



A POLYTECHNIC INSTITUTION

School of Health Sciences

Program: Medical Radiography

Option:

MRAD 2217**Pathology for Radiographers****Start Date:** September, 2005**End Date:** December, 2005**Total Hours:** 30 **Total Weeks:** 7**Term/Level:** 2 **Course Credits:** 2**Hours/Week:** **Lecture:** 2 **Lab:** 2**Shop:** **Seminar:** **Other:****Prerequisites****MRAD 2217 is a Prerequisite for:****Course No. Course Name****Course No. Course Name****Level 1 Courses****Level 3 Courses****■ Course Description**

The content covered in Level 2 is an introduction to general pathology and bone pathology.

- To provide the students with the knowledge necessary to make informed decisions about technique changes and patient care associated with different pathological processes.
- To identify a select group of bone pathologies as they appear radiographically.
- To give students a broad knowledge of the more common bone pathological processes.

■ Evaluation

Weekly Quizzes	20%
Midterm Exam	35%
Final Exam	45%
TOTAL	100%

Comments: The pass mark for all subjects in the Medical Radiography program is 60%.

■ Course Learning Outcomes/Competencies

Each of the following student outcomes are identified with the relevant critical task (CT) for competency according to the CAMRT published guidelines (Oct. 1999 revised):

Upon successful completion, the student will be able to:

1. correctly use terminology relevant to the study of pathology.

- A1.4 Correlate clinical information to the prescribed examination.
- A3.2 Verify clinical information with the patient or clinical staff.
- A3.6 Explain the procedure to the patient.
- C2.3 Explain the procedure at an appropriate level of understanding for the patient.

■ **Course Learning Outcomes/Competencies (cont'd.)**

2. explain the relationship between a pathology and its effect on the body as a whole.
 - A3.6 Explain the procedure to the patient.
 - A3.2 Verify clinical information with the patient or clinical staff.
 - A3.11 Facilitate patient transport using good body mechanics.
 - A4.1 Plan the examination according to patient condition, to minimize patient discomfort.
 - A4.6 Position the patient to demonstrate the required anatomical structures.
 - A4.8 Direct the central ray to the correct anatomical landmark(s).
 - A4.9 Align the imaging system with the required anatomical structures.
3. identify the signs and symptoms associated with common type disease processes.
 - A5.6 Select the fastest film/screen/grid combination for optimum image quality appropriate for the examination.
 - A5.7 Select appropriate kV, mA and time or automatic exposure control parameters.
 - A5.8 Modify exposure factors on the basis of the patient's age, physique and condition.
 - A7.3 Identify anatomy and patient position on the image.
 - A7.4 Verify that required structures are demonstrated.
 - A7.6 Determine whether the diagnostic quality of the image is acceptable.
 - A7.9 Confirm that any pathologies or anomalies are adequately visualized.
4. describe the radiographic appearance of selected pathological conditions.
 - A7.3 Identify anatomy and patient position on the image.
 - A7.4 Verify that required structures are demonstrated.
 - A7.6 Determine whether the diagnostic quality of the image is acceptable.
5. identify a selected group of pathologies as they appear radiographically.
 - A7.3 Identify anatomy and patient position on the image.
 - A7.4 Verify that required structures are demonstrated.
 - A7.6 Determine whether the diagnostic quality of the image is acceptable.
 - A7.7 If image is unacceptable, determine the reason.
 - A7.9 Confirm that any pathologies and anomalies are adequately visualized.
6. plan changes in radiographic technique to best demonstrate the presence of disease processes.
 - A5.6 Select the fastest film/screen/grid combination for optimum image quality appropriate for the examination.
 - A5.7 Select appropriate kV, mA and time or automatic exposure control parameters.
 - A5.8 Modify exposure factors on the basis of the patient's age, physique and condition.
 - A7.3 Identify anatomy and patient position on the image.
 - A7.4 Verify that required structures are demonstrated.
 - A7.6 Determine whether the diagnostic quality of the image is acceptable.

■ **Course Learning Outcomes/Competencies (cont'd.)**

- A7.7 If image is unacceptable, determine the reason.
- A7.12 Determine whether additional views are required.

7. discuss a plan for patient care during radiography based on the pathology involved.

- A1.4 Correlate clinical information to the prescribed examination.
- A1.6 Plan the radiographic imaging procedure.
- A3.2 Verify clinical information with the patient or clinical staff.
- A3.6 Explain the procedure to the patient.
- A3.11 Facilitate patient transport using good body mechanics.
- A4.1 Plan the examination according to patient condition, to minimize patient discomfort.
- A4.5 Touch the patient at the anatomical landmark(s) required for positioning for the examination.
- A4.7 Use immobilization and positioning aids as required.

■ **Verification**

I verify that the content of this course outline is current.

M. Filippelli
Authoring Instructor

Sept 16/05
Date

I verify that this course outline has been reviewed.

M. Filippelli
Program Head/Chief Instructor

Sept 16/05
Date

I verify that this course outline complies with BCIT policy.

Alma Bell
Dean/Associate Dean

16 Sept/05
Date

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

■ Instructor(s)

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■ Learning Resources

Required:

Pathology for Medical Radiography Student Manual

Recommended:

Mosby's Medical and Nursing Dictionary, C.V. Mosby Co.

Boyd's Introduction to the Study of Disease, 9th ed., Shelton, Huntington, Lea and Febiger, Philadelphia

Outline of Fractures, 6th ed., J.C. Adams, Churchill Livingstone, London

Fractures and Dislocations in Children, A.G. Pollen, Churchill Livingstone, London

The Bones and Joints, G.S. Lodwick, Year Book Medical Publishers

The Language of Fractures, 2nd ed., Robert J. Schultz, Williams and Wilkins, Baltimore

■ Information for Students

(Information below can be adapted and supplemented as necessary.)

Assignments: Late assignments, lab reports or projects will **not** be accepted for marking. Assignments must be done on an individual basis unless otherwise specified by the instructor.

Makeup Tests, Exams or Quizzes: There will be **no** makeup tests, exams or quizzes. If you miss a test, exam or quiz, you will receive zero marks. Exceptions may be made for **documented** medical reasons or extenuating circumstances. In such a case, it is the responsibility of the student to inform the instructor **immediately**.

Ethics: BCIT assumes that all students attending the Institute will follow a high standard of ethics. Incidents of cheating or plagiarism may, therefore, result in a grade of zero for the assignment, quiz, test, exam, or project for all parties involved and/or expulsion from the course.

Attendance: The attendance policy as outlined in the current BCIT Calendar will be enforced. Attendance will be taken at the beginning of each session. Students not present at that time will be recorded as absent.

Illness: A doctor's note is required for any illness causing you to miss assignments, quizzes, tests, projects, or exam. At the discretion of the instructor, you may complete the work missed or have the work prorated.

Course Outline Changes: The material or schedule specified in this course outline may be changed by the instructor. If changes are required, they will be announced in class.

The Medical Radiography program adheres to BCIT Student Policies — refer to:

<http://www.bcit.ca/files/pdf/policies/5002.pdf>

Schedule

	Week of	Set	Lecture	Lab
1	Sept 5	ALL	Labor Day Introduction to Pathology and Fractures	Intro to Fractures
2	Sept 12	ALL	Introduction to Fractures	Intro to Fractures
3	Sept 19	ALL	Intro to Upper Extremity Fractures	Upper Extremities
4	Sept 26	ALL	Fractures of Upper Extremities Shinearama Day Sept 28	Upper Extremities Midterm
5	Oct 3	C/D	Fractures of Lower Extremities	Lower Extremities
6	Oct 10	C/D	Thanksgiving Day Fractures of Lower Extremities Fractures of Pelvis, Ribs and Sternum	Fractures of Lower Extremities Pelvis, Ribs, and Sternum
7	Oct 17	C/D	Fractures of Vertebrae	Vertebrae
8	Oct 24	C/D	Inflammatory Disorders	Inflammatory Disorders
9	Oct 31	C/D	Epiphyseal Disorders	Epiphyseal Disorders
10	Nov 7	A/B	Fractures of Lower Extremities Remembrance Day	Lower Extremities
11	Nov 14	A/B	Fractures of Lower Extremities Fractures of Pelvis, Ribs and Sternum	Fractures of Lower Extremities Pelvis, Ribs, and Sternum
12	Nov 21	A/B	Fractures of Vertebrae	Vertebrae
13	Nov 28	A/B	Inflammatory Disorders	Inflammatory Disorders
14	Dec 5	A/B	Epiphyseal Disorders	Epiphyseal Disorders
15	Dec 12	ALL	FINAL EXAM WEEK	