

 <p><b>CAMOSUN</b> COLLEGE</p>	<p><i>School of Health &amp; Human Services</i> Medical Radiography Technology</p> <p><b>Course Name: Radiographic Anatomy and Physiology 2 W2015</b></p> <p><b>Course Number: MRAD 240</b></p>
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## COURSE OUTLINE

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

*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 parallels and emphasizes topics presented in Relational Anatomy and Physiology 3.

The course content will be covered in a self-directed laboratory environment using digital patient images, and anatomical models. The content will provide an in-depth focus of the cardiovascular, nervous (CNS) and respiratory systems, cranium, neck and thorax. Patient images will mainly focus on sectional presentation. In addition, sectional images of the spine, abdomen and pelvis will be included.

This course will focus on the understanding of sectional images as represented in various body planes. The students will study the key anatomical structures and features featured on sectional anatomy as used by several disciplines such as Computed Tomography Scanning and Magnetic Resonance.

This course also has significant importance for the understanding and success of several courses such as Radiographic Procedures 3, Pathology 2 and CT Clinical Application.

**Prerequisites:** A minimum of "C+" in MRAD 105, MRAD 125

***Students must achieve a minimum of a C+ (65%) to use this course as a prerequisite.***

## 1. Instructor Information

(a)	Instructor:	Brent Mekelburg B.Sc. RT (R)(MR)/Rajesh Nair
(b)	Office Hours:	Wed 1230 – 1330 or by appointment
(c)	Location:	WT212D
(d)	Phone:	250-370 - 3992
(e)	Email:	<a href="mailto:mekelburgb@camosun.ca">mekelburgb@camosun.ca</a>
(f)	Website:	<a href="http://online.camosun.ca/">http://online.camosun.ca/</a>

## 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. Identify anatomical landmarks of the cranium, central nervous and cardiovascular systems using laboratory models. (F34.1, F35.1, F36.1, F37.1, F38.1, F39.1, F40.1, F41.1, K1.1)
2. Identify anatomical structures of the entire cranium, central nervous and cardiovascular body systems on patient images. (F34.1, F35.1, F36.1, F37.1, F38.1, F39.1, F40.1, F41.1, K1.1)
3. Describe the relationship of structures of the head, neck, spine, thorax, abdomen, pelvis and major joints. (F34.1, F35.1, F36.1, F37.1, F38.1, F39.1, F40.1, F41.1, H2.1, H3.1, K1.1)
4. Identify digestive, urinary, reproductive (male/female), respiratory, CNS and cardiovascular structures on patient sectional images. (G2.1, G3.1, G4.1, G5.1, G6.1, G7.1 H2.1, H3.1, I2.1, I3.1, I4.1, J2.1, K1.1)
5. Identify major joints, vertebra and skull structures on patient sectional images. (F10.1, F19.1, F22.1, F25.1, F26.1, F27.1, F34.1, F35.1, F36.1, F37.1, F38.1, F39.1, F40.1, F41.1, K1.1)

[CAMRT Medical Radiography Competency Profile](#)

### 3. Learning Resources

#### **Required Textbooks:**

Drake, R.L., Vogl, W., Mitchell, A., **Gray's Anatomy for Students**, Current edition (Elsevier, Churchill Livingstone)

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

#### **Optional Textbooks:**

*Applegate, E.J. **The Sectional Anatomy Learning System: Concepts**, 3<sup>rd</sup> Edition (Saunders)*

*Applegate, E.J. **The Sectional Anatomy Learning System: Applications**, 3<sup>rd</sup> Edition*

*Madden, M.E., **Introduction to Sectional Anatomy**, Current edition (Lippincott, Wilkins & Williams)*

#### **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.

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.

#### 4. Student Evaluation

Mid-Term 1	30 %
Mid-term 2	30 %
Non-cumulative Final Exam	40 %
<b>TOTAL</b>	<b>100 %</b>

In emergency circumstances, a student may arrange to write a 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 unavoidable 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>)

Mid-term exams are written in class via D2L and are **CLOSED BOOK!**

The first midterm covers module 1.  
The second mid-term covers modules 2&3  
The Final Exam covers module 4 ONLY.

The final exam will be scheduled by the registrar and is *non-cumulative*.

#### **Attendance**

This is a self-directed course. As such, attendance during the scheduled class time is not a requirement, merely a suggestion of the time required to be successful in this course. This is essentially protected time during your weekly schedule to complete the readings and engage with the material in the manner you find to be most suitable. Exams will be written during this protected time as required. The following course schedule outlines the approximate time allotment to each module.

**5. Course Content and Schedule: Wednesday 15:30-17:20**

**Note: This schedule is tentative and subject to change if deemed necessary by the instructor.**

Week	Week of	Module	Exams
1	Jan 5	1.Skull	
2	Jan 12	1.Skull	
3	Jan 19	1.Skull	
4	Jan 26	1.Skull	
5	Feb 2	<b>MODULE 1</b>	<b>MID-TERM EXAM 1</b>
6	Feb 9	<b>FAMILY DAY</b>	<b>READING BREAK</b>
7	Feb 16	2. Nervous System	
8	Feb 23	2.Nervous System	
9	Mar 2	3. Circulatory System	
10	Mar 9	3. Circulatory System	
11	Mar 16	<b>MODULES 2&amp;3</b>	<b>MID-TERM EXAM 2</b>
12	Mar 23	4. X-Sectional Anatomy-Head	
13	Mar 30	4. X-Sectional Anatomy-Neck	
14	Apr 6	4. X-Sectional Anatomy-Thorax	
15	Apr 13	4. X-Sectional Anatomy-Abdomen	
16	Apr 20	4. X-Sectional Anatomy-Pelvis	
17	Apr 27	4. X-Sectional Anatomy-Upper Extremities	
18	May 4	4. X-Sectional Anatomy-Lower Extremities	
19	May 11	4. X-Sectional Anatomy-Review	
20	May 18	<b>VICTORIA DAY MODULE 4 ONLY</b>	<b>FINAL EXAM</b>

*Exam Period May 20-23 (scheduled by registrar) - check CAMLINK.*

***Do not book trips until the final exam schedule is posted by the registrar.***

## 6. 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](http://camosun.ca) for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
<b>I</b>	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as
<b>IP</b>	<i>In progress:</i> 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 3 <sup>rd</sup> course attempt or
<b>CW</b>	<i>Compulsory Withdrawal:</i> 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,

## 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 inasmuch 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/handbook.pdf>

## **8. GENERAL INFORMATION**

*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>*