



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline Part A

School of Health Sciences

Program: Medical Radiography

Option:

MRAD 2203

Radiographic Technique and Evaluation 2

Hours/Week:	3	Total Hours:	45	Term/Level:	2
Lecture:		Total Weeks:	15	Credits:	2
Lab:					
Other:					

Prerequisites

MRAD 2203 is a Prerequisite for:

Course No.	Course Name	Course No.	Course Name
MRAD 1103	Radiographic Technique and Evaluation 1		

Course Goals

1. To provide students with the skills required to evaluate the diagnostic and technical acceptability of medical radiographs of the vertebral column, urinary system, gastrointestinal system, thoracic cage, pharynx and trachea.
 2. Students will formulate technique charts and recognize variables to the normal patient.
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Course Description

Through tutorials and laboratory sessions, this course will address issues relating to Radiographic Technique and Technique Charts. In addition, the criteria for evaluating radiographs of the spine, urinary tract, gastrointestinal tract, pharynx, trachea and the thoracic cage will be discussed. Finally possible solutions to poor radiographic image quality will be discussed.

Evaluation

Final Examination	40%
Mid-Term	N/A
Laboratory Quizzes	20%
Other – Term Quizzes	40%
TOTAL	100%

Course Outcomes and Sub-Outcomes

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

1. Evaluate radiographs for diagnostic acceptability based on:
 - a. inclusion of all required structures
 - b. demonstration of correct positioning
 - c. appropriate level of density demonstrated
2. Assess main contributing factors to the overall radiographic image quality based on the:
 - a. type of patient involved (body habitus, pathology, limitation of movement)
 - b. appropriate technique factors required
 - c. acceptable processing methods used
3. Propose possible solutions to poor radiographic quality.
4. Develop radiographic technique charts using the DuPont Bit System.
5. Outline technique chart adjustments to *be made with respect to*:
 - a. patient body habitus
 - b. patient pathology
 - c. patient age
 - d. specific equipment used (generators, film screen, grids, etc.)
 - e. casts

Course Record

Developed by: _____
Instructor Name and Department (signature)

Date: _____

Revised by: Euclid Seeram
Instructor Name and Department (signature)

Date: Sept. 1995

Approved by: Ann McQueen
Associate Dean / Program Head (signature)

Start Date: Sept. 1995



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Course Outline Part B

School of Health Sciences

Program: Medical Radiography

Option:

MRAD 2203

Radiographic Technique and Evaluation 2

Effective Date

August, 1995

Instructor(s)

Euclid Seeram, RTR, BSc, MSc

Office No.: 4084

Phone: 8231

Office Hrs.: As Posted

Text(s) and Equipment

Required:

1. Ballinger, Philip W. Merrill's Atlas of Radiographic Positions and Radiographic Procedures – Volume 2, 6th Edition.
2. Bushong, S. Radiologic Science for Technologists, 5th Edition. 1993.

Recommended:

1. Cullinan, Angeline M. Producing Quality Radiographs. 1993.
 2. Carlton, R.R. & Adler, A.M. Principles of Radiographic Imaging. 1992.
 3. Notes from MRAD 1101 and 1103. 1995.
 4. Wallace, J.E. Radiographic Exposure. Principles and Practice. 1995.
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Course Notes (Policies and Procedures)

Assignment Details

There are 2 lab assignments. The requirements for completion will be discussed in class.



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Health Sciences

Program: Medical Radiography

Option:

Schedule

MRAD 2203

Radiographic Technique and Evaluation 2

Week	Lecture	Tutorial	Lab
Sept. 5 Tu	Special Studies	✓	✓
Sept. 11 M	Cervical and Thoracic Spines		✓
12 Tu	Course Introduction and Review of MRAD 1103	Review Questions	
12 Tu	Cervical and Thoracic Spines		✓
13 W	Radiographic Image Quality	✓	
Sept. 18 M	Lumbosacral Spine, Sacrum and Coccyx		
19 Tu	Exposure Technique Factors	✓	
19 Tu	Lumbosacral Spine, Sacrum and Coccyx		✓
20 W	Shinerama	Shinerama	Shinerama
Sept. 25 M	Intravenous Pyelography	QUIZ 1	✓
26 Tu	Exposure Technique Factors	✓	
26 Tu	Intravenous Pyelography		✓
27 W	Exposure Technique Charts	✓	
Oct. 2 M	Upper GI Tract		✓
3 Tu	Exposure Technique Charts	QUIZ 2	✓
3 Tu	Upper GI Tract		✓
4 W	Radiation Absorption by the Body	✓	
Oct. 9 M	Thanksgiving	Thanksgiving	Thanksgiving
10 Tu	Radiation Absorption by the Body	✓	
10 Tu	Colon		✓
11 W	Solutions to Poor Radiographic Quality	✓	

Set AC	Set BD		Topic	Tutorial	Lab
Oct. 16	Oct. 30	M	Colon	QUIZ 3	✓
		Tu	KVp and Penetration		✓
		Th	Sacrum; Coccyx; SI Joints		✓
		Th	KVp and the 15% Rule		✓
Oct. 23	Nov. 06	M	Ribs; Sternum; AC Joints; SC Joints		✓
		Tu	KVp-mAs Relationship		✓
		Th	Ribs; Sternum; AC Joints; SC Joints		✓
		Th	mAs and Density	QUIZ 4	✓
Nov. 13	Nov. 27	M	Ribs; Sternum; AC Joints; SC Joints		✓
		Tu	Scale of Contrast: Contrast		✓
		Th	Pharynx; Larynx; Trachea		✓
		Th	Field Size and Scatter Radiation	LAB 1 Report	✓
Nov. 20	Dec. 05	M	Review of Films		✓
		Tu	Grids and Effect on Density and Contrast		✓
		Th	Prepare Exposure Guides		✓
		Th	Prepare Exposure Guides	LAB 2 Report	✓
DEC. 11		FINAL EXAMINATION		ALL SETS	