



Course Syllabus

Course title: Advanced Radiographic Procedures

Class section: MRAD - 157 - X01A

Term: 2025S

Course credits: 3

Total hours: 135

Delivery method: In-Person

Territorial acknowledgment

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

Instructional hours

Lecture hours: 3 per W

Lab hours: 6 per W

W = Week

T = Term

Instructor details

Name: Brent McMillen

Email: mcmillenb@camosun.ca

Name: Meggan Pohanka

Email: PohankaM@camosun.ca

Course description

Course Description:

In this advanced beginner course, students synthesize academic and clinical concepts to develop adaptive radiography skills. In the laboratory setting, students simulate complex examinations using phantoms and laboratory partners and create radiographic exposure charts. Students explore specialty imaging modalities in preparation for more complex patient encounters during their final two clinical practicums. Students who successfully demonstrate critical clinical safety indicators and problem-solving skills while simulating advanced radiographic procedures will progress to the advanced beginner clinical practicum.

Prerequisites:

All of:

- C+ in MRAD 117
- COM in MRAD 130

Co-requisites:

All of:

- MRAD 148

Pre or Co-requisites:

All of:

- C+ in PHYS 165
- C+ in MRAD 156

- C+ in MRAD 159
- C+ in MRAD 173

Learning outcomes

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

1. Demonstrate correctly positioned radiographic projections on phantoms and laboratory partners for specialized radiographic examinations of the body requiring adaptations.
2. Apply the components of a radiographic examination to complex patient scenarios encountered during their remaining clinical practicum experiences, including specialty imaging modalities.
3. Develop a systematic approach to adapting radiographic examinations to complex patient scenarios.
4. Apply and convey corrective actions to sub-optimal radiographic images of the body in pursuit of optimal radiographs.

Competency mapping

Learning Outcome	Competencies
Upon successful completion of this course, a learner will be able to:	
1. Demonstrate correctly positioned radiographic projections on phantoms and laboratory partners for specialized radiographic examinations of the body requiring adaptations.	4.1.3 Use immobilization devices, as appropriate 4.3.2 Adapt positioning and/or protocol in response to patient condition and clinical environment 4.3.5 Recognize and adapt to individual patient needs RTR.1.1 Use protective devices, equipment, and apparel RTR.3.3 Apply knowledge of imaging procedures and protocols in various clinical environments RTR.4.4 Align imaging system to demonstrate required anatomical structure(s)
2.	

Apply the components of a radiographic examination to complex patient scenarios encountered during their remaining clinical practicum experiences, including specialty imaging modalities.	<p>RTR.4.3 Position patient for imaging procedures using anatomical landmarks and knowledge of relational anatomy</p> <p>2.1.6 Provide appropriate information about procedures to patients and support persons and verify understanding</p> <p>2.2.4 Maintain accurate and complete written and electronic documentation</p> <p>2.2.5 Advise patients of necessary pre- and post-procedure care instructions</p>
3. Develop a systematic approach to adapting radiographic examinations to complex patient scenarios.	<p>3.1.5 Ensure appropriate transfer of care</p> <p>4.1.1 Verify patient identity</p> <p>4.2.1 Review clinical history provided relative to ordered procedure and address discrepancies.</p> <p>4.2.2 Verify appropriateness of the procedure</p>
4. Apply and convey corrective actions to sub-optimal radiographic images of the body in pursuit of optimal radiographs.	<p>4.2.3 Assess patient for contraindications to procedure and respond</p> <p>5.3.1 Prioritize workflow to optimize patient care</p> <p>RTR.1.1 Use protective devices, equipment, and apparel</p> <p>RTR.1.3 Ensure a safe working environment</p> <p>RTR.1.5 Apply ALARA principle</p> <p>RTR.1.7 Monitor personal radiation exposure and respond</p> <p>RTR.2.2 Apply knowledge of the operational components of imaging systems to optimize images and data</p> <p>RTR.2.3 Use accessory equipment</p> <p>RTR.2.5 Use digital networking and archiving systems</p> <p>RTR.3.3 Apply knowledge of imaging procedures and protocols in various clinical environments</p> <p>RTR.4.2 Prepare patient</p> <p>RTR.4.4 Align imaging system to demonstrate required anatomical structure(s)</p>

<p>RTR.4.3 Position patient for imaging procedures using anatomical landmarks and knowledge of relational anatomy</p> <p>RTR.4.5 Adapt imaging protocol in response to findings on the image</p> <p>RTR.4.6 Select and optimize imaging parameters</p> <p>RTR.4.8 Verify acquired data is accurate and complete</p> <p>RTR.5.2 Prepare pharmaceutical agents</p> <p>RTR.5.3 Apply knowledge of the effects of pharmaceutical agents</p> <p>RTR.5.4 Administer pharmaceuticals via appropriate route</p> <p>RTR.5.5 Prepare contrast agents</p> <p>RTR.5.6 Apply knowledge of the effects of contrast agents</p> <p>RTR.5.7 Administer contrast agents via appropriate route</p> <p>RTR.5.8 Recognize and respond to adverse reactions</p> <p>RTR.6.1 Apply knowledge of principles affecting image quality</p> <p>RTR.6.3 Evaluate images for normal results and variants</p> <p>RTR.6.5 Ensure accuracy of markers and annotation</p> <p>RTR.6.6 Evaluate images for artifacts and respond</p> <p>RTR.6.7 Evaluate technical factors in image quality</p> <p>RTR.6.8 Determine if further images are required</p> <p>RTR.6.9 Perform post-acquisition processing.</p>
--

Course reading materials

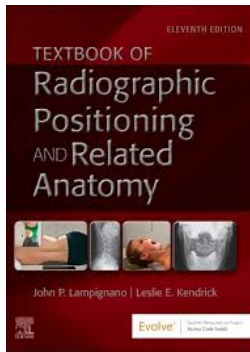
Title: Textbook of Radiographic Positioning and Related Anatomy

Authors: Lampignano, J.P., & Kendrick, L.E.

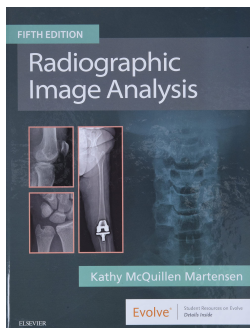
Publisher: Elsevier Mosby

Publication Date: 2025

Edition: 11th



Required/Optional: Required



Title: Radiographic Image Analysis

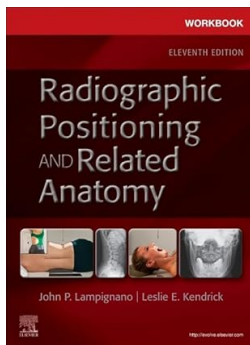
Authors: McQuillen-Martensen, K.

Publisher: Elsevier Saunders

Publication Date: 2025

Edition: 6th

Required/Optional: Required



Title: Workbook: Textbook of Radiographic Positioning and Related Anatomy

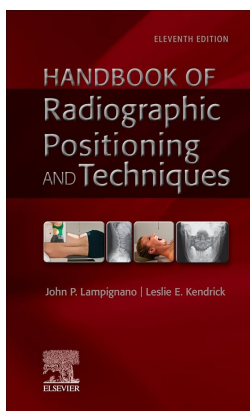
Authors: Lampignano, J.P., & Kendrick, L.E.

Publisher: Elsevier Mosby

Publication Date: 2025

Edition: 11th

Required/Optional: Required



Title: Handbook of Radiographic Positioning and Techniques

Authors: Lampignano, J.P., & Kendrick, L.E.

Publisher: Elsevier Mosby

Publication Date: 2025

Edition: 11th

Required/Optional: Required

Course schedule

Week	Dates	Module	Lecture *Critique has a separate lecture that supplements Positioning lecture/labs	Lab	Quizzes and Assignments
1	May 5-9	1	Course Introduction	See D2L for details	See D2L for details
2	May 12-16	2	Mandible and Special Facial Bones		
3	May 19-23 Victoria Day	3	Adaptive Radiography Intro, Adapting Technique, and EI		
4	May 26-30	4	Adaptive: Chest/Bony Thorax/Abdomen		
5	June 2-6	5	Adaptive: Upper/Lower		
6	June 9-13	6	Adaptive: Shoulder/Pelvis/Hip		
7	June 16-20 Graduation	7	Adaptive: Spine/Skull		
8	June 23-27		Catch up on Reading/Assignments	Comps	
9	June 30 – July 4 Canada Day	8	Fluoroscopy/UGI		
10	July 7-11	8	UGI/Biliary		
11	July 14-18	9	LGI		
12	July 21-25	10	Urinary/Venipuncture	Comps	
13	July 28-Aug 1	11	OR/Angio/IV/Diagnostic and Therapeutic Modalities		
14	Aug 4-8 B.C. day	12	Special Radiographic Procedures/Review		
15	Aug 11-15	EXAM WEEK			

**Refer to D2L page for specific details for assignments and Critique portion of course.

Exam Period is scheduled by registrar - check CAMLINK.

Specifics will be updated in D2L when known.

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

Assessment and evaluation

Type	Description	Weight
------	-------------	--------

Type	Description	Weight
Quizzes and tests	Quizzes	20
Practical Assessment	Comps	25
Quizzes and tests	Critique	20
Assignment	Assignments	5
Practical Assessment	C-arm and Radiography Portfolio Requirements Checklist (mandatory-must be done safely/efficiently)	Complete
Exams (Midterms and finals)	Final Exam	30

Course guidelines and expectations

Lab Attire

Scrubs, appropriate shoes, and OSLs are to be worn while in labs.

MRAD Program Late Policy

All quizzes and assignments are meant to provide an opportunity to deepen your understanding and connection with the learning materials. They must be submitted by dates shown on the course schedule and on D2L. Print the course calendar and check in with it often to make sure you are on track. There may be a penalty of 10% per day applied to assignment marks. The instructor will notify you before this penalty is applied the first time. Thereafter, it will be applied automatically if homework continues to be handed in late. After one week has passed, the quiz/assignment will no longer be accepted and a score of zero will be given.

MRAD Program Academic Integrity

You are expected to produce your own work, in your own words, upholding the academic and professional integrity expected of Camosun College students and medical radiography professionals. An incidence of academic misconduct will result in a score of zero for that assignment or exam. This

includes plagiarism, whether intentional or unintentional. Continued incidences of academic misconduct may result in escalated actions such as failing this course or removal from the MRAD program. Please see the Academic Integrity policy linked below for more detailed information. Students are encouraged to retake the Academic Integrity course on D2L as a reminder of professional and ethical academic integrity.

Citations and Referencing

If you are sourcing your answers from the required course textbooks, you do not need to provide a citation or a reference. If you source from external resources, citations and references are required. All information sourced from an outside source, whether a paraphrase or a quote, must be cited and referenced.

Using Quotes in Answers

Do not provide answers with only a quote from a source. While it is not plagiarism to answer with only a quote, this is not demonstrative of your knowledge. Answering questions in your own words demonstrates that you understand the content and can express it in an accurate way that makes sense to you. A quote may be included with your answer, but only as a way to support and provide extra to your words. Answers that includes mostly a quote will be scored zero.

College policies and student responsibilities

The college expects students to be responsible, respectful members of the college community. Responsible students meet expectations about attendance, assignments, deadlines, and appointments. They become familiar with academic policies and regulations, and their rights and responsibilities.

College policies are available online at the [Policies and Directives](#) page. Academic regulations are detailed on the [Academic Policies and Procedures for Students](#) page.

Policies all students should be familiar with include the [Academic Integrity Policy](#). This policy expects students to be honest and ethical in all aspects of their studies. It defines plagiarism, cheating, and other forms of academic dishonesty. Infractions of this policy can result in loss of marks or a failing grade. To learn more about plagiarism and cheating, including the use of artificial intelligence, review the [Academic Integrity Guide](#).

The [Academic Accommodations for Students with Disabilities Policy](#) defines how Camosun provides appropriate and reasonable academic accommodations. The Centre for Accessible Learning (CAL) coordinates academic accommodations. Students requiring academic accommodations should request and arrange accommodations through CAL. Contact CAL at least one month before classes start to ensure accommodations can be put in place in time. Accommodations for quizzes, tests, and exams must follow CAL's booking procedures and deadlines. More information is available on the [CAL website](#).

Students must meet the grading and promotion standards to progress academically. More information is available in the [Grading Policy](#).

The college uses two grading systems. A course will either use the standard letter grade system (A+ to F) or a competency-based approach with grades of complete, completed with distinction or not completed. Visit the [Grades/GPA page](#) for more information.

Students must meet the college's academic progress standards to continue their studies. A student is not meeting the standards of progress when a GPA falls below 2.0. The college offers academic supports for students at risk of not progressing. The [Academic Progress Policy](#) provides more details.

If you have a concern about a grade, contact your instructor as soon as possible. The process to request a review of grades is outlined in the [Grade Review and Appeals Policy](#).

The [Course Withdrawals Policy](#) outlines the college's requirements for withdrawing from a course. Consult the [current schedule](#) of deadlines for fees, course drop dates, and tuition refunds.

If students experience a serious health or personal issue, they may be eligible for a [medical or compassionate withdrawal](#). The [Medical/Compassionate Withdrawal Request Form](#) outlines what is required.

The [Acceptable Technology Use](#) policy ensures the use of the college network and computers contribute to a safe learning environment. This policy also applies to the use of personal devices with the college network.

Students experiencing sexual violence can get support from the Office of Student Support. This Office of Student support is a safe and private place to discuss supports and options. More information is available on the [sexual violence support and education site](#). Students can email oss@camosun.ca or phone 250-370-3046 or 250-370-3841.

The [Student Misconduct Policy](#) outlines the college's expectations of conduct. Students should behave to contribute to a positive, supportive, and safe learning environment.

The [Ombudsperson](#) provides an impartial, independent service to help students understand college policies.

Services for students

Successful students seek help and access college services. These services are recommended to make the most of your time at college.

Services for Academic Success

- [Career Lab](#): Connects students with work-integrated learning experiences, including co-op placements and career fairs.
- [English, Math, and Science Help Centres](#): Get one-on-one help with homework.
- [Library](#): Get help with research, borrow materials, and access e-journals and e-books. Libraries at both campuses provide computers, individual and group study spaces.
- [Makerspace](#): A place to innovate, collaborate, and learn new skills and technology in a fun, dynamic, inclusive environment.
- [Writing Centre & Learning Skills](#): Get assistance with academic writing or meet with a learning skills specialist for help with time management, preparing for exams, and study skills.

Enrolment, Registration, and Records

- [Academic Advising](#): Talk to an academic advisor for help with program planning.
- [Financial Aid and Awards](#): Learn about student loans, bursaries, awards, and scholarships.
- [Registration](#): Get information about Camosun systems, including myCamosun, and college policies and procedures.
- [Student Records](#): Get verification of enrolment to access funding, request a transcript, or credential.

Wellness and Cultural Supports

- [Counselling](#): It's normal to feel overwhelmed or unsure of how to deal with life's challenges. The college's team of professional counsellors are available to support you to stay healthy. Counselling is free and available on both campuses. If you need urgent support after-hours, contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.
- [Centre for Indigenous Education and Community Connections](#): Provides cultural and academic supports for Indigenous students.
- [Camosun International](#): Provides cultural and academic supports for international students.
- [Fitness and Recreation](#): Free fitness centres are located at both campuses.

For a complete list of college services, see the [Student Services](#) page.

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.