

# COURSE SYLLABUS



COURSE TITLE:	MLAB 139 – Pre-Analytics & Laboratory Principles
CLASS SECTION:	BX01A-C
TERM:	F2024
COURSE CREDITS:	3
DELIVERY METHOD(S):	Synchronous

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

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## INSTRUCTOR DETAILS

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NAME:	Jesse Invik
EMAIL:	<a href="mailto:InvikJ@camosun.ca">InvikJ@camosun.ca</a>
OFFICE:	
HOURS:	On request

*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

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### **Restricted to students in Certified Medical Laboratory Assistant**

In this course, students examine the function and safe operation of laboratory and accessory analytical equipment found in the medical laboratory environment. Students explore technical and biological principles affecting the preparation and quality of samples. By focusing on chemical analysis and reagents, students will learn how and why blood products and other samples are collected, labelled, prepared, handled, stored, packaged and transported in the pre-analytical phase.

PREREQUISITE(S):	One of: C in Anatomy and Physiology 12 or C in Camosun Alternative
CO-REQUISITE(S):	N/A
EQUIVALENCIES:	N/A

## COURSE OBJECTIVES AND MAPPED PROFESSIONAL COMPETENCIES

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

- identify and describe the equipment (including accessories) and components commonly found in medical laboratory departments, and explain how they interrelate to produce a diagnostic analysis of specimens.
- identify and demonstrate the skills necessary for proper collection, labelling, and preparation of specimens other than blood for distribution to clinical laboratory departments.

- c) explain the influence of correct labeling and handling procedures, selecting appropriate collection tubes, order of draw, preparation, and aseptic technique on accurate results.
- d) discuss problem solving and troubleshooting for analytical errors based on incorrect labeling and handling procedures, improper selection of collection tubes, incorrect order of draw, preparation errors, and poor aseptic technique.

**Competencies:**

- a) Knowledge of safe and effective use of laboratory equipment and devices commonly encountered in the laboratory and how they contribute to the diagnostic process.
- b) Prepare, label, and store chemicals, reagents and stains demonstrating aseptic techniques, including appropriate disinfection of glassware. Knowledge of the importance of specimen collection with an emphasis on specimen integrity, priorities, sample volumes and storage requirements as they relate to test results
- c) Knowledge of the proper instruction of patients for collection and preparation of urine and other nonblood specimens for analysis
- d) Employ knowledge of non-blood specimen procedures by practicing collection and preparation techniques used in microbiology

**REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION**

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Warekois & Robinson. (2015) Phlebotomy: Work text and Procedure Manual 5th Ed.

CSMLS Laboratory Safety Guidelines 8<sup>th</sup> or 9<sup>th</sup> Edition

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

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

WEEK or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES	COMPETENCIES CSMLS/BCSLs
1	Lab – No lab, general orientation Lecture – Icebreaker, review of safety contract, overview of D2L, Course outline, class expectations. If time, short intro to lab equipment	<b>Assignment</b> – Background knowledge self assessment	
2	Lab – <b>Unit 1</b> - Equipment and supplies, (lecture component and lab exercise) Lecture – <b>Unit 2</b> -Urinalysis		1.02 - 1.04, 1.06, 1.09. 1.10
3	Lab – Urine collection and analysis, storage and patient instructions Lecture – <b>Unit 2</b> – Centrifuge and aliquot	<b>Assignment</b> – Lab equipment power point report	1.05, 3.01, 4.02, 4.03, 6.08 2B (4.03), 2C (1.01-1.05, 1.07-1.10, 1.13, 1.15)
4	Lab – Centrifuge and aliquot practice Lecture – <b>Unit 3</b> Non-blood specimens	<b>Quiz</b> – Equipment and supplies	2.09 2B, 3D, 3H

5	Lab – Non-blood specimen patient instructions practice Lecture – <b>Unit 3</b> – Discuss assignment 2, check in and review	<b>Assignment</b> - Patient instruction video (groups)	2.12 3H
6	Lab – Further practice with urinalysis, aliquoting, patient instruction. Includes discussion of upcoming lab competency Lecture – <b>Unit 4</b> – Introduction to microbiology	<b>Quiz</b> – Urine and non-blood specimens	2.03, 2.09 2B, 3H
7	Lab – Competency assessment #1 Lecture – <b>Unit 4</b> – Microbiology media and plating		
8	Lab – Microbiology –plating media, making smears Lecture – <b>Unit 4</b> – Microbiology non-blood specimens and worms		3.04 2C, 3E
9	Lab – Gram staining, microscope intro and viewing, further practice streaking, worksheets Lecture – <b>Unit 5</b> - Blood smears	<b>Assignment</b> – Microbiology assignment	4.01 (lecture) 3F - heme, 3F - chem (lab) 2B 4.01, 4.02 (lecture)
10	Lab – Peripheral blood smears and reagent lot number activity Lecture – <b>Unit 6</b> - Lab math	<b>Quiz</b> - Microbiology	3.02, 3.03, 4.01 3F - heme
11	Lab – Peripheral blood smears, slide staining, microscope viewing Lecture – <b>Unit 7</b> – Point of care testing		6.07 2B 4.01, 4.02
12	Lab – Point of care testing Lecture – <b>Unit 8</b> – Automation	<b>Quiz</b> - Lab Math/Blood Smears/Point of Care	2.15, 2.16 (POC), 3.1, 6.03 (Automation lecture) 3F (POC), 3H (automation lecture)
13	Lab – Competency assessment #2 Lecture – Review, case studies		2.08, 2.13 (lecture)
14	Lab – Open lab Lecture – Overview of final exam		

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

## EVALUATION OF LEARNING

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DESCRIPTION	WEIGHTING
Assignments (4)	25%
Quizzes (4)	25%
Lab assessments (2)	20%
Final exam	30%
	<b>TOTAL</b>
	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](https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf) policy for more information.  
<https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf>

## COURSE GUIDELINES & EXPECTATIONS

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### 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, both under the assignments tab and in the content section.
- Complete all assignments on time and submit by the designated due dates. In exceptional circumstances, students may request an extension, however, that extension must be arranged with the instructor **BEFORE** the due date. Depending on the reason, students who have prearranged an extension may still have 10% of the total possible mark deducted per day from late assignments. This will be clearly defined by the instructor so the student is aware of the grading. If an extension is not arranged before the due date, the assignment will automatically have 10% deducted per day, up to 5 days. After 5 days the assignment can not be handed in and will be given a zero.
- A student is only permitted to miss one assignment per term
- Unless otherwise stated, all assignments will be submitted via D2L.
- 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.

(Camosun Academic Policy) <http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf>

### Attendance

- Students are expected to be on time as tardiness disrupts the class. When students are more than 5 minutes late (and/or the classroom door is shut), they cannot enter the classroom until the class break period. Since lectures are online, please enter the zoo room quietly and without disruption.
- If you choose not to or are unable to attend lecture **it is your responsibility to acquire all information given during a class missed**, including notes, hand-outs, assignments, changed exam dates etc. **Please email the instructor as a courtesy so they are aware of your absence.**

- Attendance in labs is mandatory. If a lab must be missed due to **unforeseen circumstances** or **pre-arranged conditions**, a make up lab can be planned with the instructor. This will be up to the student to arrange with the instructor.
- 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.

## SCHOOL OR DEPARTMENTAL INFORMATION

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Health & Human Services Student Handbook: <http://camosun.ca/learn/school/health-human-services/student-info/index.html>

General Practicum Information: <http://camosun.ca/learn/school/health-human-services/student-info/practicum-info.html>

Allied Health & Technologies Department Handbooks:

- Certified Medical Laboratory Assistant: <http://camosun.ca/learn/school/health-human-services/student-info/program-info/cmla.html>
- Diagnostic Medical Sonography: <http://camosun.ca/learn/school/health-human-services/student-info/program-info/sono.html>
- Medical Radiography: <http://camosun.ca/learn/school/health-human-services/student-info/program-info/mrad.html>

Students enrolled in Allied Health & Technologies Programs must achieve a minimum of 65% or a "COM" in each of their courses in order to use their course as a pre-requisite and progress in their program.

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 diseases (like COVID-19). Risks associated with learning and performing the physical duties of a healthcare profession 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.

## STUDENT RESPONSIBILITY

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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

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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 [camosun.ca/services](http://camosun.ca/services).

Support Service	Website
Academic Advising	<a href="https://camosun.ca/services/academic-supports/academic-advising">camosun.ca/services/academic-supports/academic-advising</a>
Accessible Learning	<a href="https://camosun.ca/services/academic-supports/accessible-learning">camosun.ca/services/academic-supports/accessible-learning</a>
Counselling	<a href="https://camosun.ca/services/health-and-wellness/counselling-centre">camosun.ca/services/health-and-wellness/counselling-centre</a>
Career Services	<a href="https://camosun.ca/services/co-operative-education-and-career-services">camosun.ca/services/co-operative-education-and-career-services</a>
Financial Aid and Awards	<a href="https://camosun.ca/registration-records/financial-aid-awards">camosun.ca/registration-records/financial-aid-awards</a>
Help Centres (Math/English/Science)	<a href="https://camosun.ca/services/academic-supports/help-centres">camosun.ca/services/academic-supports/help-centres</a>
Indigenous Student Support	<a href="https://camosun.ca/programs-courses/iecc/indigenous-student-services">camosun.ca/programs-courses/iecc/indigenous-student-services</a>
International Student Support	<a href="https://camosun.ca/international">camosun.ca/international</a>
Learning Skills	<a href="https://camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills">camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills</a>
Library	<a href="https://camosun.ca/services/library">camosun.ca/services/library</a>
Office of Student Support	<a href="https://camosun.ca/services/office-student-support">camosun.ca/services/office-student-support</a>
Ombudsperson	<a href="https://camosun.ca/services/ombudsperson">camosun.ca/services/ombudsperson</a>
Registration	<a href="https://camosun.ca/registration-records/registration">camosun.ca/registration-records/registration</a>
Technology Support	<a href="https://camosun.ca/services/its">camosun.ca/services/its</a>
Writing Centre	<a href="https://camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills">camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills</a>

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 Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: <https://camosun.libguides.com/academicintegrity/welcome>

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.13.pdf> for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

### 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](#) (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:

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

### Academic Progress

Please visit <https://camosun.ca/sites/default/files/2023-02/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 <https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <https://camosun.ca/registration-records/tuition-fees#deadlines>.

### Grading Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf> for further details about grading.

### Grade Review and Appeals

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

### 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 <https://camosun.ca/sites/default/files/2021-07/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: <https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and [camosun.ca/services/sexual-violence-support-and-education](https://camosun.ca/services/sexual-violence-support-and-education). To contact the Office of Student Support: [oss@camosun.ca](mailto:oss@camosun.ca) or by phone: 250-370-3046 or 250-370-3841

### 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

<https://camosun.ca/sites/default/files/2021-05/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

#### Looking for other policies?

The full suite of College policies and directives can be found here: <https://camosun.ca/about/camosun-college-policies-and-directives>

**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.