

CLASS SYLLABUS



COURSE TITLE: MRAD 117 – Introduction to Procedures
CLASS SECTION: BX01A-D
TERM: F2021
COURSE CREDITS: 6
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: Brent McMillen, Hong Gerow, Sarah Erdelyi
EMAIL: McMillenB@camosun.ca; GerowH@camosun.ca; ErdelyiS@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

In this novice course, students examine the basic components of a radiographic procedure, integrating foundational positioning skills for routine radiographic examinations of the body. In the laboratory setting, students will take radiographic images of phantoms (simulated human bodies) and analyze their images, while adhering to federal radiation safety standards. Students who successfully demonstrate critical clinical safety indicators while simulating radiographic procedures will advance to the novice clinical practicum.

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

PREREQUISITE(S): Click or tap here to enter text.
CO-REQUISITE(S): MRAD 108
PRE/CO-REQUISITE(S): **All of:** C+ in AHLT 104; C+ in AHLT 112; C+ in MRAD 106; C+ in MRAD 119

COURSE DELIVERY

| ACTIVITY | HOURS / WEEK | # OF WEEKS | ACTIVITY HOURS |
|----------|--------------|------------|----------------|
| Lecture | 7 | 14 | |

| | | | |
|-------------------------------|--------------------|----|------------|
| Seminar | | | |
| Lab / Collaborative Learning | 9 | 14 | |
| Supervised Field Practice | | | |
| Workplace Integrated Learning | | | |
| Online | | | |
| | TOTAL HOURS | | 224 |

COURSE LEARNING OUTCOMES

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

- a) demonstrate correctly positioned radiographic projections on phantoms and laboratory partners for routine radiographic examinations of the body.
- b) apply the components of a radiographic examination (interpret the request, plan the examination, establish the patient relationship, execute the procedure, and conclude the examination) to low complexity patient scenarios encountered during the first clinical practicum experience.
- c) discuss the implications of varied patient health conditions (physical and emotional) on routine examinations of the body and the necessity for the Medical Radiation Technologist to appropriately respond.
- d) apply and convey anatomic knowledge, basic radiographic principles, patient care considerations, and best practices when analyzing images for diagnostic acceptability.

COURSE OBJECTIVES AND MAPPED PROFESSIONAL COMPETENCIES (also known as “sub-outcomes” or “learning objectives”)

Canadian Association of Medical Radiation Technologists Competency Profile, Radiological Technology (2014)

- 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.2.1 Present a professional appearance and manner. R
- A.2.2 Interact respectfully with others. R
- A.2.5 Comply with organizational policies and directives. R
- A.2.6 Maintain thorough and complete workplace documentation. R
- A.2.10 Respond professionally to feedback received from others. I
- A.3.2 Use effective oral communication skills. R
- A.3.3 Use effective interpersonal skills. R
- A.3.4 Utilize medical terminology in professional communication. I
- A.3.5 Explain complex and technical matters related to medical radiation technology to the level of the respondent's understanding. R

- A.4.3 Take responsibility for decisions and actions. R
- A.5.2 Contribute productively to teamwork and collaborative processes. R
- A.6.3 Monitor inventory of materials and supplies, and respond. I
- B.1.5 Provide complete information about procedures to patient and support persons, and verify understanding. R
- B.1.6 Respond to questions from patient and / or support persons, or direct them to appropriate personnel. R
- B.1.7 Ensure ongoing, informed consent to procedures. R
- B.2.2 Verify patient identity. R
- B.2.3 Verify accuracy and completeness of pre-procedure documentation. R
- B.2.4 Transport patient safely. R
- B.2.5 Transfer patient safely. R
- B.2.6 Utilize immobilization devices. I
- B.2.10 Ensure post-procedure transfer of care. I
- B.2.11 Verify accuracy and completeness of post-procedure documentation. I
- B.2.12 Ensure entry of information to data archiving system. I
- B.3.1 Enhance patient comfort. R
- B.3.2 Review clinical history provided, relative to requested procedure, and address discrepancies. R
- B.3.3 Obtain information from patient or support person. R
- B.3.5 Determine patient's pregnancy status and respond. R
- B.3.6 Assess patient for contraindications to procedure and respond. R
- B.3.12 Advise patient of necessary post-procedure follow-up. I
- C.1.1 Employ routine practices for infection control. R
- C.1.2 Employ transmission-based precautions. R
- C.1.4 Use aseptic technique. 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
- C.3.6 Monitor personal radiation exposure, and respond. R
- C.4.1 Provide information regarding radiation risks and safe practices. R
- D.1.2 Apply knowledge of operational components of imaging systems listed in Appendix 2. I
- D.1.3 Apply knowledge of radiation interactions. I
- D.1.4 Apply knowledge of computer technology. I
- D.2.1 Operate imaging systems listed in Appendix 2. 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. I
- D.2.6 Utilize digital networking and archiving system. I
- D.2.7 Evaluate images for the purpose of reject analysis. I
- 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
- D.4.3 Verify accuracy of patient demographics. I
- D.4.4 Verify visibility and accuracy of radiographic markers and annotations. I
- D.4.5 Evaluate image for artifacts, 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.1.4 Apply knowledge of imaging procedures and protocols listed in Appendix 4, in various clinical environments and modalities. I
- 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). I
- E.2.6 Distinguish patterns consistent with normal results and normal variants. R
- E.2.9 Evaluate results to determine if further images are required. I

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

a) Required

Lampignano, J.P., & Kendrick, L.E. (2021). *Bontrager's Textbook of Radiographic Positioning and Related Anatomy 10th ed.*. St. Louis, Missouri: Elsevier Mosby.

McQuillen Martensen, K. (2020). *Radiographic Image Analysis (5th ed.)*. St. Louis, Missouri: Elsevier Saunders.

Lampignano, J.P., & Kendrick, L.E. (2020). *Workbook: Textbook of Radiographic Positioning and Related Anatomy 10th ed.*. St. Louis, Missouri: Elsevier Mosby.

Lampignano, J.P., & Kendrick, L.E.(2020). *Bontrager's Handbook of Radiographic Positioning and Techniques (10th ed.)*. St. Louis, Missouri: Elsevier Mosby.

Optional Textbooks: available for purchase or on reserve in library

McQuillen Martensen, K. (2020). *Workbook for Radiographic Image Analysis (5th ed.)*. St. Louis, Missouri: Elsevier Saunders.

Long, B.W., Rollins, J.H., & Smith, B.J. (2019). *Merrill's Atlas Of Radiographic Positioning & Procedures, Volumes 1,2,3 (14th ed.)*. St. Louis, Missouri: Elsevier Mosby.

b) Other

Desire-to-Learn (D2L):

D2L – the Camosun College online learning portal contains the remainder of the learning materials for this course. Students are expected to familiarize themselves with the online

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 |
|--|--|---|
| Sept 6-10 Labour Day | Group Agreement/lab intro/PACS-CH.1 | See D2L for more notes and course details |
| Sept 13-17 | Ch.1 -Lab- orientation – assignments/tests/workbooks | |
| Sept 20-24 | Ch.4 Upper Finger to Elbow | |
| Sept 27-Oct 1 National Day for Truth and Reconciliation | Ch.5 Upper Humerus to Scapula | |
| Oct 4-8 | Ch.6 Lower Toe to tib/fib | |
| Oct.11-15 Thanksgiving | Ch.6 Lower knee | |
| Oct 18-22 | Ch.7 Lower – Pelvis/hip/femur | |
| Oct.25-29 | Ch.11 Skull-sinuses, skull, nasal,orbits | |
| Nov 1-5 | Ch.8 C/T spine | |
| Nov 8-12 Remembrance Day | MRT Week - Review | Passport to Positioning I |
| Nov 15-19 | Ch.9 Lumbar/sacrum/coccyx | |
| Nov 22-26 | Ch.2 Bony thorax-chest | |
| Nov 29-Dec 3 | Ch.10 Bony thorax-ribs | |
| Dec 6-10 | Ch.3,12,13,14 Abdomen | |
| Dec 13-17 | Final Exam and Comp | Final exam and Passport to Positioning II |

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 scan 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 |
|-------------|-----------|
| Workbook | 10 |

| DESCRIPTION | WEIGHTING |
|-------------------------------------|--------------|
| Module Quizzes and Midterms | 43 |
| Lab –positioning sheets and Ziltron | 22 |
| Critique | 10 |
| Cumulative Final Exam | 15 |
| Final Comp | Completion |
| | 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>

COURSE GUIDELINES & EXPECTATIONS

Workbook (10%)

Workbooks will be due any time before the closing time for the module quiz, usually Tuesday at 1159pm. A late workbook will result in no mark. The workbook chapters assigned will coincide with the chapters your quizzes are based on. This is to encourage you to use the workbook as a study tool. To obtain the mark for your workbook you will be asked to drop box images of 2 complete pages out of the assigned pages.

Module Quizzes (27%)

There will be quizzes following the completion of a module. They are used to assess your level of knowledge as it relates to the positioning and critique content from that module. The purpose of these quizzes throughout the term is to keep you up to date on course content, help you identify areas of weakness, celebrate successful integration of knowledge, provide confidence, decrease anxiety, and expose you to the type of questions you can expect on the midterms and final exam.

Midterms (16%)

There will be two midterms during the term. The midterms are cumulative. They will be worth 8% each. It will be used to assess your level of knowledge as it relates to the positioning and critique content from multiple modules. The purpose of the midterm is to keep you up to date on course content, help you identify areas of weakness, celebrate successful integration of knowledge, provide confidence, decrease anxiety, and expose you to the type of questions you can expect on the final exam.

Lab (22%)

Lab marks will be given for lab assignments and simulation exercises.

Positioning Sheets (11%)

Full marks will be given for completed positioning tables.

These will be due on Tuesdays at 1159pm.

Simulation (11%)

Full marks will be given for completion of modules.

These will be due on Tuesdays at 1159pm.

Critique (10%)

Marks for the Critique portion of MRAD 117 will be given for completion of the Passport.

There will be 5 body parts to critique to complete the Passport to Image Critique. This booklet allows practice of image analysis skills, as well as how to use correct terminology and technical language. Practicing these skills now will prepare the student for clinical terms where critique of all body parts is required for clinical portfolio completion. Image critique also allows development of strategies to recognize patient positioning errors, and how to fix them. Oral image critiques will be performed with the instructor on a one-on-one basis during synchronous sessions.

Final Exam (15%)

The final examination is cumulative and includes material from all modules covered in the course. This final examination will occur during the regularly scheduled final exam week.

Do not book trips until the final exam schedule is posted by the registrar.

In emergency circumstances, a student may write a test or final examination 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 retrievable from: <http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf>)

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 |

| Support Service | Website |
|-------------------------------|---|
| 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](#) (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 250-370-3841

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.