based on lab content and is a closed-book exam. The use of phones, smart watches, or other electronic devices during exams is NOT permitted and will result in a zero on the exam.
- Please bring a **calculator** to all exams.

Lecture Attendance

Aside from the first week of classes, attendance will NOT be required for lectures (EXAMS are the only exception to this). However, attending and participating in lectures is strongly recommended to ensure success in this course. If a class is missed, the student is responsible for arranging to obtain information such as notes, handouts, assignments, and announcements.

Laboratory Attendance

Laboratory attendance for this course is **mandatory**. It is expected that students will read and prepare for each lab BEFORE arrival. Lateness in arriving, failure to attend the lab, or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments. Exceptions can be made **at the instructor's discretion** in legitimate cases of emergency (e.g. significant illness); in such cases the instructor must receive **advance notification** to grant approval for any accommodation.

Written Assignments

All assignments must be submitted according to the instructor's criteria. A **professional format** is expected, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty or reduced marks. If the assignment is more than one page, separate pages **must be stapled**.

All assignments are due at the date and time specified. As described on the previous page, late assignments will be accepted with a penalty of **10% per day**, including weekends. Late assignments will not be accepted once marked assignments have been returned to the class.

Plagiarism

You are encouraged to discuss assignments with your classmates, however, **individual assignments must be your own individual work – beware of plagiarism.**

Plagiarizing is appropriating the work or parts or passages of another's writing (including the ideas or language) and passing them off as the product of one's own mind or manual skill (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.1.pdf>).

Except where work is assigned to a group, all written work must be done individually. Plagiarism is a serious offence and is considered to be academic misconduct, and **will not be tolerated**. A student caught plagiarizing will forfeit all credit for the assignment and a note will be sent to the Dean regarding the student's behaviour.

Missed Exams

All exams must be written at the scheduled times. However, it is understood that emergency circumstances occur (e.g. illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student:

- (a) notifies the instructor **in advance** of the exam (not after), and
- (b) provides **acceptable documentation** of the circumstance where possible (i.e. medical documentation).

In the event of emergency circumstances, it is at the instructor's discretion whether to administer a make-up exam or re-allocate marks to an upcoming exam.

*** HOLIDAYS, SCHEDULED FLIGHTS, AND WORK ARE NOT CONSIDERED TO BE EMERGENCIES ***

Be sure not to make travel or work plans for the end of semester until the final exam schedule is finalized and posted. Please ask any family members who might make travel plans on your behalf to consult with you before booking tickets.

Cheating

Cheating is a serious offence and is considered to be academic misconduct. Cheating includes but is not limited to:

- (a) using unauthorized materials or resources in a quiz/exam, and
- (b) providing information to another person regarding exam content.

The consequences for cheating and plagiarism are outlined by Camosun College policies (see <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf>) and penalties may be severe.

Student Safety

Consider the following laboratory safety practices. These are required to participate in all laboratory activities. Students must sign a safety contract in the first lab and follow all safety rules and procedures.

| | |
|-------------------|---|
| Lab footwear | <ul style="list-style-type: none">For safety reasons WorkSafeBC mandates that students are required to wear closed shoes in all lab times. Flip flops, sandals, or shoes with holes are NOT acceptable. |
| Lab coat | <ul style="list-style-type: none">Due to the handling of chemicals and blood in this lab, lab coats are recommended. |
| Eating & drinking | <ul style="list-style-type: none">Absolutely NOTHING may be ingested while in the lab. Chewing gum and applying makeup or lip balm are similarly prohibited.If something must be consumed, then it may be taken out of the lab. |
| Hair | <ul style="list-style-type: none">Long hair must be tied back. |
| Hand washing | <ul style="list-style-type: none">Hands should be thoroughly washed BEFORE leaving the lab. |

Study Habits

This course covers a high volume of material, so attending each lecture and lab is imperative for success. Come to each lecture and lab prepared, having pre-read the material and reviewed any relevant textbook pages. Regularly check D2L for updates and other communication. Mark your calendar with the important dates and deadlines from this syllabus to help you stay on track, and frequently look ahead so you can plan for upcoming exams or due dates. You should plan on spending a minimum of 6 hours outside of scheduled class time for completion of assignments and general studying. It is recommended to set aside specific study times in your weekly schedule to help with time management. These habits will help you throughout your academic career.

Lecture notes will be posted on D2L in PowerPoint form. These should be used as a study guide, not as your sole source of information. You will need to write down additional key words for examples and explanations given during lecture and read the assigned textbook pages. It is also recommended practice to transcribe your notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need assistance with course material or assignments.

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

| | |
|-------------------------------------|---|
| Academic Advising | http://camosun.ca/advising |
| Accessible Learning | http://camosun.ca/accessible-learning |
| Counselling | http://camosun.ca/counselling |
| Career Services | http://camosun.ca/coop |
| Financial Aid and Awards | http://camosun.ca/financialaid |
| Help Centres (Math/English/Science) | http://camosun.ca/help-centres |
| Indigenous Student Support | http://camosun.ca/indigenous |
| International Student Support | http://camosun.ca/international/ |
| Learning Skills | http://camosun.ca/learningskills |
| Library | http://camosun.ca/services/library/ |
| Office of Student Support | http://camosun.ca/oss |
| Ombudsperson | http://camosun.ca/ombuds |
| Registration | http://camosun.ca/registration |
| Technology Support | http://camosun.ca/its |
| Writing Centre | http://camosun.ca/writing-centre |

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](http://camosun.ca/services/accessible-learning/) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services->

and-support/e-2.9.pdf and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Changes to this syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.