

**MRAD 117 Introduction to Radiographic Procedures**  
**Fall 2019**

**COURSE OUTLINE**

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The course description is available on the web:  
<http://camosun.ca/learn/calendar/current/web/mrad.html#mrad117>

*Ω Please note: This outline will not be kept indefinitely. Students are recommended to keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.*

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**1. Instructor Information**

- (a) **Instructor** Brent McMillen, Sarah Erdelyi and Hong Gerow
- (b) **Office hours** Tuesday and Thursday 1230-1320 or by appointment
- (c) **Location** CHW 317
- (d) **Phone** TBD **Alternative:** N/A
- (e) **E-mail** [mcmillenb@camosun.ca](mailto:mcmillenb@camosun.ca) , [erdelyis@camosun.ca](mailto:erdelyis@camosun.ca) , [gerowh@camosun.ca](mailto:gerowh@camosun.ca)
- (f) **Website** <http://online.camosun.ca/>

**2. Intended 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.

### 3. Required Materials

a) Required

Bontrager, K.L., & Lampignano, J.P. (2018). *Textbook of Radiographic Positioning and Related Anatomy (9<sup>th</sup> ed.)*. St. Louis, Missouri: Elsevier Mosby.

McQuillen Martensen, K. (2015/2020). *Radiographic Image Analysis (4<sup>th</sup> ed. or 5<sup>th</sup> ed.)*. St. Louis, Missouri: Elsevier Saunders.

Bontrager, K.L., Lampignano, J.P., & Kendrick, L.E. (2018). *Workbook: Textbook of Radiographic Positioning and Related Anatomy 9<sup>th</sup> ed.*. St. Louis, Missouri: Elsevier Mosby.

Bontrager, K.L., & Lampignano, J.P. (2018). *Bontrager's Handbook of Radiographic Positioning and Techniques (9<sup>th</sup> ed.)*. St. Louis, Missouri: Elsevier Mosby.

**Optional Textbooks:** available for purchase or on reserve in library

McQuillen Martensen, K. (2015/2020). *Workbook for Radiographic Image Analysis (4<sup>th</sup> ed. or 5<sup>th</sup> 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 (14<sup>th</sup> 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 learning environment and all the features it has to make this course experience enriching. Log on at <https://online.camosun.ca/> to access these materials.

Additional resources may include, but are not limited to: lecture notes, PowerPoint slides, Textbook companion workbooks, Laboratory Manuals, and hyperlinks. You may prefer to download lectures notes ahead of time (when available) and then write your notes directly onto copies of the slides.

D2L materials **must not** be considered your sole source of information! They merely summarize the main points and provide direction for your learning experiences. You may need to write down additional information in each lecture. Additionally, not all details can be covered in a lecture, and you will be required to refer to textbook material that is not discussed specifically in class.

#### **4. Course Content and Schedule**

**Lecture Days/Times & Room Number:**

CHW 347

Monday 1330-1520

Wednesday 1030-1220

Thursday (Critique) 1030-1220

CHW 235

Friday 1330-1420

**Lab Days/Times & Room Number:**

XRAY LABS CHW 134/135/137

7 hours each week based on designated set

2 hours lab critique based on designated set

Sections **A B C D** – please check CamLink for times

**Course Schedule**  
**Introduction to Radiographic Procedures**  
**MRAD 117**

Wk	Dates	Positioning Module	Ch. (Bontrager)	Critique	Ch. (MQM)
1	Sept 2-6 (Labour Day- Sept.2)	Group agreement/Study Share and PACS intro		Critique Intro Positioning and Terminology	1 Bontrager
2	Sept 9-13	PACS/lab assignments/tests/ workbooks		Beam Principles and Geometry	1 Bontrager
3	Sept 16-20	Upper- finger to elbow	4	Critique Criteria	1
4	Sept 23-Sept 27	Upper- humerus to scapula	5	Upper – hand and wrist	4
5	Sept.30 - Oct 4	Lower - toe to tib/fib	6	Upper – elbow	4
6	Oct 7-11	Lower - knee	6	Upper – shoulder	5
7	Oct 14-18 (Thanksgiving- Oct.14)	Lower – Pelvis/hip/femur	7	Lower – foot and ankle	6
8	Oct 21-25	Skull - sinuses, skull, nasal, orbits	11	Lower – knee	6
9	Oct 28- Nov 1	Review		Lower – pelvis and hip	7
10	Nov 4-8	C/T spine	8	Skull – skull, sinuses, and facial bones	11
11	Nov 11-15 (Remembrance Day Nov.11)	Lumbar/sacrum/ coccyx	9	C/T spine	8
12	Nov 18-22	Bony thorax - Chest	2	Lumbar spine	9
13	Nov 25-Nov 29	Bony thorax - Ribs	10	Chest and abdomen	3
14	Dec 2-6	Abdomen	3, 12,13,14	Review	
15	Dec 9-13	<b>FINAL EXAM PERIOD</b>			

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

## 5. Basis of Student Assessment (Weighting)

Workbook	5%
Module Quizzes	26%
Midterms	14%
Lab Comps	30%
Critique	10%
Cumulative Final Exam	15%
Final Comp	Completion
<b>TOTAL</b>	<b>100%</b>

**Students must achieve a minimum of 65% to use this course as a prerequisite.**

### Workbook (5%)

Before each module quiz your workbook will be due. Quizzes will be on Fridays at 1330. A late workbook will result in no mark for that week. 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. Workbooks will not be due on Midterm days but are encouraged to be used as a study guide throughout the course.

### Module Quizzes (26%)

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 (14%)

There will be two midterms throughout the term. The first midterm is cumulative from the start of the term and the second midterm is cumulative from the first midterm. They are used to assess your level of knowledge as it relates to the positioning and critique content from multiple modules. The purpose of these midterms 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 Competencies (30%)

Upon completion of the practice activities for that module, students will demonstrate their ongoing Simulation Competency through a combination of scenarios, role playing, phantom simulation & exposure, image production and image critique. Students will be marked on specific components of a radiographic exam and be given instructor feedback.

After the competency is finished students will sometimes have a self-reflection to complete regarding that module.

When the self-reflection is complete the student is to drop box their score sheet and self-reflection into the assigned drop box. This is due on the Sunday after the competency at 2359.

It is expected that all labs will be attended by the student as this is the opportunity for the student to practice what they have learnt in lecture and will allow greater success in the competencies and in clinical. Each student is partnered, so any absence affects another student's learning. An unexplained/unsanctioned lab absence compromises a lab partner's ability to learn and the absent student may enter a learning contract.

### **Critique (10%)**

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 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. Lab time is given to practice and present image critiques to the instructor on a one-on-one basis.

### **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>)

Missed quizzes or examinations cannot be made-up except in the case of documented illness (doctor's note).

## Final Competency (completion)

The cumulative final competency evaluates the student's abilities to determine if they are able to demonstrate, apply, discuss the **Intended Learning Outcomes** and are **safe to enter a clinical setting**.

**Students must successfully complete the cumulative final competency in order to attend clinical.**

## Late Penalties

Late assignments will be subject to 10% per day penalty, at the instructor's discretion.

Late assignments will be accepted only until the next assignment due date.

## 6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

## 7. Recommended Materials to Assist Students to Succeed Throughout the Course

N/A

## 8. College Supports, Services and Policies

### Immediate, Urgent, or Emergency Support



If you or someone you know requires immediate, urgent, or emergency support (e.g., illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts:

<http://camosun.ca/about/mental-health/emergency.html> or  
<http://camosun.ca/services/sexual-violence/get-support.html#urgent>

### College Services

Camosun offers a variety of health and academic support services, including counselling, dental, centre for accessibility, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit Student Services at <http://camosun.ca/services>

### College Policies

Policies are available on the College website at <http://camosun.ca/about/policies>. Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with college policies.

Education and academic policies include, but are not limited to, [Academic Progress](#), [Admission](#), [Course Withdrawals](#), [Grading](#), [Involuntary Health and Safety Leave of Absence](#), [Prior Learning Assessment](#), [Medical/Compassionate Withdrawals](#), [Sexual Violence and Misconduct](#), [Standards for Awarding Credentials](#), [Student Ancillary Fees](#), [Student Appeals](#), and [Student Penalties and Fines](#).

### Student Conduct Policy

The [Student Conduct Policy](#) provides clear expectations of appropriate academic and non-academic student conduct and establishes processes for resolution of conduct issues or the imposition of sanctions for inappropriate conduct. It is the student's responsibility to become familiar with the content of this policy.

## A. GRADING SYSTEMS

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>

The following two grading systems are used at Camosun College:

### 1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

### 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes.

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

## B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.