



Course Syllabus

Course title: Laboratory Pathophysiology

Class section: MLAB - 173 - BX01C

Term: 2025W

Course credits: 3

Total hours: 75

Delivery method: Blended

Territorial Acknowledgement

Camosun College respectfully acknowledges that our campuses are situated on the territories of the Lək̓ʷəŋən (Songhees and Kosapsun) and W̱SÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

Instructor Details

Name: Tania Pozney

Email: pozneyt@camosun.ca

Instructor Statement

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.

Instructor Office Hours

Office:

Hours:

Room # 317

Hours: by appointment

Course Description

Course Description:

In this course, students review anatomic systems and discuss pathologies and conditions commonly investigated by medical laboratories. Students will focus on learning how tests required in hematology, chemistry, transfusion medicine, histology, cytology, and microbiology provides physicians with critical information for diagnosing, treating, and monitoring health conditions. Students learn how pathologies and conditions affect patient and client interactions and explore appropriate responses by the Medical Laboratory Assistant.

Prerequisites:

All of:

- C+ in MLAB 139

Pre or Co-requisites:

All of:

- C+ in MLAB 147

Course Learning Outcomes / Objectives

Upon successful completion of this course, the learner will be able to

1. Demonstrate knowledge of tests and procedures used when collecting and handling specimens in hematology, chemistry, transfusion medicine, histology, cytology, and microbiology
2. Discuss the nature, relationship, and effects of pathophysiologic processes on the human body as they pertain to the analysis conducted in medical laboratories for specimen handling and collections
3. Classify commonly occurring pathological conditions investigated in laboratory sciences into the divisions of hematology, transfusion medicine, histology, cytology, and microbiology and

describe the nature of each

4. Apply knowledge of commonly investigated pathological conditions as they pertain to the components of laboratory testing procedures (professionalism, interpreting requests, planning and preparing for collecting procedures, establishing patient relationships, performing collection procedures, and pre-analytical preparation)

Course Competencies

Canadian Society for Medical Laboratory Science Competencies

- 1.01 Applies the principles of routine practices.
- 1.02 Uses personal protective equipment, e.g. gloves, gowns, mask, face shields, aprons.
- 1.03 Applies laboratory hygiene and infection control practices.
- 2.01 Demonstrates fundamental knowledge of medical terminology, physiology, anatomy, and disease processes.
- 2.02 Verifies relevant information is provided for test request.
- 2.03 Provides information to the client on specimen collection, transportation, and storage.
- 2.06 Adheres to established protocols for labeling and traceability of specimens.
- 2.07 Delivers specimens considering priority and stability.
- 2.08 Assesses specimen suitability for testing.
- 2.09 Verifies that the pertinent data on the specimen and requisition correspond.
- 2.11 Adheres to guidelines for specimen retention, storage, transportation, and disposal.
- 2.12 Prepares specimens for analysis.
- 3.02 Prepares smears manually or using automated equipment.
- 3.03 Performs routine staining and cover slipping either manually or using automated equipment, e.g. Jenner-Giemsa, Gram, Wright, Hematoxylin and Eosin, Papanicolaou, Leishman.
- 3.04 Selects appropriate culture media, inoculates, and incubates specimens using aseptic technique.

British Columbia Society Laboratory Sciences Competencies

Unit 2A: Anatomy & Physiology

- 2.01 Identify, locate, and possess fundamental knowledge of the functions of the major organs and structures within these body systems, including disorders commonly associated with these

systems: Integumentary, musculoskeletal, circulatory, urinary, digestive, respiratory, nervous, reproductive, endocrine, lymphatic, immune.

- Knowledge of the common tests and procedures related to the above body systems.
- Identify the main structures and functions of the Circulatory system relevant for blood.

Unit 2B: Laboratory Terminology and Measurement

- Define and use correct terminology related to specimen collection.
- Define terminology commonly used in the laboratory.
- Understand and define terminology related to the measurement systems used in the laboratory: SI units, metric system, 24-hour clock collection: arteries, veins, capillaries, blood components, coagulation mechanisms.
- 4.03 Demonstrate knowledge of glassware cleaning, including detergents, disinfectants, and equipment.

Unit 2C: Competencies: Infection Control

- Knowledge and description of infectious diseases and etiological agents: bacteria, fungi, viruses, parasites.
- Have knowledge of and describe basic mechanisms of disease transmission and host interaction and prevention. Importance of hand washing, good hygiene, disinfection controls and MRSA.
- Knowledge of transmission and prevention of Hep A; B; C. Have knowledge of the importance of Hep B vaccination. Knowledge of Transmission and prevention of HIV.

Unit 3D: Collection and Preparation of Urine specimens

- Knowledge of the preparation of urine for microscopic examination.
- Have knowledge of requirements and preparation of urine collection for Cytology.

Unit 3E: Collection and Preparation of Microbiology specimens

- Demonstrate inoculation and streak methods.
- 3.03 Knowledge of staining methods.

Unit 3G: Miscellaneous Specimen Collection and Processing

- Knowledge of the tests and procedures routinely associated with Transfusion Medicine.
- Knowledge of tests performed in Cytology.

Recommended Preparation / Information

We do not have a required textbook for this course, but we have some open education resources available in D2L.

Course Delivery Hours

| ACTIVITY | HOURS / WEEK | # OF WEEKS | ACTIVITY HOURS |
|----------|--------------|---------------------|----------------|
| Lecture | 3 | 15 | 45 |
| Lab | 2 | 15 | 30 |
| | | | |
| | | | |
| | | TOTAL HOURS: | 75 |

** Please note that Camosun is standardized on a 15-week semester which, where applicable, includes a final evaluation week. When an evaluation week is not required this may create a discrepancies in total hours.

Course Schedule, Topics, and Associated Preparation / Activity

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

| Week or Date Range | Lecture | Lab | Quiz/Assignment |
|--------------------|--|---|-----------------|
| Week 1 | Unit 1 - Tissue Overview and Integumentary System | Unit 2 - Skeletal and Muscular Systems Activity for Units 1-2 | |

| Week or Date Range | Lecture | Lab | Quiz/Assignment |
|---------------------------|---|---|--|
| Week 2 | Unit 3 - Nervous System Unit 4 - Digestive System | NO LAB (Day 2 of MLAB 147/151 activity) | Open book quiz #1 (Units 1-2) |
| Week 3 | Unit 5 - Cardiovascular System Unit 6 - Respiratory System | Activity for Units 3-6 | Open book quiz #2 (Units 3-6) |
| Week 4 | Unit 7 - Endocrine System Unit 8 - Reproductive System | Activity for Units 7-8 | |
| Week 5 | Unit 9 - Urinary System Unit 10 - Lymphatic/Immune Systems | Activity for Units 9-10 | Open book quiz #3 (Units 7-10) Term project part 1 due |
| Week 6 | Overview of midterm Introduction to second half of term | Midterm written in lab | Midterm |
| Week 7 | READING BREAK | | |
| Week 8 | Transfusion Medicine | Activity for Transfusion | Quiz #4 - Transfusion Term project part 2 due |
| Week 9 | Hematology 1 | Activity for Hematology | |
| Week 10 | Hematology 2, Coagulation | Activity for Hematology | Quiz #5 - Hematology |
| Week 11 | Chemistry 1 | Activity for Chemistry | Term project part 3 due |
| Week 12 | Chemistry 2 | Term project presentations | Quiz #6 - Chemistry |
| Week 13 | Histology/Cytology | Activity for Histology | Quiz #7 - Histology/Cytology |
| Week 14 | Review, Exam Q&A | Potential lab tour | |

Evaluation of Learning: Weighted

| DESCRIPTION | WEIGHTING |
|--------------------------|------------------|
| Quizzes (7 total) | 35% |
| Term Project | 25% |
| TOTAL | 100% |

| DESCRIPTION | WEIGHTING |
|--------------|-------------|
| Midterm | 15% |
| Final Exam | 25% |
| TOTAL | 100% |

NOTE: CMLA Students must achieve at least a ("C+") in all program courses.

Camosun's Grading Systems

<https://camosun.ca/registration-records/student-records/camosun-grading-systems>

Grade Reviews and Appeals

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 policy** for more information.

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

The Centre for Accessible Learning (CAL) is part of Camosun's Student Affairs unit. CAL coordinates academic accommodations and provides related programs and services to students with documented disabilities.

Students who require academic accommodations are expected to request and arrange accommodations through CAL in a timely fashion. While we understand that not all accommodation needs are known to students at the beginning of a course, accommodations cannot be provided unless the proper process is followed through CAL and an accommodation letter has been released to the instructor. Students are responsible for providing CAL with the proper documentation prior to the beginning of a course.

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 noticed is required.

Deadlines can be reviewed on the CAL exams page

<https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams>

Please consult the CAL webpage for more information:

<https://camosun.ca/services/academic-supports/accessible-learning><https://camosun.ca/registration-records/student-records/camosun-grading-systems>

Artificial Intelligence: A Guide for Students

Generative Artificial Intelligence (GenAI) is an evolving technology that brings potential benefits but also substantial risks. While GenAI tools have the ability to transform how we work and learn, it is essential for the college community to adapt to these changes in a thoughtful and secure way.

When using GenAI tools, students should ensure proper citation and attribution guidelines are followed. This includes acknowledging AI assistance in reports ,presentations, or any external communications. Clear citation helps build trust, ensures ethical use, and reduces the risk of misinformation or copyright issues.

For citation support visit the college's citation style guide.

<https://camosun.libguides.com/cite>

Artificial Intelligence: A Guide for Students

Visit the following website to learn about AI use in academic settings.

<https://camosun.libguides.com/artificialintelligence/home>

Course Guidelines & Expectations

Attendance

Students are expected to be on time; tardiness disrupts the class. When students are more than 5 minutes late (and/or the door is shut), they cannot enter the classroom until the class break period. Since lectures are online, please enter the ZOOM session without disruption and with volume muted. If you choose not to or are unable to attend lecture it is your responsibility to acquire all information given during a class missed, incl. notes, hand-outs, assignments, changed exam dates etc.

Attendance in labs is mandatory. If a lab is going to be missed, you must notify your instructor by email at least one hour before the start of lab whenever possible. If a lab must be missed due to unforeseen circumstances or pre-arranged conditions, a make up lab can possibly be planned with the instructor. Please arrange with the instructor ahead of time so they are aware of your absence.

Missed exams cannot be made up except in case of documented illness (doctor's note required). The instructor must be informed that the students will be missing the exam before the exam start time.

Participation in Learning Activities

Students enrolled in Allied Health & Technologies Programs must participate in learning activities that include intimate and direct personal contact with their classmates during supervised practice. Students are training to perform the duties of a healthcare professional. These duties usually require constant, close physical contact with patients and clients. Students may be required to simulate and perform these activities on one another during this course. Students may also be required to use special hygiene practices and protective gear to protect themselves from the transmission of

communicable disease (like COVID-19). Risk associated with learning and performing the physical duties of a healthcare professional cannot be entirely eliminated by any amount of caution or protection. Students who refuse or are incapable of participating and performing these activities due to personal or medical limitations may only continue to participate in their course work when supported by officially registered accommodations or temporary medical advisory.

Written Assignments

Assignments are due by 23:59 on the assigned day unless otherwise specified. Unless otherwise directed by individual course outlines or assignment descriptions, assignments must be: word processed, double spaced, font meeting APA 7th edition guidelines, with a title page and reference list in APA 7th edition format. Student requiring an extension for the due date of an assignment must discuss with the instructor, at least 24 hours before the due date. Assignment submitted late without an approved extension will result in a 10% deduction in mark for each day late, and will not be accepted after 7 days post due date.

Student Assessment

Students must achieve a minimum of 65% in order to pass this course and use it as a prerequisite. Detailed information regarding assignments will be available on D2L. Complete all assignments on time and submit by the designated due dates. Unless otherwise stated, all assignments will be submitted via D2L.

The use of AI generated tools is permitted ONLY for brainstorming and organizing your ideas. Its use will not be tolerated when passed off as original writings for class assignments. Any assignment that can be proven to have used AI tools in an unauthorized way will be treated as plagiarism and given a zero. (Camosun Academic Policy: <http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf>)

In emergency circumstances, a student may arrange to take an assessment before or after the scheduled time if the student would otherwise be unable to complete the program or course. Exceptions due to emergency circumstances, such as unavoidable employment commitments, health problems, or unavoidable family crises, require the approval of the instructor. Holidays or scheduled flights are not considered to be emergencies. The student may be required to provide verification of the emergency circumstance.

School or Departmental Information

Students are required to read and are accountable for the College policies (outlined below) and practicum guidelines as described in the School of Health and Human Services (HHS) and program handbooks.

[CMLA Program Handbook](#)

Clinical and Practice Placements in HHS

<https://camosun.ca/programs-courses/school-health-and-human-services/hhs-programs/practicums>

School of Health and Human Services (HHS)

<https://camosun.ca/programs-courses/school-health-and-human-services/information-health-and-human-services-students-1#top>

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.

College Policies

Academic Integrity

Students are expected to follow the college's [Academic Integrity policy](#), and be honest and ethical in all aspects of their studies. To help you understand these responsibilities review the online [Academic Integrity guide](#).

The college's [Academic Integrity policy and supporting documents](#) detail the process for addressing and resolving matters of academic misconduct.

Academic Accommodations for Students with Disabilities

If you have a documented disability and need accommodations contact the Centre for Accessible Learning (CAL). CAL will arrange the appropriate academic accommodations so you can participate in all academic activities. Visit the [CAL website](#) for more information

Academic Progress

The [Academic Progress policy](#) details how the college monitors students' academic progress and what steps are taken if a student is at risk of not meeting the college's academic progress

standards.

Acceptable Technology Use

The [Acceptable Technology Use](#) policy outlines how students are expected to use college technology resources, this includes using your own devices on the college's network. The use of the college resources in a way that violates a person's right to study in an environment free of discrimination, harassment or sexual violation is prohibited.

Course Withdrawals Policy

For details about course withdrawal see the [Course Withdrawals policy](#). Be aware of the [deadlines for fees, course drop dates, and tuition refunds](#).

Grading Policy

To learn more about grading see the [Grading Policy](#).

Grade Review and Appeals

The process to request a review of grades is outlined in the [Grade Review and Appeals policy](#).

Medical / Compassionate Withdrawals

If you have experienced a serious health or personal issue, you may be eligible for a [medical/compassionate withdrawal](#). The [Medical / Compassionate Withdrawal Request form](#) outlines what is required.

Sexual Violence

If you have experienced sexual violence on or off campus, you can get support from the Office of Student Support. The Office of Student Support is a safe and private place to talk about what supports are available and your options for next steps. Visit the [sexual violence support and education site](#) to learn more or email oss@camosun.ca or phone: 250-370-3046 or 250-370-3841.

Student Misconduct (Non-Academic)

Camosun expects students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Review the [Student Misconduct Policy](#) to understand the college's expectations of conduct.

Looking for other policies? See [Camosun College Policies and Directives](#)

Services and Supports

Services are free and available to all students.

| | |
|---|---|
| Academic Supports Centre for Accessible Learning English, Math and Science Help Centres Library Writing Centre & Learning Skills | Enrollment Supports Academic Advising Financial Aid and Awards Registration Tuition and Fees |
| Health and Wellness Counseling Fitness and Recreation Office of Student Support | Applied learning Co-operative Education and Career Services Makerspace |

The [Centre for Indigenous Education Centre and Community Connections](#) provides cultural and academic supports for Indigenous students.

[Camosun International](#) provides supports to international students.

[The Ombudsperson](#) provides an impartial, independent service to ensure students are treated fairly. The service is a safe place for students to voice and clarify concerns and complaints.

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

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 the course content or schedule. When changes are necessary the instructor will give clear and timely notice.