



**School of Health & Human Services**  
Medical Radiography Technology

**Course Name: Pathology 2**

**Course Number: MRAD 248**

## COURSE OUTLINE

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**The Approved Course Description is available on the web:**

<http://camosun.ca/learn/calendar/current/web/mrad.html#MRAD248>

*Please note:*

- *This outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for your records.*
- *This course is only open to students in the Medical Radiography program.*

### **Introduction:**

This course builds on Pathology 1 by providing theory describing complex bone pathologies resulting from trauma and disease. Emphasis will be placed on discerning between benign versus malignant bony pathologies.

The main focus of this course is commonly occurring pathological processes and their radiographic presentations of the following anatomical systems: respiratory, gastrointestinal, urinary, reproductive, cardiovascular, nervous (including brain), lymphoreticular, and endocrine.

***Students must achieve a minimum of a C+ (65%) to use this course as a prerequisite. Refer to the Camosun Calendar for detailed information about course prerequisites.***

**Prerequisites:** A minimum of "C+" in MRAD 102, MRAD 105, MRAD 109, MRAD 115

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### **1. Instructor Information**

|     |                      |   |
|-----|----------------------|---|
| (a) | <b>Instructor:</b>   | Louise Kallhood   |
| (b) | <b>Office Hours:</b> | Wednesday or Friday 1230 – 1320 or by appointment/email           |
| 248 | <b>Location:</b>     | WT 212D   |
| (d) | <b>Phone:</b>        | Email only  |
| (e) | <b>Email:</b>        | <a href="mailto:kallhoodl@camosun.ca">kallhoodl@camosun.ca</a>    |
| (f) | <b>Website:</b>      | <a href="http://online.camosun.ca/">http://online.camosun.ca/</a> |

## 2. Intended Learning Outcomes/Competencies

Letters and numbers following certain learning outcomes indicate the specific competencies covered from the CAMRT Medical Radiography Competency Profile:

1. effectively use terminology relevant to the study of pathology.
2. interpret physicians request for patient examinations. (A1.1, F25.3, F26.3, F27.3,G2.3, G3.3, G4.3, G5.3,G6.3, G7.3, H2.3, H3.3, I3.3, I4.3, J2.3, J3.3)
3. explain the relationship between a pathology its physiological effect on other body systems. (G1.1, H1.1, I1.1, J1.1, K1.2, M1.2)
4. identify the radiographic appearance of commonly occurring pathological conditions of the following areas/systems: head/spine, chest/cardiac, abdomen, pelvis, and all body systems. ( F25.7, F26.7, F27.7, G1.1, G2.7, G3.9, G4.11, G5.11, G6.12, G7.10, H1.1, H2.7, H3.8, I1.1, I3.13, I14.13, J1.1, J2.11, J3.8, K1.2, M1.2)
5. identify the physical signs and symptoms associated with commonly occurring pathologies (B3.1, B3.2, G1.1, H1.1, I1.1, J1.1, K1.2, M1.2)
6. identify pathological variants versus normal anatomy. ( G1.1, H1.1, I1.1, J1.1, K1.2,M1.2)
7. provide alternate positioning and patient care solutions based on specific pathologies. (A1.1. F25.3, F25.6, F26.3, F26.6,F27.3, F27.6, G2.3, G2.6, G3.3, G3.8, G4.3, G4.10, G5.3, G5.10, G6.3, G6.11, G7.3, G7.9, H2.3, H3.3, H3.6, I3.3, I3.11, I4.3, I14.12, J2.3, J3.3)
8. discuss changes in exposure technique pursuant to specific pathologies. (E1.1, E1.2, E1.3, E1.4, E1.12, E2.1)

[CAMRT Medical Radiography Competency Profile Current](#)

[CAMRT Medical Radiography Competency Profile January 2014](#)

## 3. Learning Resources

### Required Textbooks:

Eisenberg,Ronald L., Johnson.Nancy M.(2007). ***Comprehensive Radiographic Pathology***. (5<sup>th</sup> ed.) Mosby Elsevier, St.Louis,Mi.

Kowalczyk, N., & Mace, J.D. (2008). ***Radiographic Pathology for Technologists*** (5<sup>th</sup> ed.). Mosby.

Drake, R.L., Vogl, W., & Mitchell, A.W.M. (2010). ***Gray's Anatomy for Students*** (2<sup>nd</sup> ed.). Churchill Livingstone.

### Optional & Supportive Textbooks:

Ballinger, P.W., & Frank, E.D. (2012). ***Merrill's Atlas of Radiographic Positions and Radiologic Procedures***, Volumes 1, 2 & 3 (12th ed.). Mosby: Elsevier.

Braun, Carie A. & Anderson, Cindy M. (2011). ***Pathophysiology, A Clinical Approach, (2<sup>nd</sup> ed.)***, Lippincott Williams & Wilkins.

McConnell, Thomas, H. (2007). ***The Nature of Disease***, Lippincott Williams & Wilkins.

Anderson, K.N. (Ed.). (2001). ***Mosby's Medical, Nursing and Allied Health Dictionary (9th ed.)***. Mosby. (Any medical dictionary is suitable.)

### **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.

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 from various sources. Additionally, not all details can be covered in the online content, and you will be required to refer to textbook material that is not discussed specifically in class.

### **Other Materials:**

Additional resources may include, but are not limited to: online notes, PowerPoint slides, Textbook Companion Workbooks, and hyperlinks. You may prefer to download online notes ahead of time (when available) and then write your notes directly onto copies of the slides/content.

## **4. Student Assessment**

|                       |             |
|-----------------------|-------------|
| Quizzes               | 30%         |
| Assignments           | 30%         |
| Cumulative Final Exam | 40%         |
| <b>TOTAL</b>          | <b>100%</b> |

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

### **Assessment Details**

#### **Quizzes**

- Quizzes are usually administered in class following the completion of a Module or study unit and cover all content from that Module or unit. Students will have a set amount of time to complete the quiz using the D2L online testing system.
- Some quizzes may be assigned as “take home” format.
- Questions on all quizzes are randomized for each student. The questions are drawn from a test bank library and are in a variety of formats including: multiple choice, multi-select, fill-in-the-blank, matching, true/false, short answer, and essay.

**Assignments:**

- Most late assignments are subject to a **2% penalty** subtracted from a student's total **FINAL GRADE** in the course. E. g. Three "late" assignments over the course of the term will result in 6% subtracted from the student's **final grade** after all assignments, quizzes, and the final exam are calculated.
- Failing to turn in a completed assignment results in a ZERO mark for the assignment ***in addition*** to the late assignment penalty.
- Incomplete assignments are not accepted.

Exceptions to the Late Assignment Penalty Rule will be made solely at the discretion of the instructor. In mitigating circumstances evidence of acute injury, illness, or other emergency situation may be required. However, this does not guarantee that an exception will be made. When possible, it is highly recommended that students attempt to arrange an extension of an assignment **BEFORE** the due date.

**Final Exam:**

The final exam is a cumulative assay of the entire course. The final examination will be sequenced & randomized from a cumulative bank of test questions. Students will have a set amount of time to complete the final using the D2L online testing system.

In emergency circumstances, a student may write a quiz 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 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>

**There is NO written midterm exam for this course.**

**5. Course Content and Schedule:****Lecture Days/Times & Room Number:**

Rotates between: MRT212 A, B, & C

**Class:** Tuesday 0930 -1020AM, Friday 1030 AM – 1220 PM

**Lab:** Wednesday 430 – 520 PM

## Weekly Course Schedule

The following schedule is tentative and subject to change if deemed necessary by the instructor.

| Week | Dates (M-Sun)                    | Module/Assignments   |
|------|----------------------------------|--|
| 1    | Jan 11- 15                       | Course Introduction & Skeletal System                        |
| 2    | Jan 18 - 22                      | Skeletal System  |
| 3    | Jan 25 - 29                      | Skeletal System  |
| 4    | Feb 01-05                        | Central Nervous System                                       |
| 5    | Feb 08 – 12<br>Family Day        | Endocrine/Biliary Systems                                    |
| 6    | Feb 15 – 19<br>Reading Break     | Breast/Reproductive/Lymphoreticular/Hematopoietic<br>On Line |
| 7    | Feb 22 – 26                      | Biliary/GI Systems   |
| 8    | Feb 29 – Mar 04                  | GI System  |
| 9    | Mar 07 - 11                      | Cardiovascular System  |
| 10   | Mar 17 - 18                      | Urinary System   |
| 11   | Mar 21 – 25<br>Good Friday       | Respiratory System   |
| 12   | Mar 28 – Apr 01<br>Easter Monday | Respiratory System   |
| 13   | Apr 04 - 08                      | Class Presentations and Review                               |
| 14   | Apr 11 - 15                      | Review and Mock Final  |
| 15   | Apr 18 - 22                      | FINAL EXAMS  |
|      |                                  |  |

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

### 6. Grading System

The following two grading systems are used at Camosun College. This course will use:

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

## 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+    | Minimum level of achievement to use the course as a prerequisite. | 3                       |
| 60-64      | C     |   | 2                       |
| 50-59      | D     | Minimum level of achievement for which credit is granted.         | 1                       |
| 0-49       | F     | Minimum level has not been achieved.                              | 0                       |

### 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 E-1.5 at [camosun.ca](http://camosun.ca) 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   |
| IP              | <i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of |
| 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,  |

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

### CONDUCT POLICIES

It is the student's responsibility to become familiar with the content of these policies. The policies are available in each School Administration Office, Registration, and on the College web site in the Policy Section.

[Academic Policies and Procedures](#)  
[Student Conduct Policy](#)

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at

[Camosun.ca](http://camosun.ca)

### MRT PROFESSIONAL CODE OF ETHICS

Camosun College Medical Radiography Technology students are expected to abide by the Canadian Association of Medical Radiation Technologist (CAMRT) Code of Ethics inasmuch as it applies to them in the learning and clinical environments. This information is available on the CAMRT website at:

[CAMRT Code of Ethics](#)

### MRT Department Policies & Procedures

Camosun College Medical Radiography Technology students are responsible for knowing all of the MRT Department Policies and must abide by them, including dress codes & lab safety procedures.

<http://camosun.ca/learn/programs/mrt/handbook.pdf>

## 8. GENERAL INFORMATION

### Suggested Study Time/Study Habits

- Successful students will typically spend 4 – 6 hours outside of class per week studying the content for this course to achieve full marks. This is in addition to the time it takes to navigate the online content.
- The instructor will be available during “virtual office” hours, by appointment, for students needing additional support mastering the course content.
- Map out a homework schedule; include time for reading and discussion.
- Study groups are a highly effective way of learning for many students.

### Attendance

- Students are expected to be **on time** for class discussions or scheduled content; tardiness disrupts the class. When students log onto a time sensitive discussion late; marks will be deducted from their assignment.
- If you choose not to **or** are unable to attend an online lecture or activity; it is your responsibility to acquire **all** information given during a class missed, incl. notes, hand-outs, assignments, changed exam dates etc.
- Missed exams or quizzes cannot be made up except in case of documented illness (doctor’s note required).

*The Medical Radiography Technology program is committed to promoting competence, professionalism and integrity in our students and developing their core skills to succeed throughout their academic programs and in their careers. The purpose of Academic Honesty Guidelines is to provide clear expectations of appropriate academic conduct and to establish processes for discipline in appropriate circumstances. It is the student’s responsibility to become familiar with the content and the consequences of academic dishonesty. Before you begin your assignments, review the Academic Policies on the Camosun College website:*

<http://camosun.ca/learn/becoming/policies.html>



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