

CLASS SYLLABUS



COURSE TITLE: MRAD 277 – CT Procedures
CLASS SECTION: BX01
TERM: W2023
COURSE CREDITS: 3
DELIVERY METHOD(S): Synchronous

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

<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 McCreight

EMAIL: McCreightL@camosun.ca

OFFICE: CHW 317

HOURS: Available to meet 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 explore routine Computed Tomography (CT) procedures of the body. Students integrate concepts from previous and concurrent courses to support their understanding of clinical applications in CT. Using case study scenarios, students learn the basic components of a CT examination in preparation for their final clinical practicum experience.

Note: Only open to students in the Medical Radiography program.

PREREQUISITE(S): **All of:** C+ in MRAD 157; C+ in MRAD 254; COM in MRAD 260

CO-REQUISITE(S): N/A

PRE/CO-REQUISITE(S): **All of:** C+ in AHLT 266; C+ in AHLT 268; C+ in MRAD 273; C+ in MRAD 279

COURSE DELIVERY

ACTIVITY	HOURS / WEEK	# OF WEEKS	ACTIVITY HOURS
Lecture	3	14	
Seminar			

Lab / Collaborative Learning	2	14	
Supervised Field Practice			
Workplace Integrated Learning			
Online			
	TOTAL HOURS		70

COURSE LEARNING OUTCOMES

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

- a) discuss routine Computed Tomography procedures used to diagnose a variety of patient conditions.
- b) analyze Computed Tomography images of the body using knowledge of anatomy, physiology and pathology.
- c) compare a variety of applications in Computed Tomography useful to clinical diagnosis.
- d) apply the components of a routine Computed Tomography examination in a variety of clinical practice situations.

COURSE OBJECTIVES AND MAPPED PROFESSIONAL COMPETENCIES

(also known as “sub-outcomes” or “learning objectives”)

CAMRT Competencies

- A.1.2 Comply with federal and provincial legislation and regulations affecting the practice of medical radiation technology. R
- A.1.5 Practice in a manner that recognizes patient’s legal rights. R
- A.2.6 Maintain thorough and complete workplace documentation. I
- A.3.2 Use effective oral communication skills. R
- A.3.4 Utilize medical terminology in professional communication. R
- A.4.1 Appraise decision options based on best practice evidence, clinical information, resource implications and other contextual factors. R
- A.4.2 Use professional judgement to reach decisions. R
- A.4.3 Take responsibility for decisions and actions. R
- A.5.1 Recognize the roles of health care professionals commonly encountered in the medical radiation technology workplace. R
- A.5.2 Contribute productively to teamwork and collaborative processes. R
- A.6.1 Prioritize workflow to optimize patient care. R
- A.6.3 Monitor inventory of materials and supplies, and respond. R
- A.7.1 Maintain awareness of factors in the clinical environment that may affect delivery of care, and take appropriate action. R
- B.1.5 Provide complete information about procedures to patient and support persons, and verify understanding. R
- B.1.7 Ensure ongoing, informed consent to procedures. R
- B.2.3 Verify accuracy and completeness of pre-procedure documentation. I
- B.2.6 Utilize immobilization devices. I
- B.2.8 Assess and respond to any changes in patient condition. R
- B.2.9 Recognize medical emergencies, and respond. R
- B.2.10 Ensure post-procedure transfer of care. R
- B.2.11 Verify accuracy and completeness of post-procedure documentation. R
- B.3.2 Review clinical history provided, relative to requested procedure, and address discrepancies. I

- B.3.4 Identify clinically relevant details, and respond. R
- B.3.6 Assess patient for contraindications to procedure and respond. I
- B.3.7 Perform venipuncture. I
- B.3.8 Assist with administration of pharmaceuticals. I
- B.3.9 Adapt procedures based upon patient's physical and cognitive condition. R
- B.3.12 Advise patient of necessary post-procedure follow-up. I
- C.1.1 Employ routine practices for infection control. R
- C.1.4 Use aseptic technique. R
- C.1.5 Use sterile technique. R
- C.1.6 Follow standardized procedures for handling and disposing of sharps, and contaminated and biohazardous materials. R
- C.3.1 Apply ALARA principle. R
- C.3.3 Use protective devices and apparel for personnel. R
- C.3.4 Implement safe practices to minimize radiation dose to personnel and support persons. R
- C.3.5 Implement safe practices to minimize radiation dose to patients. R
- D.2.2 Select and optimize parameters for performing a procedure. I
- D.2.3 Utilize common accessory equipment listed in Appendix 5. I
- D.2.4 Activate, monitor, and manage acquisition. I
- D.2.5 Perform post-processing on acquired image data. R
- D.3.2 Assess performance of accessory equipment as listed in Appendix 5, and respond. I
- D.4.1 Apply knowledge of principles affecting image quality. R
- D.4.2 Evaluate diagnostic quality of image, and respond. I
- E.1.1 Apply knowledge of gross anatomy, relational anatomy and physiology related to the imaging of anatomical structures. R
- E.1.2 Differentiate anatomical structures on images. R
- E.1.3 Apply knowledge of pathologies, anomalies and conditions listed in Appendix 3. R
- E.1.4 Apply knowledge of imaging procedures and protocols listed in Appendix 4, in various clinical environments and modalities. I
- E.1.5 Apply knowledge of the effects of pharmaceutical agents listed in Appendix 6, as they relate to procedures. R
- E.2.1 Plan imaging procedures utilizing data available from clinical information, reports and previous diagnostic studies. R
- E.2.2 Position patient for imaging procedures listed in Appendix 4, utilizing anatomical landmarks and relational anatomy. I
- E.2.3 Adapt positioning in response to patient condition and clinical environment. R
- E.2.4 Adapt protocol in response to patient condition and clinical environment. R
- E.2.5 Align imaging system to demonstrate required anatomical structure(s). R
- E.2.6 Distinguish patterns consistent with normal results and normal variants. R
- E.2.7 Recognize patterns consistent with abnormal results and pathologies included in Appendix 3. R
- E.2.9 Evaluate results to determine if further images are required. R
- E.3.1 Assess patient for contraindications to contrast media, and respond. R
- E.3.2 Prepare contrast media. R
- E.3.3 Administer contrast media via appropriate route. R
- E.3.4 Prepare and administer pharmaceutical agents. R
- E.3.5 Perform rectal tube insertion. R

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Required Textbook:

Computed Tomography for Technologists - A Comprehensive Text (Romans, Lois E. - 2nd Edition)

Computed Tomography. Physical Principles, Clinical Applications and Quality Control (Seeram, E. - 5th Ed.)

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 or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES
Week 1	Intro to CT Procedures	
Week 2	CT Scan Parameters	
Week 3	CT Contrast & Venipuncture	
Week 4	CT Head	Quiz #1
Week 5	CT Neck	
Week 6	CT Chest	
Week 7	Reading Week	No Class
Week 8	CT Abdomen	
Week 9	CT Pelvis	Quiz #2
Week 10	CT Spine	
Week 11	CT Extremities	
Week 12	Interventional	
Week 13		Quiz #3
Week 14	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](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

STUDENT EVALUATION

DESCRIPTION	WEIGHTING
Lab Assignments	30%
Quizzes - 3X10%	30%
Cumulative Final Exam	40%
	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](#) policy for more information.

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

COURSE GUIDELINES & EXPECTATIONS

[INSERT TEXT HERE]

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 <http://camosun.ca/students/>.

Support Service	Website
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.

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: <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

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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 250-370-3841

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 <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.