

# CLASS SYLLABUS



COURSE TITLE: MRAD 173 – Pathology – Part A  
CLASS SECTION: BX01  
TERM: S2025  
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](#).

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<https://camosun.ca/about/covid-19-updates>

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*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

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NAME: Dan Andrews  
EMAIL: [AndrewsD@camosun.ca](mailto:AndrewsD@camosun.ca)  
OFFICE: CHW 317  
HOURS:

*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

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In this advanced beginner course, students explore various musculoskeletal, respiratory, and cardiovascular pathologies due to disease and trauma. Students study images obtained from a variety of sources illustrating the appearance of pathological conditions common to these systems. To better understand how pathology impacts patient care and technical considerations for the radiographer, students discuss and experiment with adaptive actions and plan appropriate practice responses during laboratory activities.

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

PREREQUISITE(S): All of: C+ in MRAD 106  
CO-REQUISITE(S): N/A  
PRE/CO-REQUISITE(S): All of: C+ in MRAD 156

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## COURSE DELIVERY

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| ACTIVITY                      | HOURS / WEEK | # OF WEEKS | ACTIVITY HOURS |
|-------------------------------|--------------|------------|----------------|
| Lecture                       | 2            | 15         |                |
| Seminar                       |              |            |                |
| Lab / Collaborative Learning  | 1            | 15         |                |
| Supervised Field Practice     |              |            |                |
| Workplace Integrated Learning |              |            |                |
| Online                        |              |            |                |
| TOTAL HOURS                   |              |            | 45             |

## COURSE LEARNING OUTCOMES

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

- discuss the nature and effects of pathophysiologic processes on the human body as they pertain to radiographic imaging. (A.3.4, E.2.7)
- organize commonly occurring pathological conditions of the musculoskeletal, respiratory, and cardiovascular systems by classification, etiology, pathogenesis, signs and symptoms, treatment, and radiographic appearance. (A.3.4, E.1.3)
- apply knowledge of commonly occurring pathological conditions of the musculoskeletal, respiratory, and cardiovascular systems as they pertain to the components of a radiographic examination. (A.3.4, B.3.4, E.1.3, E.2.7)

## COURSE OBJECTIVES AND MAPPED PROFESSIONAL COMPETENCIES

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

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### Canadian Association of Medical Radiation Technologists Competency Profile, Radiological Technology (2019)

- discuss the nature and effects of pathophysiologic processes on the human body as they pertain to radiographic imaging. (A.3.4, E.2.7)
- organize commonly occurring pathological conditions of the musculoskeletal, respiratory, and cardiovascular systems by classification, etiology, pathogenesis, signs and symptoms, treatment, and radiographic appearance. (A.3.4, E.1.3)
- apply knowledge of commonly occurring pathological conditions of the musculoskeletal, respiratory, and cardiovascular systems as they pertain to the components of a radiographic examination. (A.3.4, B.3.4, E.1.3, E.2.7)

#### MSK

- Classify MSK pathologies in terms of their attenuation of x-rays. RTR.3.2
- Explain the changes in technical factors required for obtaining optimal quality radiographs in patients with various underlying pathologic conditions. RTR.3.2, 2.2.2
- Define and describe key terms of MSK pathologies. RTR.6.4
- Describe the physiology of the MSK system. RTR.6.4
- Identify anatomic structures on both diagrams and radiographs of the MSK system. RTR.6.4, RTR.3.2
- Differentiate the various pathologic conditions affecting the MSK system and their radiographic manifestations. RTR.6.4, RTR.3.2, 2.2.2

#### Respiratory

- Classify Respiratory pathologies in terms of their attenuation of x-rays. RTR.3.2
- Explain the changes in technical factors required for obtaining optimal quality radiographs in patients with various underlying pathologic conditions. RTR.3.2, 2.2.2
- Define and describe key terms of Respiratory pathologies. RTR.6.4

- Describe the physiology of the Respiratory system. RTR.6.4
- Identify anatomic structures on both diagrams and radiographs of the Respiratory system. RTR.6.4, RTR.3.2
- Differentiate the various pathologic conditions affecting the Respiratory system and their radiographic manifestations. RTR.6.4, RTR.3.2, 2.2.2

#### Cardiovascular

- Classify Cardiovascular pathologies in terms of their attenuation of x-rays. RTR.3.2
- Explain the changes in technical factors required for obtaining optimal quality radiographs in patients with various underlying pathologic conditions. RTR.3.2, 2.2.2
- Define and describe key terms of Cardiovascular pathologies. RTR.6.4
- Describe the physiology of the Cardiovascular system. RTR.6.4
- Identify anatomic structures on both diagrams and radiographs of the Cardiovascular system. RTR.6.4, RTR.3.2
- Differentiate the various pathologic conditions affecting the Cardiovascular system and their radiographic manifestations. RTR.6.4, RTR.3.2, 2.2.2

### REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Eisenberg, R. and Johnson, N. (2021). *Comprehensive Radiographic Pathology* (7<sup>th</sup> ed.). Elsevier

Kowalczyk, N. (2021). *Radiographic Pathology for Technologists* (8<sup>th</sup> ed.). Elsevier

### 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 |
|--------------------|---|-------------|
| 1 – May 5-9        | <b>Intro</b><br><u>Readings:</u> Eisenberg Ch. 1<br>Kowalczyk Ch. 1                               |             |
| 2 – May 12-16      | <b>Skeletal Trauma</b><br><u>Readings:</u> Eisenberg Ch. 4 (pp. 128-149 only)<br>Kowalczyk Ch. 12 |             |
| 3 – May 19-23      | <b>Skeletal Trauma, cont.</b>   |             |
| 4 – May 26-30      | <b>Skeletal Pathologies</b><br><u>Readings:</u> Eisenberg Ch. 4 (pp. 84-128)<br>Kowalczyk Ch. 2   |             |
| 5 – June 2-6       | <b>Skeletal Pathologies, cont.</b>  |             |
| 6 – June 9-13      | <b>Skeletal Pathologies, cont.</b>  |             |

| WEEK or DATE RANGE | ACTIVITY or TOPIC  | OTHER NOTES |
|--------------------|--|-------------|
| 7 – June 16-20     | <b>Cardiovascular Pathologies</b><br><u>Readings:</u> Eisenberg Ch. 7<br>Kowalczyk Ch. 4 |             |
| 8 – June 23-27     | <b>Cardiovascular Pathologies, cont.</b>   |             |
| 9 – June 30-July 4 | <b>Cardiovascular Pathologies, cont.</b>   |             |
| 10 – July 7-11     | Respiratory Pathologies begin if Cardiovascular have completed (Flexible)                |             |
| 11 – July 14-18    | <b>Respiratory Pathologies</b><br><u>Readings:</u> Eisenberg Ch. 3<br>Kowalczyk Ch. 3    |             |
| 12 – July 21-25    | <b>Respiratory Pathologies, cont.</b>  |             |
| 13 – July 28-Aug 1 | <b>Respiratory Pathologies, cont.</b>  |             |
| 14 – Aug 4-8       | Flex Week  |             |
| 15 – Aug 11-15     | Final Exams  |             |

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 | 33          |
| Quizzes         | 33          |
| Final Exam      | 34          |
| <b>TOTAL</b>    | <b>100%</b> |

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

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### **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.

## SCHOOL OR DEPARTMENTAL INFORMATION

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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

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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

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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                   | <a href="http://camosun.ca/advising">http://camosun.ca/advising</a>                       |
| Accessible Learning                 | <a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a> |
| Counselling                         | <a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>                 |
| Career Services                     | <a href="http://camosun.ca/coop">http://camosun.ca/coop</a>                               |
| Financial Aid and Awards            | <a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>               |
| Help Centres (Math/English/Science) | <a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>               |
| Indigenous Student Support          | <a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>                   |
| International Student Support       | <a href="http://camosun.ca/international/">http://camosun.ca/international/</a>           |
| Learning Skills                     | <a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>           |
| Library                             | <a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>     |
| Office of Student Support           | <a href="http://camosun.ca/oss">http://camosun.ca/oss</a>                                 |
| Ombudsperson                        | <a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>                           |
| Registration                        | <a href="http://camosun.ca/registration">http://camosun.ca/registration</a>               |
| Technology Support                  | <a href="http://camosun.ca/its">http://camosun.ca/its</a>                                 |

| Support Service | Website   |
|-----------------|---|
| Writing Centre  | <a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a> |

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.

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## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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### 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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.