CAMOSUN COLLEGE	***School of Health & Human Services*** Medical Radiography Technology **Course Name:** **Radiographic Procedures 2** **Course Number:** **MRAD 235**

COURSE OUTLINE

The Approved Course Description is available on the web:
http://camosun.ca/learn/calendar/current/web/mrad.html#MRAD109

Please note:

- *This outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for their records.*
- *This course is only open to students in the Medical Radiography program.*

Introduction:

This course introduces the student to the fundamentals of specialized and interventional procedures in medical imaging. Students will focus on the anatomical and radiographic presentation for specific procedures: these being cerebral and renal angiography, angioplasty, embolization, stent insertions and AIF's. The curriculum also identifies commonly used surgical instruments, angiography catheters, contrast media and relevant technical exposure factors relative to specific procedures.

This course will also cover routine examinations for mammography, female reproductive and bone mineral densitometry (BMD) studies. It will include patient care, equipment, common pathologies, normal, and variant results for each of these procedures.

The curricula will be illustrated and delivered through online learning modules, online demonstrations, audiovisual aids and student projects.

Students must achieve a minimum of a C+ (65%) to use this course as a prerequisite. Refer to the Camosun Calendar for detailed information about course prerequisites.

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1. Instructor Information

(a)	Instructor:	Lynelle Yutani
(b)	Office Hours:	Thursday & Friday 1230 – 1320 or by appointment/email
(c)	Location:	WT 212D
(d)	Phone:	250-370-3995
(e)	Email:	yutaniL@camosun.ca
(f)	Website:	http://online.camosun.ca/

2. Intended Learning Outcomes/Competencies

Letters and numbers following certain learning outcomes indicate the specific competencies covered from the CAMRT Medical Radiography Competency Profile:

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

1. perform patient history to support physician's request and confirm adherence to exam preparation requirements. (A1.1, F1.2, G7.3, G7.5, J1.2, J2.6, L1.1)
2. plan the examination based on patient's needs and room environment. (A1.1, B3.1, E1.6, E1.7, E1.8, F1.1, F1.3, G7.4, J1.3, J2.3, J3.3, L1.2, M1.3)
3. provide post procedure care information. (G7.12, J2.12, J3.9, L1.3, M1.13)
4. provide patient care prior, during, and post examination. (B3.2, B5.1, F1.4, G7.7, J1.4, J2.12, J3.9, M1.13)
5. describe methods to familiarize the patient to the imaging environment. (B2.2)
6. describe the imaging examination to the patient in comprehensible language. (B2.2, G7.3, J2.4, J3.4)
7. describe course of action for confirmed pregnant patients. (J3.5)
8. assess the patient's physical, mental, or psychological limitations and provide for alternate methods. (A1.1, B3.1, F1.1, F1.4, G7.9, J1.3, J1.4, J3.5, L1.6, M1.3)
9. select exposure techniques required for specialized studies and provide solutions for atypical patients. (A1.1, E1.6, E1.7, E1.8, E3.3, J3.7, L1.7)
10. utilize anatomical landmarks and relational anatomy to position the patient for specialized studies. (G7.8, J2.10, J3.1, J3.6, J3.7, L1.4, L1.5)
11. evaluate radiographic images for technical quality and diagnostic acceptability. (A1.1, E1.14, G7.10, J2.11, J3.8, L1.10, M1.11)
12. identify and apply corrective measures as required to resultant image. (A1.1, D2.4, E1.6, E1.7, E1.8, G7.11, J2.11, J3.8, L1.10, L1.13, L1.14)
13. describe and adapt the basic positioning, patient preparation and care for specialized procedures. (A1.1, G7.3, G7.9, J2.10, J3.6, L1.4)
14. describe patient diagnosis requiring specialized/interventional procedures. (M1.2)
15. describe recognized contraindications for specific procedures. (G7.7, J2.8, J2.9, J3.5, M1.5)
16. identify and describe contrast media type, dosage, administration route, and possible side effects. (G7.6, G7.7, J2.7, J2.8, J2.9, M1.8)
17. describe image acquisition and processing protocols for commonly performed examinations. (E1.6, E1.7, E1.8, L1.8, M1.11)
18. analyze BMD data and recognize normal versus variant results (L1.11, L1.12)

CAMRT Medical Radiography Competency Profile

3. Learning Resources

Required Textbooks:

Ballinger, P.W., & Frank, E.D. (2012). ***Merrill's Atlas of Radiographic Positions and Radiologic Procedures, Volumes 1, 2, 3 & Workbook*** (12th ed.). Mosby: Elsevier.

Desire-to-Learn (D2L):

D2L – the Camosun College online learning portal contains the remainder of the learning materials for this course. Students are expected to familiarize themselves with the online learning environment and all the features it has to make this course experience enriching. Log on at https://online.camosun.ca/ to access these materials.

Additional resources may include, but are not limited to: lecture notes, PowerPoint slides, Laboratory Manuals, and hyperlinks. You may prefer to download lectures notes ahead of time (when available) and then write your notes directly onto copies of the slides.

D2L materials ***must not*** be considered your sole source of information! They merely summarize the main points and provide direction for your learning experiences. You may need to write down additional information in each lecture. Additionally, not all details can be covered in a lecture, and you will be required to refer to textbook material that is not discussed specifically in class.

Other Materials:

Additional resources may include, but are not limited to: lecture notes, PowerPoint slides, Textbook Companion Workbooks, Laboratory Manuals, and hyperlinks. You may prefer to download lectures notes ahead of time (when available) and then write your notes directly onto copies of the slides.

Students often find that previously purchased textbooks will support their studies in different courses.

4. Student Assessment

Assignments, Discussions, & Participation	20 %
Module Quizzes	20 %
Mid-Term Project	20 %
Cumulative Final Exam	40 %
TOTAL	**100 %**

Students must achieve a minimum of 65% and you must pass the Cumulative Final Competency to use this course as a prerequisite.

Assessment Details:

Assignments & Discussions:
ALL Late assignments are subject to a 2% penalty subtracted from a student's total FINAL GRADE in the course. (E.g. Three "late" assignments over the course of the term will result in 6% subtracted from the student's final grade ***after*** all other assignments, quizzes, and the final exam are calculated.) Failing to turn in a completed assignment results in a ZERO mark for the assignment AND the 2% penalty. Incomplete assignments are not accepted.

Unless otherwise stated, all assignments will be submitted via D2L. Assignments (including Discussions & Projects) will be accessible from within D2L and are posted no later than the first day of the module for which they are due. Online participation is mandatory (will be assigned); students receive marks for completing activities and discussions within the course. Students who fail to participate in an assigned discussion also incur the 2% penalty on their final grade.

Exceptions to this penalty are made solely at the discretion of the instructor. In mitigating circumstances evidence of acute injury, illness, or other emergency situation may be required. However, this does not guarantee that an exception will be made. In such situations, it is highly recommended that students attempt to arrange an extension of an assignment BEFORE the due date, if possible.

Quizzes:
Quizzes are administered online via D2L and may be accessed from any computer with internet access during the window of availability. The student IS NOT required to take ***quizzes*** in a proctored environment. There is NO midterm exam for this course.

Final Exam:
The final exam will be scheduled in conjunction with the clinical sites. It is a cumulative assay of the entire course. The final examination will be sequenced & randomized from a cumulative bank of test questions. Students will sit for the final exam in an invigilated testing environment provided by their clinical site.

In emergency circumstances, a student may write a quiz or final examination before or after the scheduled time if the student would otherwise be unable to complete the program or course. Exceptions due to emergency circumstances, such as unavoidable employment commitments, health problems, or family crises require

the approval of the instructor. Holidays or scheduled flights are not considered to be emergencies. The student may be required to provide verification of the emergency circumstance.

(Camosun Academic Policy http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf)

5. Course Content and Schedule:

Lecture Days/Times & Room Number: N/A

Lab Days/Times & Room Number: N/A

Weekly Course Schedule

The following schedule is tentative and subject to change if deemed necessary by the instructor.

Week	**Dates**	Topic	Activities
1	Sept 3 - 6	Course Intro/Module 1: Bone Mineral Densitometry	Read text & Online Notes
2	Sept 9 - 13		Self-Reflection Essay, Due Sept 15
3	Sept 16 - 20	Module 2: Reproductive Imaging	Read text & Online Notes
4	Sept 23 - 27		Discussion 1, Due Sept 29
5	Sept 30 – Oct 4	Module 3: Introduction to Interventional Radiography	Read text & Online Notes
6	Oct 7 - 11		Quiz 1 window open 7am to 7pm Oct 11, (Modules 1, 2, & 3)
7	Oct 15 - 18	Biliary Studies	Thanksgiving, Specialty Self Audit & Mid Term Project Proposal, Due Oct 20
8	Oct 21 - 25	Renal Studies	Discussion 2, Due Oct 27
9	Oct 28 - Nov 1	Mid Term Project Due Nov 3 in Study Share	
10	Nov 4 - 8	GI Studies	Quiz 2 window open 7am to 7pm Nov 8, (Modules 4, 5, & 6)
11	Nov 12 - 15	Angiography	Remembrance Day, Read text & Online Notes
12	Nov 18 - 22	Interventional Radiology	Discussion 3, Due Nov 24
13	Nov 25 - 29	Cardiac Procedures	Read text & Online Notes
14	Dec 2 – 6	Musculoskeletal IR	Quiz 3 window open 7am to 7pm Dec 6, (Modules 7, 8, 9, & 10)
15	Dec 9-13	Wrap Up & Review	
16	Dec 16-17	December 16th or 17th (Depending on Clinical Site) - Cumulative Final Exam	

Exam Period Dec. 9th – 17th (scheduled by registrar) - check CAMLINK.

6. Grading System

The following two grading systems are used at Camosun College. This course will use:

[X] Standard Grading System (GPA)

[ ] Competency Based Grading System

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+	Minimum level of achievement to use the course as a prerequisite.	3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	*Incomplete*: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.

IP	*In progress*: A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. *(For these courses a final grade will be assigned to either the third course attempt or at the point of course completion.)*
CW	*Compulsory Withdrawal:* A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

CONDUCT POLICIES

It is the student's responsibility to become familiar with the content of these policies. The policies are available in each School Administration Office, Registration, and on the College web site in the Policy Section.

Academic Policies and Procedures
Student Conduct Policy

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at

http://www.camosun.bc.ca

MRT PROFESSIONAL CODE OF ETHICS

Camosun College Medical Radiography Technology students are expected to abide by the Canadian Association of Medical Radiation Technologist (CAMRT) Code of Ethics insomuch as it applies to them in the learning and clinical environments. This information is available on the CAMRT website at:

CAMRT Code of Ethics

MRT Department Policies & Procedures

Camosun College Medical Radiography Technology students are responsible for knowing all of the MRT Department Policies and must abide by them, including dress codes & lab safety procedures.

http://camosun.ca/learn/programs/mrt/_documents/handbook.pdf

8. GENERAL INFORMATION

Suggested Study Time/Study Habits

- Successful students will probably spend 2 - 4 hours outside of class per week studying the content for this course to achieve full marks. This is in addition to the time it takes to navigate the online content.
- The instructor will be available during "virtual office" hours, by appointment, for students needing additional support mastering the course content.
- Map out a homework schedule; include time for reading and discussion.
- Study groups are a highly effective way of learning for many students.

Attendance

- Students are expected to be **on time** for class discussions or scheduled content; tardiness disrupts the class. When students log onto a time sensitive discussion late; marks will be deducted from their assignment.
- If you choose not to ***or*** are unable to attend an online lecture or activity; it is your responsibility to acquire ***all*** information given during a class missed, incl. notes, hand-outs, assignments, changed exam dates etc.
- Missed exams or quizzes cannot be made up except in case of documented illness (doctor's note required).

The Medical Radiography Technology program is committed to promoting competence, professionalism and integrity in our students and developing their core skills to succeed throughout their academic programs and in their careers. The purpose of Academic Honesty Guidelines is to provide clear expectations of appropriate academic conduct and to establish processes for discipline in appropriate circumstances. It is the student's responsibility to become familiar with the content and the consequences of academic dishonesty. Before you begin your assignments, review the Academic Policies on the Camosun College website: http://camosun.ca/learn/becoming/policies.html