



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Operating Unit: Health Sciences

Program: Medical Radiography

Option:

Course Outline

MRAD 4400/5500
Clinical Education

Start Date: May 29 2000

End Date: May 4, 2000

Course Credits: 45/24

Term/Level: 4/5

Total Hours:

Total Weeks: 49

Hours/Week: 35

Lecture:

Lab:

Clinical Experience:

Prerequisites

Course No. Course Name

MRAD 3300 Clinical Education and all Level 3
didactic courses.

MRAD 4400/5500 is a Prerequisite for:

Course No. Course Name

Successful completion of the Medical Radiography
program.

Course Calendar Description

This course is designed to provide the student with practical experience in all areas of Medical Radiography. The student will gain this experience under the supervision of the clinical instructor and staff technologists in assigned clinical facilities.

Course Goals

To provide the necessary radiographic experiences for the student to develop into a competent technologist able to meet the radiographic requirements of any general radiographic imaging department.

Evaluation

Satisfactory

In order to receive a satisfactory standing, the student should:

- achieve competency for all the objectives as stated in the course outline and student manual.
- meet the volume, quality and percentage requirements of the Record of Clinical Experience 4/5.
- be certified competent in all aspects of general radiography (technical, patient procedures, patient care, professional behaviors and attitudes).

Unsatisfactory

A student may be considered to have an unsatisfactory standing if:

- objectives are not met.
- improvement strategies do not result in meeting of objectives.
- progress requirements for Record of Clinical Experience are not satisfactorily met.
- difficulty is demonstrated with the academic portion of the training.

An unsatisfactory standing will be given upon consultation with the clinical site, clinical coordinator and Program Head. Improvement strategies must have been attempted and documented prior to giving of an unsatisfactory standing.

- all situations resulting in an unsatisfactory standing will be reviewed with the student.
- additional tasks and strategies to be assigned by the clinical instructor.
- a student may be placed on provisional when an unsatisfactory standing has not been cleared.
- a student must obtain two consecutive satisfactory evaluations for any failed objectives.
- the clinical instructor may request assistance from BCIT clinical coordinators in dealing with an unsatisfactory standing.
- a student must clear all unsatisfactory objectives by end of Level 5 clinical term.
- student will be unable to write the national registry exams given by the CAMRT until any unsatisfactory objectives are cleared.

Course Learning Outcomes/Competencies

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

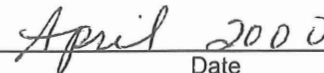
1. provide safe care for all patients.
2. consistently apply satisfactory positioning and technique skills that result in diagnostic films.
3. carry out radiation safety precautions for all patients, staff, and self as designated by provincial and national radiation protection codes.
4. handle the required equipment in a competent manner.
5. prepare the radiographic room for all examinations to be done.
6. keep the work area clean and stocked.
7. judiciously use the material resources.
8. communicate effectively with all individuals with whom he/she has contact.
9. interact appropriately with all members of the health care team.
10. document information as necessary for each procedure undertaken.
11. competently critique all radiographs.

12. organize and perform work efficiently while working as an effective team member.
13. carry out the organizational policies and procedures of a department of radiology (Imaging Dept.)

Course Content Verification

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


Program Head/Chief Instructor


Date

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



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Option:

MRAD 4400/5500
Clinical Education

Instructor(s)

Cindy Gibbons, A.C.R.	–	Burnaby Hospital
Nancy Devlin, R.T.R.	–	BC Children's Hospital
Helen Domshy, R.T.R., B.Sc.	–	Prince George Regional Hospital
Anna Yoshida, R.T.R.	–	Royal Inland Hospital
Patti Anderson, R.T.R.	–	Kelowna General Hospital
Henry Ross, R.T.R.	–	Royal Columbian Hospital
Egidio Pasin, R.T.R., B.Sc.	–	Lions Gate Hospital
Bonnie Goosney, RTR	–	MSA Hospital
Phyllis Wasylyshyn, R.T.R./TBA	–	Vancouver Hospital
Joanne Petersen, R.T.R.	–	St. Paul's Hospital
Louise Kallhood, A.C.R., MEd	–	Capital Health Region – Victoria General Hospital – Royal Jubilee Hospital

Learning Resources

Required: CAMRT Competency Profile

Recommended: At the discretion of individual hospital clinical instructors.

BCIT Policy Information for Students

Please refer to individual hospital policies and procedures for clinical site variations to the following.

Student Evaluations

1. Clinical Evaluation Summary: Department Orientation

- Given within the first month of Level 4.

2. Evaluation of Competency: Formative

- This general form is to be completed by staff technologists or CI's working with students (see sample in student manual).
- This is a general skills evaluation form that can be used in the following manner:
 - one case at a time
 - over a period of time (1 day, 1 week)
 - for a specific rotation
 - for the 3, 6 and 11 month general performance summaries provided by staff technologists.
- Evaluations are generally done every two (2) weeks for the first three (3) months and then monthly. Additional evaluations can be requested at the discretion of the CI.

3. Record of Clinical Experience and Competence

- The record must be completed before the Record of Clinical Competency will be signed by the Clinical Instructor and/or Program Head.
- The cases entered in the record must be done unassisted and be of superior quality.
- This record is divided into competency and radiographic critique logs of anatomical and radiographic specialty areas as well as sections for quality control, patient care and professional deportment.
- For the **competency critique log**:
 - on going competency assessments will be done by the CI or designate and will be documented in this section.
 - competency assessments will be based on clinical evaluation objectives and on the summative evaluation form.
 - competency critique log must demonstrate a variety of case types.
 - of the entered competencies, 2/3 (or 66%) must have a satisfactory standing with a minimum of 1 satisfactory entry in each anatomical section.
 - If an insufficient number of satisfactory competencies are achieved, further competency assessments will be required using the summative competency form.
- For the **radiographic critique log**:
 - cases are not required to be done with the CI, but can be done with an RT.
 - students are required to complete all spaces.
 - cases entered must be of superior diagnostic quality in order to be acceptable.
 - each case must be reviewed by the CI during film viewing sessions.

The radiographic critique log of the BCIT *Record of Clinical Experience and Competence* should be completed in the following manner.

- 25% of cases at end of 3 months
 - 50% of cases at end of 6 months (recorded on 6-month clinical evaluation summary)
 - 95% of cases at end of 11 months
 - 100% of cases at end of 12 months (required for program completion)
- For the **quality control** section:
 - exposure to the required tasks will be ensured.
 - For the **patient care** section:
 - assessments will be ongoing during competency assessments.
 - For the **professional deportment** section:
 - assessments will be ongoing through Professional Behaviour and Practice evaluations.

4. Evaluation of Competency: Summative

- This form is to be used if the competency critique log in the Record of Clinical Experience and Competence is not satisfactorily completed.
- This form is similar to the Formative Evaluation (see sample in student manual and record of clinical experience).
- Summative Evals are case specific to anatomical area (e.g., chest, hips, etc.).
- CI or designate will evaluate student skills for this form.

5. Professional Behaviors and Practice

Students are required to successfully attain Professional Behavior in Practice assessments in the clinical area by supervising technologists and the clinical instructor. Unsuccessful PBP's will be repeated.

6. Clinical Evaluation Summaries for Level 4/5

- This form is completed at 3, 6 and 11 months. A completed copy is sent to the clinical coordinator at BCIT.
- These forms are a compilation of information from the Formative evaluations and Record of Clinical Experience and Competence.
- The Level 4 term mark is based on the 6-month Summary evaluation form.
- Copies of these completed forms to be given to student.

Class Time

1. A minimum of two hours a week.
2. Topics covered:
 - hospital/departmental/program operational business
 - rad eval, multiple choice exams
 - radiographic exam routines, positioning and technique
 - equipment operation — radiographic and processing
 - quality control projects
 - patient care
 - interpersonal aspects of the student experience
 - guest lectures from radiologists, senior techs, biomed, etc. (vary, depending upon individual site's resources)
3. Project
Students will be responsible for one project during the year. The project topic will vary significantly from site to site, but it must lead to increased knowledge in a specific area related to medical radiography.

Term 4/5 Examinations

1. Multiple Choice
 - 5 exams during the course of the year
 - two clinical (anatomy, pathology, patient care, positioning)
 - two sciences (physics, apparatus, specialized imaging, QC, radiation biology, radiation protection, image recording)
 - mock final “achievement exam” given third week of March that consist of two parts.
The subject material is varied throughout the exams.
2. Radiographic Evaluation
 - 10 exams given during Level 4 and 5. These exams cover upper/lower extremities, shoulder girdle, pelvic girdle, thoracic cage, respiratory system, venous system, vertebrae, abdominal, digestive system, biliary system, urinary system, reproductive system, mobile, operating room, mammography, angiography

The exams are compiled by the Level 4/5 instructors group and reviewed/updated annually.

Students attaining less than 60% on any exam may be required to spend remedial study time in that area and to demonstrate, to the instructor's satisfaction, mastery of the material.

Clinical Rotations

Approximately 50% of a student's year will be spent gaining proficiency in general procedures.

1. The three general department rotations are:
 - weekdays day shift
 - afternoons
 - weekends
2. The students will rotate through various imaging areas to achieve proficiency in:
 - fluoro
 - OR/mobiles
 - IVP
 - tomography
3. Students also gain **introductory knowledge** of specialized areas by rotating through:
 - special procedures
 - CT
 - MR (where available)
 - mammography
4. Students may be assigned an additional clinical rotation in order to gain additional experience.

Site Evaluations

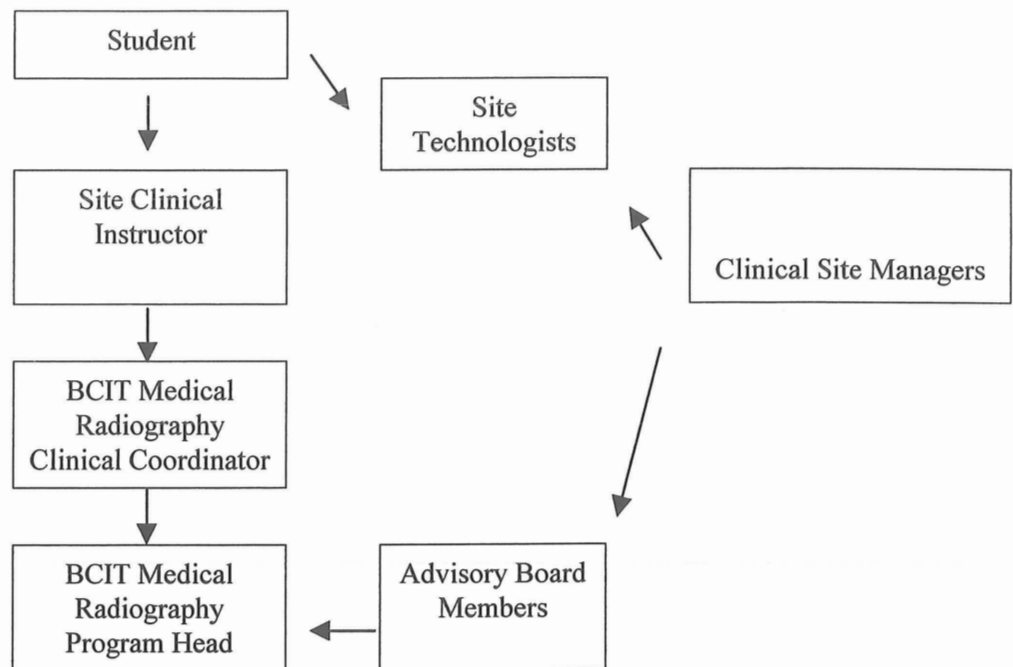
At the end of Level 5 the students will evaluate the clinical site, program and clinical instructor. Evaluation comments are summarized, discussed with the department manager and course improvement strategies implemented as required.

The summary of any strategies for improvement are forwarded to BCIT.

Term Schedule

- 49 weeks clinical (total).
- 2 weeks vacation (to be scheduled with site CI).
- Sick time as required (doctor's certificate may be requested for absences of 3 days or more).

Program Structure





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Schedule

MRAD 4400/5500
Clinical Education

Total Weeks	Subject Area Covered
49	<p>Skeletal</p> <p>Upper Extremities Lower Extremities Pelvic Girdle Thoracic Cage Shoulder Girdle Vertebral Column Cranium</p> <p>Contrast Studies</p> <p>Arthrography Cardiovascular/Angiography Digestive System Urinary System Nervous System Reproductive</p> <p>Miscellaneous Studies</p> <p>Respiratory Pediatrics Mammography Operating Room Mobiles CT MR (where available)</p>