



**CAMOSUN COLLEGE**  
School of Health & Human Services  
Department: Allied Health & Technologies  
Medical Radiography



[Camosun.ca/hhs-handbook](http://camosun.ca/hhs-handbook)

**MRAD 159 Principles of Radiographic Imaging 2**  
**Summer 2019**

**COURSE OUTLINE**

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The course description is available on the web:  
<http://camosun.ca/learn/calendar/current/web/mrad.html#MRAD159>

*Ω Please note: This outline will not be kept indefinitely. It is recommended students 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** Sarah Erdelyi  
(b) **Office hours** 1130-1220 Wednesdays or by appointment  
(c) **Location** WT 212D  
(d) **Phone** 250-370-3996 **Alternative:**  
(e) **E-mail** erdelyis@camosun.ca  
(f) **Website** online.camosun.ca

**2. Course Description & Intended Learning Outcomes**

In this advanced-beginner course, students build on their knowledge of how to operate radiographic and accessory imaging equipment. Students explore fluoroscopy, mammography, mobile radiography, as well as intra-operative equipment. Students focus on the digital imaging process and digital archiving principles as they apply to a variety of radiographic imaging modalities. In the lab component of this course, students execute quality control tests and apply tolerance standards as outlined in federal safety codes to assess equipment performance.

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

- a) describe the evolution, function, and importance of x-ray tubes used in a variety of medical imaging procedures.
- b) explain how diagnostic images are produced by describing the components and function of computed radiography, digital radiography, fluoroscopy, mobile radiography, mammography, and C-arms.
- c) describe how digital imaging principles and techniques are used in the performance of medical radiography.
- d) describe the use of digital archiving principles in the management of imaging data within a variety of workplace settings.
- e) apply the principles of quality control and quality assurance to review and analyze radiographic images for accuracy and quality.

### 3. Required Materials

Bushong, S.C. (2017). Radiologic Science for Technologists: Physics, Biology, and Protection (11th ed.). Elsevier Health Sciences.

Fauber, T. (2017). Radiographic Imaging & Exposure (5th ed.). Elsevier Health Sciences.

Health Canada Safety Code 35. Available online at [www.canada.ca](http://www.canada.ca)

### 4. Course Content and Schedule

Lecture 1230-1320 Mondays

Lab 1330-1720 Mondays (50 minutes per group)

Lecture 1430-1620 Thursdays

Seminar 1630-1720 Thursdays

Week	Dates	Lecture 1	Lab 1 (Seminar)	Lecture 2 (QC Class)	Lab 2 (QC Lab)	Quizzes	Assignments
	2019	Thursdays		Mondays		Thursdays	Sunday nights
1	May 6-10	Module 1 Course Introduction	Seminar explanation	RFP project explanation	Determine RFP teams and vendor selection		Submit team response to RFP announcement
2	May 13-17	Module 2 Technological Developments and Information Literacy	Library session	QC class 1	QC lab 1		Submit seminar article selection
3	May 20-24	Module 3 Digital Radiography Overview	Instructor-led seminar	College Closed (stat holiday)			
4	May 27-31	Module 4 Comparison of Digital Radiographic Systems	Student-led seminar 1	QC class 2	QC lab 2	Article quiz 1	Seminar presentations begin
5	June 3-7	Module 5 Digital Radiographic Image Quality	Student-led seminar 2	QC class 3	QC lab 3	Article quiz 2	
6	June 10-14	Module 6 PACS & IT	Student-led seminar 3	QC class 4	QC lab 4	Article quiz 3	
7	June 17-21	Self-directed RFP team check-in *HHS grad		QC class 5	QC lab 5		
8	June 24-28	Module 7 Fluoroscopy	Student-led seminar 4	QC class 6	QC lab 6	Article quiz 4	
9	July 1-5	Module 8 Mobile Radiography	Student-led seminar 5	College Closed (stat holiday)		Article quiz 5	

10	July 8-12	Module 9 Mammography and BMD	Student-led seminar 6	QC class 7	QC lab 7	Article quiz 6	
11	July 15-19	Module 10 Radiation Protection	Student-led seminar 7	QC class 8	QC lab 8	Article quiz 7	
12	July 22-26	<b>QC test</b>	Student-led seminar 8	Review for QC test		Article quiz 8 QC test	
13	July 29-Aug 2	<b>RFP presentations</b>	RFP vendor recommendation	Self-directed RFP team check-in			RFP team presentation and submit RFP vendor recommendation
14	Aug 5-9	RFP celebration *optional course evaluation survey *make-up time (if needed)		<b>College Closed (state holiday)</b>			
15	Aug 12-16	<b>Final Examination Period (no final for this course).</b>					

## 5. Basis of Student Assessment (Weighting)

Seminar Presentation	20%
Seminar Quizzes (8)	10%
QC Labs (8)	10%
QC Test	30%
RFP Group Project	30%

### Seminar

Students will host a seminar (in pairs) on a relevant topic. A library session will occur in the second week of class so that students can finalize their topic selection and identify relevant literature. By the end of the library session, the pair will select an article to feature in their seminar and submit for approval by the instructor. Once the article has been approved, the pair will be asked to summarize key findings and develop 5 simple multiple choice questions based on the article content.

### Quizzes

The quizzes will be based primarily on the seminar articles. The instructor will post a list of the articles on D2L so that everyone in the class can read the article before each seminar.

The 5 multiple choice questions created by the presenters may be used in the quiz, subject to instructor editing/feedback. The instructor will create 5 additional questions. The instructor may draw from lectures and assigned readings, depending on the relevance to the seminar topic. The quizzes will be available for a 10-minute window during class time only.

### QC Labs and Test

Students are responsible for participating in QC labs throughout the term and submitting their completed work to D2L. Students will receive credit for participating in each lab. Near the end of the course, there will be a knowledge test on the content covered in the labs and in the lab pre-readings.

### RFP Project

Students will complete a group project and demonstrate their work in the form of a live presentation to their peers. It is expected that group members make themselves available to participate in group meetings and work on their project during the times allocated in the course schedule or agree to

alternative meeting times. The instructor is available to provide guidance and assist students in finding resources for their presentation.

More information about all of the assignments will be published on D2L.

## 6. Grading System

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

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

## 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 the content of College policies.

Education and academic policies include, but are not limited to, [Academic Progress](#), [Admission](#), [Course Withdrawals](#), [Student Appeals](#), Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, and Student Penalties and Fines.

### Student Conduct Policy

There is a [Student Conduct Policy](#). It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College website.

### A. GRADING SYSTEMS

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf#page=2>

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#page=4> 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.