



A POLYTECHNIC INSTITUTION

School of Health Sciences

Program: Medical Radiography

Option:

**MRAD 2217**  
**Pathology for Radiographers****Start Date:** September, 2003**End Date:** December, 2003**Total Hours:** 21    **Total Weeks:** 7**Term/Level:** 2    **Course Credits:** 2**Hours/Week:**    **Lecture:** 2    **Lab:** 1**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 pathologies as they appear radiographically.
- To give students a broad knowledge of the more common pathological processes.

**■ Evaluation**

Weekly Quizzes	10%
Midterm Exam	45%
Final Exam	45%
<b>TOTAL</b>	<b>100%</b>

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

Optional Project                      10%

**■ 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 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.
  - 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.
  - A7.12 Determine whether additional views are required.

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

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

Aug 29/03  
Date

I verify that this course outline has been reviewed.

\_\_\_\_\_  
Program Head/Chief Instructor

\_\_\_\_\_  
Date

I verify that this course outline complies with BCIT policy.

John H. Ennis  
Dean/Associate Dean

August 29 2003  
Date

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

## ■ Instructor(s)

Mary Filippelli

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## ■ Learning Resources

### Required:

*Pathology for Medical Radiography Student Manual*

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

### Recommended:

*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.

## ■ Assignment Details

### Schedule

	Week of	Set	Lecture	Lab
1	Sept 1 – 5	C/D	<b>Labor Day</b> Introduction to Pathology and Fractures	Lecture Cont'd
2	Sept 8 – 12	A/B	Introduction to Pathology and Fractures	Lecture Cont'd
3	Sept 15 – 19	A/B	Fractures of Upper Extremities <b>Shinearama Day Sept 17</b>	Upper Extremities
4	Sept 22 – 26	C/D	Fractures of Upper Extremities	Lecture Cont'd
5	Sept 29 – Oct 3	C/D	Fractures of Lower Extremities	Upper Extremities
6	Oct 6 – 10	A/B	Fractures of Lower Extremities	Lower Extremities
7	Oct 13 – 17	A/B	<b>Thanksgiving Day</b> Fractures of Spine	Midterm
8	Oct 20 – 24	C/D	Fractures of Spine	Midterm
9	Oct 27 – 31	A/B	Fractures of Pelvis, Ribs, Sternum and Skull	Fractures of Spine
10	Nov 3 – 7	A/B	Inflammatory Disorders	Pelvis, Ribs, Sternum and Skull
11	Nov 10 – 14	C/D	<b>Remembrance Day</b> Fractures of Pelvis, Ribs, Sternum and Skull	Fractures of Lowers
12	Nov 17 – 21	C/D	Inflammatory Disorders	Spine, Pelvis, Ribs, Sternum and Skull
13	Nov 24 – 28	A/B	Epiphyseal Disorders	Inflammatory Disorders
14	Dec 1 – 5	C/D	Epiphyseal Disorders	Inflammatory Disorders
15	Dec 8	ALL	<b>FINAL EXAMS</b>	

### Optional MRAD 2217 Project Paper

Paper on a new (within last five years) advancement on medical, surgical or radiographic approach to fractures and pathologies involving fractures.

**Criteria:**

- Minimum five pages (text) (APA format)
- Include references
- Include abstract page
- Include minimum three diagrams/pictures

\* Above can be submitted on floppy disk.

Student Name: \_\_\_\_\_

Set: \_\_\_\_\_ Date: \_\_\_\_\_

I would like to submit a project paper to defer my exam marks as follows:

Midterm                      40% ☐                      35% ☐

Final exam                      40% ☐                      35% ☐

Student signature: \_\_\_\_\_