

COURSE SYLLABUS



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|---------------------|---|
| COURSE TITLE: | MIDS 287 – Interventional Sonography Procedures |
| CLASS SECTION: | BX01A-D |
| TERM: | F2024 |
| COURSE CREDITS: | 3 |
| DELIVERY METHOD(S): | Blended |

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](#).

INSTRUCTOR DETAILS

| | |
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| NAME: | Eleze Munro |
| EMAIL: | MunroE@camosun.ca |
| OFFICE: | CHW 317 |
| HOURS: | By Appointment |

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

Students enhance their understanding of how to support referring practitioners, radiologists, and surgeons with clinical interventions utilizing sonographic image guidance to provide diagnostic and therapeutic outcomes for patients. Students analyze interventional and intraoperative ultrasound procedures while learning to recognize the sonographic appearances of laparoscopic surgery, percutaneous aspiration, percutaneous biopsies, and complex vascular access. Students learn to select appropriate scanning protocols, assemble appropriate equipment, observe sterile technique, and assist the designated operator based on patient history, physiologic data, laboratory values, and complementary imaging studies. Students will apply research methodology to examining the expanded use of sonography for interventional procedures.

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| PREREQUISITE(S): | All of: C+ in MIDS 231; C+ in MIDS 237 |
| CO-REQUISITE(S): | C+ in MIDS 281 |
| EQUIVALENCIES: | Click or tap here to enter text. |

COURSE OBJECTIVES AND MAPPED PROFESSIONAL COMPETENCIES

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

- explain the significance of interventional ultrasound and imaging guidance on the approach to preparing and assisting health practitioners with sterile technique and aseptic procedures for

department and mobile sonography and discuss the selection of protocols, transducers, and impact on resultant sonographic image quality.

- b) explain how to obtain optimal image quality for the sonographic appearance of biopsies, laparoscopic surgery, percutaneous aspiration, percutaneous biopsies, and complex vascular access and differentiate across gender, age, and habitus.
- c) define and apply the components of a diagnostic examination to interventional sonography.
- d) discuss the implications of the expansion of interventional sonography on future practice and determine if an evidence-based approach to clinical practice supports this
- e) assist in interventional ultrasound examinations, prepare technical impressions and procedural summaries, correctly label all samples, record images and take measurements necessary to achieve the goal of the intervention within the recommended Sonography Canada guidelines for scheduling and time allotments while scanning simulated patients, live subjects, or laboratory partners.

Sonography Canada Competencies:

Area 2: Professional Conduct

2.3o Maintain awareness of current and emerging technological developments in the field of sonography.

Area 3: Patient Assessment and Care

3.1b Assess patient's ability to tolerate examination.

3.2a Understand role in interventional procedures.

3.3h Understand the application of transrectal imaging.

3.3k Perform intravenous starts.

Appendix B: Abdomen

5 Chest and thorax

Expanded Learning Outcome(s)

c-1) define and apply the following key components of an ultrasound exam: professional conduct, interpret the request, plan the procedure, establish the patient relationship, execute the procedure and conclude the procedure in relation to ultrasound guided interventional procedures.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Required Texts:

A Guide to Clinical Practice, Abdomen and Superficial Structures, 5th Edition (Tanya Nolan; Diane Kawamura)

Optional Texts:

Workbook for Diagnostic Medical Sonography, A Guide to Clinical Practice, Abdomen and Superficial Structures, 5th Edition (Diane Kawamura; Tanya Nolan)

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.

| WEEK/DATE | LESSON/ACTIVITY | READINGS | LEARNING OUTCOMES | LEARNING OBJECTIVES | S.C. COMPTENCIES |
|-------------------------|--|---|------------------------|------------------------------------|---------------------|
| 1 (Sept 4-8, 2023) | <u>Lecture</u> : HOLIDAY (no class) <u>Lab</u> : Course Introduction <u>Asynchronous</u> : None | None | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> |
| 2 (Sept 11-14, 2023) | <u>Lecture</u> : Lesson 1 & 2 <u>Lab</u> : Lesson 3 <u>Asynchronous</u> : Quiz 1 | Abdo&S.S. (5 th ed.) Ch 26 | <i>a</i> | 1.0-1.3, 2.0-2.4, 3.0 | <i>Area 3: 3.2a</i> |
| 3 (Sept 18-21, 2023) | <u>Lecture</u> : Lesson 4 & 5 <u>Lab</u> : Lesson 6 <u>Asynchronous</u> : Quiz 2 | Abdo&S.S. (5 th ed.) Ch 26 | <i>b</i> | 4.0 – 4.5, 5.0 - 5.4, 6.0 | <i>Area 3: 3.2a</i> |
| 4 (Sept 25-28, 2023) | <u>Lecture</u> : Lesson 7 & 8 <u>Lab</u> : Lesson 11 <u>Asynchronous</u> : Quiz 3 | Abdo&S.S. (5 th ed.) Ch 26 | <i>b, c, c-1, d</i> | 7.0-7.9, 8.0-8.9, 11.0 | <i>n/a</i> |
| 5 (Oct 2-5, 2023) | <u>Lecture</u> : HOLIDAY (no class) <u>Lab</u> : Lesson 9 & 10 <u>Asynchronous</u> : Quiz 4 | Abdo&S.S. (5 th ed.) Ch 17, 26 | <i>b, c, d</i> | 9.0, 10.0-10.3 | <i>Area 2: 2.3o</i> |
| 6 (Oct 9-12, 2023) | <u>Lecture</u> : HOLIDAY (no class) <u>Lab</u> : Midterm review <u>Asynchronous</u> : Quiz 5 | None | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> |
| 7 (Oct 16-19, 2023) | <u>Lecture</u> : Midterm Exam <u>Lab</u> : None <u>Asynchronous</u> : None | None | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> |
| 8 (Oct 23-26, 2023) | <u>Lecture</u> : Lesson 12 & 13 <u>Lab</u> : Lesson 14 <u>Asynchronous</u> : None | Abdo&S.S. (5 th ed.) Ch 4, 5, 26 | <i>b, c, c-1</i> | 12.0-12.2, 13.0-13.13, 14.0 | <i>Area 2: 2.3o</i> |
| 9 (Oct 30- Nov 3, 2023) | <u>Lecture</u> : Lesson 15 <u>Lab</u> : Lesson 16 | Abdo&S.S. (5 th ed.) Ch 26 | <i>a, b, c, c-1, d</i> | 15.0-15.3, 16.0-16.1 | <i>Area 3: 3.2a</i> |

| WEEK/DATE | LESSON/ACTIVITY | READINGS | LEARNING OUTCOMES | LEARNING OBJECTIVES | S.C. COMPTENCIES |
|-------------------------|---|--|---------------------|-----------------------------------|-------------------------------------|
| | <u>Asynchronous</u> : Quiz 6 | | | | |
| 10 (Nov 6-9, 2023) | <u>Lecture</u> : Lesson 17 & 18 <u>Lab</u> : Lesson 21 <u>Asynchronous</u> : Quiz 7 | Abdo&S.S. (5 th ed.) Ch 7, 24, 26 | <i>b, c, c-1, d</i> | 17.0-17.2, 18.0-18.3, 21.0 | <i>n/a</i> |
| 11 (Nov 13-16, 2023) | <u>Lecture</u> : HOLIDAY (no class) <u>Lab</u> : Lesson 24 <u>Asynchronous</u> : Quiz 8 | Abdo&S.S. (5 th ed.) Ch 14, 26 | <i>b, c, d</i> | 24.0 – 24.8 | Area 3: 3.3h |
| 12 (Nov 20-23, 2023) | <u>Lecture</u> : Lesson 22 <u>Lab</u> : Lesson 23 <u>Asynchronous</u> : Quiz 9 | Abdo&S.S. (5 th ed.) Ch 26 | <i>b, c-1</i> | 22.0-22.9, 23.0 | Area3, 3.1b Area 3: 3.3k |
| 13 (Nov 27-30, 2023) | <u>Lecture</u> : Lesson 19 & 20 <u>Lab</u> : TBD <u>Asynchronous</u> : Quiz 10 | Abdo&S.S. (5 th ed.) Ch 6, 26 | <i>b, c</i> | 19.0-19.3 20.0-20.3 | <i>n/a</i> |
| 14 (Dec 4-7, 2023) | <u>Lecture</u> : Final exam review <u>Lab</u> : None <u>Asynchronous</u> : Future of Sonography Interventions Presentations | None | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> |
| 15/16 (Dec 11-19, 2023) | Final Exam (Date/Time TBD) | None | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> |

Lessons:

Lesson 1 (lecture): Sonographers Role in Interventional Procedures

Lesson 2 (lecture): Transducers/equipment in procedures overview. Indications and Contraindications for Biopsy. PTT and INR

Lesson 3 (lab): The Sterile/Clean Challenge—keeping clean sterile with a basic/complex setup

Lesson 4 (lecture): Time Out-Procedure, Potential Biopsy Complications, Vasovagal Response, Code Blue, Patient Consent and ability to tolerate procedure

Lesson 5 (lecture): Technical Impressions & Operative Reports and Lab Analysis Requests

Lesson 6 (lab): Writing Lab Requests, Operative Reports and Labelling Samples Activity

Lesson 7 (lecture): FNA vs. Core and Cytology vs. Histology—when is each appropriate?

Lesson 8 (lecture): Hand-Eye Coordination—imaging the needle-tip

Lesson 9 (lecture): Introduction to Future of Sonography assignment intro & brainstorming activity

Lesson 10 (lecture): Thyroid/Neck/Lymph node and Superficial Biopsies

Lesson 11 (lab): Hand-Eye Coordination—imaging the needle-tip

Lesson 12 (lecture): Ultrasound in Palliation—Chest and Abdominal Drainages, Thorax Anatomy

Lesson 13 (lecture): Ultrasound in the OR

- Lesson 14 (lab): Thoracentesis & Paracentesis —handling catheters
- Lesson 15 (lecture): Interventional Cardiac procedures (TEE, pericardiocentesis, ablation, ICE, Watchman, ASD/VSD closures, TAVI, MitraClip) in Heart Cath/Angiography Suites
- Lesson 16 (lab): TEE/Cath Lab & Pericardiocentesis simulation
- Lesson 17 (lecture): Renal Core Biopsies, Liver Core Biopsies & Transplant Biopsies
- Lesson 18 (lecture): Ultrasound vs. CT vs. MRI Biopsies
- Lesson 19 (lecture): Pseudoaneurysm Assessment and Treatment
- Lesson 20 (lecture): Vascular Access— VADs, PICC lines
- Lesson 21 (lab): Liver Biopsy Simulation
- Lesson 22 (lecture): Intravenous Catheter Insertion Techniques
- Lesson 23 (lab): Simulation Arm IV insertion
- Lesson 24 (lecture): Prostate Biopsies/Trans Rectal Imaging

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

| DESCRIPTION | WEIGHTING |
|---|-------------|
| Discussions | 20% |
| Future of Sonography Interventions Presentation | 25% |
| Weekly Quizzes | 10% |
| Midterm | 20% |
| Final Exam | 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](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

Refer to the [Diagnostic Medical Sonography \(SONO\) Program Handbook](#) for classroom and lab etiquette as well as professional behaviour expectations.

Evaluation

With the exception of emergency circumstances, a student who does not notify the instructor ahead of time about absenteeism or does not have an acceptable reason for being absent the day of the midterm or final exam or a quiz will receive a grade of zero (0%).

Late assignments/submissions will not be graded and will receive a score of zero (0%) unless the student is able to demonstrate emergency. Students must contact the instructor *prior* to submission deadlines

The midterm and written final exam are administered online via D2L. For these tests, the content is cumulative from all lectures/labs/assigned readings up to that point in the course. Students who perform poorly on the quiz or midterm should seek help from the instructor as early as possible to work together to develop a plan for success.

Illness and Emergency Circumstances

It is acknowledged that short-term illness or personal priorities that are of critical importance, such as an appointment with a specialist, may occasionally conflict with a course assessment. In this case, as long as the student notifies the instructor before the anticipated absence, the student may be provided the opportunity to make up an assessment. Notifying the instructor by email is considered an acceptable means of communication.

This exception is not intended to be the norm. Students are expected to be present for all course assessments. The instructor will use discretion to determine if the reason for absenteeism is acceptable and/or whether or not absenteeism is problematic. Reasons that are unacceptable include, and are not limited to: birthday parties, family gatherings, employment commitments, etc. Students who miss significant time may be at risk of falling behind in the course. The instructor will use discretion to determine what course of action will be taken for students who miss multiple activities and/or assessments.

Exceptions due to emergency circumstances, such as health problems or unavoidable family crises, require the approval of the instructor. In the case of an emergency, the student may be required to provide verification of the emergency circumstance as early as possible. Personal commitments, such as holidays or scheduled flights, are not considered to be emergencies.

SCHOOL OR DEPARTMENTAL INFORMATION

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

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 camosun.ca/services.

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

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. To contact the Office of Student Support: 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.