



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline

School of Health Sciences

Program: Medical Imaging

Option: Medical Radiography

**MRAD 1106**

**Radiographic Procedures 1**

**Start Date:** January 2002

**End Date:** April 19<sup>th</sup>, 2002

<b>Hours/Week</b>	10	<b>Total Hours:</b>	150	<b>Term/Level:</b>	1
<b>Lecture:</b>	4	<b>Total Weeks:</b>	15	<b>Credits:</b>	10
<b>Lab:</b>	6				
<b>Other:</b>					

#### Prerequisites

is a Prerequisite for:

Course No.	Course Name	Course No.	Course Name
		MRAD 1108	Clinical Education 1
		MRAD 2206	Radiographic Procedures 2

#### Course Description

This course introduces the field of radiography including the principles and terminology of imaging procedures. Emphasis will be placed on patient preparation and care as well as positioning and techniques for examinations of upper and lower extremities, pelvis, chest and abdomen. The course also covers all factors affecting radiographic technique and quality. Skills to evaluate the diagnostic and technical acceptability of the radiographs for each of the respective areas will be developed. Labs will reinforce the theoretical components of the course.

#### Course Goals

- To introduce students to the field and practice of radiography.
- To understand radiographic and patient care procedures necessary to carry out required positioning of upper and lower extremities, pelvis, chest and abdomen.
- To become familiar with basic radiographic positioning principles and medical terminology.
- To develop skills necessary to competently critique radiographs of anatomical positions covered.
- To understand the application of technical and physical principles affecting the radiographic image.
- To develop skills to competently discern diagnostic film quality.
- To develop skills to adjust technical factors for optimum quality radiographs.

### Evaluation

Weekly quizzes	10%	All laboratory exercises must be satisfactorily completed for a course mark to be received. 60% is the required pass mark in this course
Midterm quizzes Lecture	20%	
Film Labs	20%	
Video Project	10%	
Laboratory (Positioning)	5%	
Final Exam Lecture/Lab	35%	
TOTAL	100%	

### Course Learning Outcomes/Competencies

Upon successful completion the student will be able to:

(Each of the following statements are identified with the relevant Critical Task for Competency (CT) according to the CAMRT publication January 1997)

1. describe basic radiographic principles, basic patient positions and radiographic projections. CT A4
2. describe the anatomical landmarks and how they relate to the specific positions CT A4
3. describe differences in patient body habitus and how it relates to specific positioning requirements CT A4
4. explain the basic technical requirements of radiographic examinations CT A5
5. identify specific KV ranges as they relate to various anatomical areas CT A5
6. in the lab, perform basic radiographic positioning of the upper extremity, lower extremity, pelvis, chest and abdomen CT A4
7. explain the relationship between patient position and resultant image CT A7
8. identify on radiographs the specific anatomical structures demonstrated, and evaluate for technical quality and diagnostic acceptability CT A7
9. offer solutions for correction of technical and position errors CT A7
10. explain the influence of varying patient types and technical factors on the radiographic image CT A7

### Course Content Verification

I verify that the content of the course outline is current, accurate and complies with BCIT Policy.

M. Filippelli  
Program Head/Chief Instructor

Dec 2001  
Date

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



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**Effective Date**

January 2002

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**Instructor(s)**

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**Learning Resources**

**Required:**

- Philip W. Ballinger *Merrill's Atlas of Radiographic Positions and Radiologic Procedures 9<sup>th</sup> Edition*
- McQuillen – Martensen (1996) *Radiographic Critique*
- Mrad 1106 Student Lecture Manual
- Mrad 1106 Laboratory Manual
- Mrad 1106 Positioning Book (Pocket Inserts)

**Recommended:**

- Bushong, S., *Radiologic Science for Technologists, 6<sup>th</sup> Edition*
- Cullinan, A.M., *Producing Quality Radiographs, 2<sup>nd</sup> Edition*