

MRAD 106 Anatomy & Physiology for the Radiographer
Fall 2020

COURSE OUTLINE

The course description is available on the web:
<http://camosun.ca/learn/calendar/current/web/mrad.html#mrad106>

Camosun College will continue to follow the guidance of the Provincial Health Officer, the B.C. Government and WorkSafeBC, and as such may revise the delivery of courses. Courses with an approved face-to-face component may need to move to online or remote delivery if necessary.

The COVID-19 pandemic has presented many challenges, and Camosun College is committed to helping you safely complete your education. Following guidelines from the Provincial Health Officer, WorkSafeBC and the BC Government to ensure the health and wellbeing of students and employees, Camosun College is providing you with every possible protection to keep you safe including COVID Training for students and employees, health checks, infection control protocols including sanitization of spaces, PPE and ensuring physical distancing. Please refer to: <http://camosun.ca/covid19/faq/covid-faqs-students.html>

However, if you're at all uncomfortable being on campus, please share your concerns with your Instructor and if needed, alternatives will be discussed.

Ω Please note: This outline will not be kept indefinitely. Students are recommended to keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

- (a) **Instructor** Dr. Brent Mekelburg
(b) **Office hours** By appointment
(c) **Location** CHW 317
(d) **Phone** 250-370-4758 **Alternative:**
(e) **E-mail** mekelburgb@camosun.ca
(f) **Website**

2. Intended Learning Outcomes

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

1. Identify and describe the anatomical structures and components of the musculoskeletal, respiratory, cardiovascular, digestive, and urinary systems using X-ray images and a variety of media.

2. Describe the functioning of the musculoskeletal, respiratory, cardiovascular, digestive, and urinary systems as it pertains to radiographic imaging.
3. Relate structure to physiological function of the musculoskeletal, pulmonary, and cardiovascular system as it pertains to radiographic imaging.
4. Identify and describe anatomical features of the skeleton to facilitate accurate radiographic positioning.
5. Identify and describe the relationships and movements of skeletal structures and joints to facilitate accurate radiographic positioning.

3. Required Materials

Required:

Patton, K. & Thibodeau, G. (2016). *Anatomy & Physiology* (10th ed.) Textbook & Lab Manual. Elsevier Health Sciences.
Complete Anatomy

As part of this course, an iPad will be supplied as a required item. The return of the iPad in useable undamaged condition is a gradable item that will be assessed as complete, or incomplete. Students must return the iPad and all supplies (charger, keyboard, case) by the completion of the course in order to get a complete grade in the course. Should the iPad not be returned, or, returned in a damaged condition that is irreparable or unusable, an \$800 replacement cost will be charged to the student. In order to take possession of the iPad, a contract needs to be signed upon taking possession of the iPad indicating device condition, device identification, acknowledgement of the conditions of use, as well as an understanding of the assumed risk.

Optional:

Drake, R.L., Vogl, W., & Mitchell, A.W.M. (2015). *Gray's Anatomy for Students* (3rd ed.). Churchill Livingstone.

4. Course Content and Schedule

Week	Dates	Lecture/Module	Chapter	Quiz	Labs
1	Sept 8-11 (Labour Day)	Introduction to Radiographic Anatomy & Physiology	Organization of the body 1 Skeletal Tissues 11		Organization of the body Lab 1 Overview of the Skeleton Lab 11
2	Sept 14-18	Upper Extremities: Fingers to Elbow	Appendicular Skeleton 13	Quiz 1	Upper Extremities Lab 14 Joints Lab 16
3	Sept 21-25	Upper Extremities: Humerus to Scapula			
4	Oct 5-9	Lower Extremities & Pelvis: Toes to Knee	Articulations 14	Quiz 2	Lower Extremities Lab 15
5	Oct 13-16 Thanksgiving	Lower Extremities & Pelvis: Knee to Pelvis			
6	Oct 19-23	Midterm Exam 1			
7	Oct 14-18	Skull	Axial Skeleton 12	Quiz 3	The Skull Lab 12
8	Oct 26-30				
9	Nov 2-6	Spine		Quiz 4	The Vertebral Column and Thoracic Cage Lab 13
10	Nov 9-13				
11	Nov 16-20	Thoracic Viscera Bony Thorax	(Thorax from chapter 12) Respiratory Tract 35 Heart 28	Quiz 5	Structure of the Heart Lab 35 Respiratory Structures Lab 41
12	Nov 23-27	Midterm Exam 2			
13	Nov 30-Dec 4	Gastrointestinal System	Upper & Lower Digestive Tract 38 & 39	Quiz 6	Digestive Structures Lab 44
14	Dec 7-11	Urinary System	Urinary System 42	Quiz 7	Urinary Structures Lab 47
15	Dec 14-18	FINAL EXAM PERIOD			

5. Basis of Student Assessment (Weighting)

Reading Quizzes	10%
Learning Portfolio	20%
Midterm Exam 1	20%
Midterm Exam 2	20%
Cumulative Final Exam	30%
TOTAL	100%

Students must achieve a minimum of 65% to use this course as a prerequisite.

Reading Quizzes

In order to gain the most from lectures, students should come to class prepared. This means having done the assigned reading beforehand. In order to assess your understanding of the material, there will be a short 5-10 question reading quiz during the weekend before the module commences. It will cover the general concepts addressed in the readings. Pay close attention to the calendar in D2L!

Learning Portfolio

Making use of Complete Anatomy, learners will be asked to create learning materials that they can use in preparation for exams. Learners will be asked to use the screens function in conjunction with the model to label, color, identify structures, and delineate key relationships using the tools available within Complete Anatomy. Submissions will be graded as complete/incomplete (0/5 or 5/5), and the link to each learner's INDIVIDUAL effort will be submitted into the correct assignment dropbox in D2L. It cannot be stressed enough, that the correct assignment **MUST** be submitted to the correct assignment dropbox in order to be marked as complete. If a mistaken submission has been made, please submit the screen again to the correct dropbox and send me an email notifying me that you have submitted the screen to the incorrect dropbox. I will delete the incorrect submission for you. The rationale is that you are only permitted to submit 1 (one) submission per dropbox. If you submit the incorrect assignment, it will prevent you from submitting the correct assignment in the future. If you are unaware of submitting the incorrect assignment, that assignment will be considered INCOMPLETE. It is equally important to submit the work to the correct assignment dropbox as it is to complete the assigned work.

Midterm Exams

There will be two midterm exams to assess your level of knowledge as it relates to the theory of Anatomy & Physiology for Radiographers. The purpose of the midterm exams is to provide you with feedback about your level of knowledge **during** the term. The midterm exams are non-cumulative. Beyond a grade, I encourage you to use the exams as an assessment **for** learning, not simply **of** your learning. As such, I highly encourage you to reflect on your results by identifying areas of weakness and celebrating successful integration of knowledge. The midterm exams should provide confidence, decrease anxiety, and expose you to the type of questions you can expect on the final exam.

Final Exam

The final examination is cumulative and includes material from all modules covered in the course. This final examination will occur during the regularly scheduled final exam week. In emergency circumstances, a student may write a test 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 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 retrievable

from: <http://camosun.ca/learn/calendar/current/pdf/academic-policies.pdf>) Missed quizzes or examinations cannot be made-up except in the case of documented illness (doctor's note).

6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

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

Complete Anatomy App for iPad/iPhone

8. College Supports, Services and Policies

Immediate, Urgent, or Emergency Support



If you or someone you know requires immediate, urgent, or emergency support (e.g., illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts:

<http://camosun.ca/about/mental-health/emergency.html> or
<http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, centre for accessibility, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit Student Services at

<http://camosun.ca/services>

College Policies

Policies are available on the College website at <http://camosun.ca/about/policies>. Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with college policies.

Education and academic policies include, but are not limited to, [Academic Progress](#), [Admission](#), [Course Withdrawals](#), [Grading](#), [Involuntary Health and Safety Leave of Absence](#), [Prior Learning Assessment](#), [Medical/Compassionate Withdrawals](#), [Sexual Violence and Misconduct](#), [Standards for Awarding Credentials](#), [Student Ancillary Fees](#), [Student Appeals](#), and [Student Penalties and Fines](#).

Student Conduct Policy

The [Student Conduct Policy](#) provides clear expectations of appropriate academic and non-academic student conduct and establishes processes for resolution of conduct issues or the imposition of sanctions for inappropriate conduct. It is the student's responsibility to become familiar with the content of this policy.

A. GRADING SYSTEMS

<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>

The following two grading systems are used at Camosun College:

1. 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+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes.

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. 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 at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<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 illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<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, practicum, worksite, or field placement.