A POLYTECHNIC INSTITUTION

Course Outline

School of Health Sciences
Program: Medical Radiography Technology
Option:

MRAD 3315
Case Studies

Start Date: January, 2005 **End Date:** April, 2005

Total Hours: 16 **Total Weeks:** 8 **Term/Level:** 3 **Course Credits:** 1.0
Hours/Week: 2 **Lecture:** **Lab:** **Shop:** **Seminar:** 2 **Other:**

Prerequisites

Course No.	Course Name
Successful completion of Level 2	

MRAD 3315 is a Prerequisite for:

Course No.	Course Name
Clinical Level 4	

Course Description

The course will examine issues and concerns related to the application of knowledge of anatomy and physiology, positioning, patient care, pathology, radiation protection, equipment, technique, ethics and other areas of concern in the solution of real life problems in medical radiography using selected case studies. Course readings, writing assignments, seminar discussions and exam questions will be used to develop and evaluate the skills.

In addition, this course is designed to provide the bridge between classroom theory and clinical work through group discussions and presentations and allow the student the opportunity to develop critical thinking and problem-solving skills.

Course Learning Outcomes/Competencies

The goals of the course are to assist the student in integrating the content from all the program courses as well as applying research skills while focusing on a radiographic case study. The discussions are also intended to develop or improve critical thinking, problem-solving and communication skills.

Upon successful completion, the student will be able to:

1. Apply imaging knowledge to understand realistic clinical scenarios.
2. Apply critical thinking and problem-solving skills to provide creative and alternative solutions to patient situations.
3. Analyze recommended action when solving issues in medical radiography.
4. Apply team skills in literature research and discussion.
5. Generate experiments to support radiography theory.
6. Analyze researched information for validity and application implications.
7. Develop multi-format communication skills.

The course outcomes correspond with the competency profile of the CAMRT.

A1 Utilize the request for consultation
A2 Prepare the room for radiographic imaging procedures
A3 Prepare the patient
A4 Position the patient
A5 Operate imaging equipment
A6 Process images
A7 Critique images and implement corrective measures
A8 Complete post–procedural tasks
B1 Protect the patient
B2 Protect the technologist
B3 Protect others required to be present during the procedure
B4 Monitor personal radiation exposure
C1 Ensure patient safety
C2 Establish patient trust and confidence
C3 Attend to the patient's physical comfort and needs
C4 Perform patient care duties
C5 Assist in the administration of contrast media and other drugs
C6 Ensure the confidentiality of patient information
D1 Monitor and maintain processing equipment and facilities
D2 Monitor radiographic equipment
D3 Perform quality control tasks
E1 Function within legal and ethical guidelines
E2 Demonstrate professional behaviour
E3 Demonstrate professional responsibility

Assignment Details
See web posting.

Evaluation

Final Examination	43%	Optional: Case Study Presentation, 2%
Midterm Examination	32%	
Participation	20%	
Team Work	5%	
TOTAL	100%	

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

Authoring Instructor — Date: Jan 4/05

I verify that this course outline has been reviewed.

Program Head/Chief Instructor — Date

I verify that this course outline complies with BCIT policy.

Dean/Associate Dean — 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:
Case Studies Manual MRAD 3315 – available online

Recommended:
Current Journals
Radiological Texts
Internet

Examples of internet sites:

http://www.onhealth.com
http://www.webmd.com
http://www.healthcentral.com
http://www.adam.com
http://www.healthatoz.com
http://www.discoveryhealth.com
http://www.mylifepath.com
http://www.intelihealth.com
http://www.healthanswers.com
http://www.accenthealth.com
http://www.americasdoctor.com
http://www.drugdigest.com
http://www.health-center.com
http://www.allhealth.com
http://www.drkoop.com
http://www.medbroadcast.com
http://www.askdrbob.com
http://www.nhsdirect.nhs.uk
http://www.medicines.org.uk/
http://www.surgerydoor.co.uk
http://www.netdoktor.com
http://www.meddean.luc.edu/lumen/index.html
http://www.rad.washington.edu/
http://www.vh.org/
http://www.medscape.com/radiologyhome
http://www.personalmd.com
http://www.realage.com
http://www.Adam.com
http://www.canadian-health-network.ca/

Information for Students

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.

Case Studies Mrad 3315
Schedule for 2005

Week	Set	Date	Topic
1	A/B	January 3	Introduction
	C/D	January 4	
2	A	January 10	Darkroom Disease
	C	January 11	
3	B	January 17	Darkroom Disease
	D	January 18	
4	A	January 24	Ankylosing Spondylitis
	C	January 25	
5	B	January 31	Ankylosing Spondylitis
	D	February 1	
6	A	February 7	Polycystic Disease
	C	February 8	
7	B	February 14	Polycystic Disease
	D	February 15	
8	A/B	February 21	Midterm
	C/D	February 22	
9	A	February 28	Scoliosis
	C	March 1	
10	B	March 7	Scoliosis
	D	March 8	
11	A/B/C/D	March 14-18	Spring Break
12	A	March 21	Legge Perthes
	C	March 22	
13	B	March 28	Easter Monday
	D	March 29	
13	A	April 4	Pulmonary Embolism
	C	April 5	
14	B	April 11	Legge Perthes
	D	April 12	Legge Perthes
15	B	April 18	Pulmonary Embolism
	D	April 19	Pulmonary Embolism
16		April 25-29	Exam week

LEVEL 3
CASE STUDIES PARTICIPATION MARK

Case Studies is designed to ***integrate research, teamwork and communication skills*** by discussing questions relating to clinical scenarios. Each student is not responsible for completing research on all of the case study questions, however, during the class, all of the questions will be discussed.

Each week, **students *will randomly be assigned one* case study question** on the case assignment sheet posted on the bulletin board outside the case study room.
Students will research the questions and collaborate with their partners for the final answer which will be discussed during class. Multiple choice questions must have misleads validated. Adequate research must be done to ensure a complete answer to the question. A rule of thumb is that students should be able to answer "why" to each explanation given.

Collaboration with students from other sets or with technologists may take place, however, the answers must be referenced to validating resources which must be provided on the summary using APA methodology http://www.comcul.ucalgary.ca/Web/efwr/apa.pdf).

Teamwork and providing feedback is an integral part of the medical radiography program, and it is important to learn these skills early. The teamwork component of the course will be satisfied by having students corroborate with students from another set for the assigned questions. This can be done by doing the research together or by doing the research independently and then comparing information. Students will provide feedback on the teamwork element which will be compiled in a random order and distributed to students at the end of the term.

WEEKLY MARKING GUIDE

1. **assigned question completed**
   - question answered thoroughly, not superficially
   - explanation of statements made
   - short memorized answers copied from books are not acceptable

2. **able to explain answers**
   - able to explain answers without reading material or summary
   - explanation of statements made
   - able to answer student questions pertaining to question researched

3. **adequate summary** (part marks will not be awarded if any of the following are not adhered to)
   - enough information provided on summary for comprehension purposes
   - typed, using 12 point font with 1 inch margins
   - minimum of one page in length
   - submitted one hour prior to class
   - works cited and quoted must be documented using APA format

4. **adequate references / proof provided for assigned questions** (part marks will not be awarded if any of the following are not adhered to)
   - acceptable references include:
     - textbooks, journals, newspapers, lab experimentation
   - valid internet sites such as university or hospital/medical sites are valid.
     - unacceptable references include:
     - instructor prepared manuals, classroom discussion, individual's websites
   - if internet sites are used are references, summaries must be emailed in order to validate internet site

5. **participating in non-assigned questions** • students are to contribute to class discussion by adding information or asking relevant questions
Mark Deductions
1. **lateness** • as case studies is dependent on class participation, it is important to respect everyone's contribution and be on time for class • summaries must be handed in 1 hour prior to class so that they can be copied for everyone • copies of summaries not available for classmates
2. **technique question not completed** • students will be asked randomly to explain technique question to everyone
3. **teamwork feedback not completed (see sample below)** • teamwork feedback to be completed by indicating attributes with a positive √, negative X, or neutral – • identification of person's strengths or suggestion for improvement must be give based on the the √, X, or – indicators • feedback will be typed in random order and be given back to students

Peer Assessment
To *not* have any marks deducted on the weekly marking sheet, each student will complete the peer assessment form for each assigned collaborating partner. • **Each student will complete the first four attributes by indicating if it was a positive √, negative X, or neutral – experience** • **Each student must indicate partner's strength or suggestion for improvement in order for peer assessment to be considered complete.**
1. **works to complete assignment in a timely manner** • is respectful of partners responsibilities and time constraints
2. **contributes value to the assignment** • contributes different material or ideas • doesn't just agree with information provided by others without adding to it
3. **is respectful of others ideas and opinions and is open-minded to suggestions** • is willing to acknowledge t
4. **would you like to have this person on your team again?**
5. **identify this person's strengths or make suggestions for improvements if X's have been indicated** • must identify strength or suggestion – not permissible to only identify what partner did during case study collaboration

If unable to attend class due to illness or other justified reason, marks will still be allotted for questions completed thoroughly on summary with adequate references. Students will still be responsible for completing the teamwork feedback. Marks will not be given for participation or explanation of questions.

Optional Case Studies Assignment

For the optional case study assignment, students will present a 5 minute (maximum) case study to the class. The assignment is worth 2% of the term mark.

Assignment Details

Presentations can be from cases that students were involved in during clinical or they can be cases that were researched on the net. The case study presentation will be marked on the following criteria:

1. ***Involving a Variety of Imaging Technologies***
   Attempts should be made to include at least **2 types of imaging modalities.** Examples of different imaging modalities include plain films, contrast fluoro, angiography, CT, MRI, US, NM. An example of a case study presentation would be a study consisting of plain films and ultrasound relating to the same clinical diagnosis, or CT and angio, or plain films and barium enema.

2. ***Background***
   The presentation must include the **history and clinical sign/symptoms of the patient.** For example, *Mrs. X, an elderly woman has been complaining of lower right abdominal pain for the last 2 weeks. It has worsened over the last 2 days and she has passed obvious blood in her stool. She has been taken to the emergency department by her daughter since the pain has suddenly become very severe.*

3. ***Student Involvement***
   It would be beneficial if students were involved in the case presented. However, as there is not any clinical during Level 3, cases can be researched from the internet or clinical pathology files.

4. ***Explanation of Images/Techniques***
   A brief description of the imaging modalities and techniques used is required along with an explanation of the procedure.

5. ***Conclusion/Diagnosis***
   The pathology found or diagnosis made must be identified along with a brief explanation of the pathology/diagnosis. If possible, students should identify the outcome (ie surgery, self resolution).

Intent of Participation

Students must give case studies instructor fair notice of intent in order to schedule case study presentation and to accommodate all interested students.