

## **Course Outline - MDSC 404 (Winter) Integrative Human Physiology**

**Course Coordinator – Dr. James Fewell ([fewell@ucalgary.ca](mailto:fewell@ucalgary.ca))**

### **Instructors**

- Neurophysiology, Cardiovascular & Respiratory  
Dr. James Fewell ([fewell@ucalgary.ca](mailto:fewell@ucalgary.ca))
- Endocrine & Renal  
Dr. Francine Smith ([fsmith@ucalgary.ca](mailto:fsmith@ucalgary.ca))
- Gastrointestinal & Liver  
Dr. Donna-Marie McCafferty ([dmmccaff@ucalgary.ca](mailto:dmmccaff@ucalgary.ca))

### **Office Hours/Policy on Answering Student Email**

- Office hours will be set and communicated by individual instructors.
- Emails from student's@ucalgary.ca account will be answered Monday to Friday from 0800 to 1600 within 48 hours of receipt; questions regarding unit material will not be answered within 24 hours of a unit examination.

### **Teaching Assistants**

- Ms. Alam Randhawa ([alam.randhawa@ucalgary.ca](mailto:alam.randhawa@ucalgary.ca))

### **Time and Location**

- Learning will occur in both synchronous (i.e., real-time Zoom lectures) and asynchronous (i.e., text reading assignments, videos, tutorials and practice examinations) contexts. Lectures will be held Monday, Wednesday and Friday from 1500 to 1550 via Zoom. The teaching assistant will be available after lecture to answer questions via Zoom until 1700.
- This course will take place **online** via Desire2Learn (D2L) and Zoom. To best succeed in the course, students are encouraged to participate in the asynchronous learning tasks (e.g., read assigned material before lectures, view relevant videos, etc.) and synchronous Zoom sessions. When unable to participate live due to the time difference or unforeseen circumstances, inform the instructor in advance and propose and implement an alternative participation activity.

## Important Dates

### Fall Term

- First day of class: Wednesday, September 9
- Fall term Break (no classes held) November 8-14
- Last day of class: Wednesday, December 9

### Winter Term

- First day of class: Monday, January 11
- Winter term break (no classes held): February 14-20
- Good Friday/Easter Monday (no classes): April 2, April 5
- Last day of class: Wednesday, April 14

## Prerequisite

- Enrolment in the BHSc Honours program or consent of course coordinator.

## Course Description

- Physiology is defined as the study of how living organisms function and encompasses the integration of processes from molecules to the whole-organism. Provides fundamental principles and concepts about the physiology of the major human organ systems.

## Overarching Theme

- Course format consists of lectures provided by published scholars as well as student-initiated discussions of various topics.

## Global Objective

- The global objective of MDSC 404 is to provide a founding in integrative human physiology.

## Learning Objectives

- By the end of this course, students will have a founding in integrative human physiology that will allow them: a) to recall fundamental principles and concepts regarding physiology of the nervous system, endocrine system, cardiovascular system, respiratory system, renal system and gastrointestinal system, b) to apply these physiological principles and concepts to predict the body's response to perturbations that disrupt homeostasis, and c) to predict how disease or injury of an organ can lead to disordered function (i.e., pathophysiology) and disrupt homeostasis.

## Required Textbook

- Derrickson's Human Physiology, 2<sup>rd</sup> edition, John Wiley and Sons, 2019.

## A Note regarding readings

- A list of required readings for all course sections will be outlined on D2L and links and documents will be made available, where appropriate. Required readings have been chosen carefully to inform you and enhance the lecture material. **Students are REQUIRED to**

**complete assigned readings BEFORE each lecture.** Instructors will proceed in class on the assumption that students have read completely the assigned readings.

- Students should be aware that many of the readings they will be assigned might be of an unfamiliar nature and style. Students should allot sufficient time to allow for several reads of the assigned material.

## Learning Technology Requirements

- Brightspace (by D2L) is located on the University of Calgary server and will be used extensively for communication with students. **It is the student's responsibility to ensure that they receive all posted communications and documents and that they receive emails sent by instructors or fellow students through D2L.** Only your @ucalgary.ca email address may be linked to D2L. Please ensure that you are regularly checking your @ucalgary.ca account.
- In order to successfully engage in learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology: A computer with a supported operating system, as well as the latest security and malware updates; A current and updated web browser; Webcam (built-in or external); Microphone and speaker (built-in or external), or headset with microphone; Current antivirus and/or firewall software enabled; Broadband internet connection
- Most current laptops will have a built-in webcam, speaker and microphone.
- A laptop, desktop, tablet or mobile device is required for D2L access. If you need help accessing or using D2L, please visit the Desire2Learn resource page for students: <http://elearn.ucalgary.ca/d2l-student/>.

## Evaluation

- The University policy on grading and related matters is described in section F of the 2020-2021 Calendar.
- In determining the overall grade in the course, the following weights will be used: scheduled unit examinations 90%, unannounced unit quizzes 10%.
- **A scheduled synchronous unit examination consisting of 25 questions from the various lectures will occur at the end of each unit; 75 minutes (i.e. 1515 to 1630; 50 minutes plus 50% time) will be allowed for the student to complete the examination in D2L. The unit coordinator and the teaching assistant will be available during the examination via Zoom to answer questions. Students who cannot write the examination during the specified time will be allowed to write the examination at a mutually agreed date/time per the conditions mentioned above.**
- **Two unannounced synchronous unit quizzes, each consisting of 5 questions from lectures to date in a given unit, will be given; 15 minutes (i.e., 10 minutes plus 50% time) will be allowed for the student to complete the quiz on D2L on the selected days between 1615 to 1630 after the lecture. The unit coordinator and the teaching assistant will be available during the quiz via Zoom to answer questions. Students who cannot write the quiz during the specified time will be allowed to write the quiz at a mutually agreed date/time per the conditions mentioned above.**
- Each of the six equally weighted unit marks derived from your unit examination and unit quizzes will be recorded on a percentage basis and averaged to determine your final mark in the course; there will NOT be a Registrar-scheduled final examination. Scheduled unit

examinations and unannounced unit quizzes will be in multiple choice, fill-in-the-blank, true-false and/or short answer format. Deferred examinations (see below) may be of a different format (e.g., oral examination) from scheduled examinations.

- All examinations are timed and closed-book but a nonprogrammable calculator may be used.
- A passing grade on any particular examination is not essential for the student to pass MDSC 404 as a whole.
- Students in MDSC 404 are not expected to participate as subjects in research projects of professors involved in the course.
- If you have queries about marking of your unit examination or quizzes, you should bring it to the attention of the unit coordinator. If you then wish to seek a reappraisal, you must provide your concerns and request for reappraisal in writing to the unit coordinator **within ten business days** but not sooner than 24 hours of the marked examinations or quizzes return to the class. If you are not satisfied with the initial reappraisal, you have the right to take the matter -- **within two days** -- to the Associate Dean (Undergraduate Health and Science Education), Dr. Ebba Kurz who will arrange for an independent reassessment of the work. The result of this reassessment will be given to the student in writing. The reappraisal of the examination and/or quizzes may cause the grade to be raised, lowered or to remain the same.

## Final Course Grade

Regarding queries about the final course grade, the only element that can be considered is the final assessment (i.e., GI&L exam). Students seeking a reappraisal **MUST** obtain a **Reappraisal of Final Grade form from the Registrar's** website and submit it to the Registrar's office no later than June 30.

## Grading Scheme

Letter Grade	Description	Percentage
A+	Outstanding performance	96-100
A	Excellent performance	90-95
A-	Approaching excellent performance	85-89
B+	Exceeding good performance	80-84
B	Good performance	75-79
B-	Approaching good performance	70-74
C+	Exceeding satisfactory performance	65-69
C	Satisfactory performance	60-64
C-	Approaching satisfactory performance	57-59
D+	Marginal pass	54-56
D	Minimal pass	50-53
F	Did not meet course requirements	0-49

## Deferred Examinations

- Deferred examinations are allowed only in the following circumstances: debilitating illness, severe domestic affliction, and religious conviction or absence due to a Faculty-approved activity. If you wish to defer an examination, you must contact the unit lead BEFORE the time of the scheduled examination and provide appropriate supporting documentation as per Section N.1 of the University Calendar (<https://www.ucalgary.ca/pubs/calendar/current/n-1.html>). The makeup examination will usually be scheduled and administered within 7 days of the missed scheduled examination and will be different from the original examination. If a student misses a scheduled examination, they are upon their honour code not to discuss the missed examination with their fellow students before taking the deferred examination.
- A student who is absent from an assessment in a course will receive a grade of zero on the assessment. If a student communicates with the instructor and explains the circumstances around the absence, the instructor may transfer the percentage weight for the assessment to another component of the course (such as the next examination), set another assessment, or make other alternative arrangements. An instructor will normally make this decision based on the information provided by the student.

## Missed Components of Term Work

- **Students who miss a quiz will receive a mark of zero.** The only exceptions to this are those in keeping with the University Calendar (debilitating illness, religious conviction, or severe domestic affliction) that are received in writing and with supporting documentation.

## A Note regarding Writing Assignments

- Writing skills are important to academic study in all disciplines. In keeping with the University of Calgary's emphasis on the importance of academic writing in student assignments (section E.2 of 2020-21 Calendar), writing is emphasized, and the grading thereof in determining a student's mark in this course. The Bachelor of Health Sciences values excellence in writing. Competence in writing entails skills in crafting logical, clear, coherent, non-redundant sentences, paragraphs and broader arguments, as well as skills with the mechanics of writing (grammar, spelling, punctuation). Sources used in research papers must be properly documented. The University of Calgary offers a number of instructional services through the Students' Success Centre's Writing Support Services (<http://www.ucalgary.ca/writingsupport/>) for students seeking feedback on assignments or seeking to improve their general writing skills. Students are **strongly encouraged** to take advantage of these programs.

## Course Evaluations and Student Feedback

- Student feedback will be sought at the end of the course through the Universal Student Rating of Instruction (USRI) and a qualitative student evaluation. Students are welcome to discuss the process and content of the course at any time with the instructor. Students may also address any concerns they may have with Dr. Ebba Kurz, Associate Dean (Undergraduate Health and Science Education) in the Cumming School of Medicine ([kurz@ucalgary.ca](mailto:kurz@ucalgary.ca)).

## Guidelines for Zoom Sessions

- Zoom is a video conferencing program that will allow us to meet at specific times for a 'live' video conference, so that we can have the opportunity to meet each other virtually and discuss relevant course topics as a learning community.
- To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.
- The use of video conferencing programs relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith, and respect (as the Code of Conduct). When entering Zoom or other video conferencing sessions, you play a role in helping create an effective, safe and respectful learning environment. Please be mindful of how your behaviour in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities. Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies. If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your zoom sessions visit: <https://elearn.ucalgary.ca/guidelines-for-zoom/>.
- If you are unable to attend a Zoom session, please contact your instructor to arrange an alternative activity (where available). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in Zoom sessions. Students will be advised by their instructor when they are expected to turn on their webcam (such as for group work, presentations, etc).
- The instructor may record online Zoom class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a Zoom session. These recordings will be used to support student learning only.

## Conduct During Lectures

- The classroom should be respected as a safe place to share ideas without judgement - a community in which we can all learn from one another. Students are expected to frame their comments and questions to lecturers in respectful and appropriate language, always maintaining sensitivity towards the topic. Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.
- As members of the University community, students, employees and academic staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar, the Code of Conduct and Non-Academic Misconduct policy and procedures, which can be found at <https://www.ucalgary.ca/policies/forms/title>.

- **Students are expected to take notes during class and should not rely solely on material supplied by the instructors.**

### **Use of Internet and Electronic Communication Devices in Class**

- The Bachelor of Health Sciences program aims to create a supportive and respectful learning environment for all students. The use of laptop and mobile devices is acceptable when used in a manner appropriate to the course and classroom activities. However, research studies have found that inappropriate/off-topic use of electronic devices in the classroom negatively affects the learning of others during class time.
- Students are responsible for being aware of the University's Internet and email use policy, which can be found at <https://www.ucalgary.ca/policies/files/policies/electronic-communications-policy.pdf>.

## **UNIVERSITY OF CALGARY POLICIES AND SUPPORTS**

### **Copyright**

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright-policy.pdf>) and requirements of the Copyright Act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy <https://www.ucalgary.ca/pubs/calendar/current/k.html>.

### **Instructor Intellectual Property**

Course materials created by instructors (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may **NOT** be reproduced, redistributed or copied without the explicit consent of the professor. **The posting of course materials to third party websites such as note-sharing sites without permission is prohibited.** Sharing of extracts of these course materials with other students enrolled in the course *at the same time* may be allowed under fair dealing.

### **Academic Accommodations**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>.

Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (<https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf>).

Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their instructor. SAS will process the request and issue letters of accommodations to instructors. For additional information

on support services and accommodations for students with disabilities, visit [www.ucalgary.ca/access/](http://www.ucalgary.ca/access/).

## **Academic Misconduct**

The University of Calgary is committed to the highest standards of academic integrity and honesty. The University of Calgary has created rules to govern all its members regarding the creation of knowledge and the demonstration of knowledge having been learned. Academic Misconduct refers to student behaviour that compromises proper assessment of a student's academic activities and includes (but is not limited to): cheating, fabrication, falsification, plagiarism, unauthorized assistance, failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses, and failure to comply with exam regulations applied by the Registrar.

For information of the Student Academic Misconduct Policy and Procedures, please visit;

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>

<https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf>

Additional information is available on the Academic Integrity website at: <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>.

## **Recording of Lectures**

Audio or video recording of lectures is prohibited except where explicit permission has been received from the instructor.

## **Freedom of Information and Protection of Privacy Act**

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary

## **Appeals**

If there is a concern with the course, academic matter or a grade, first communicate with the instructor. If these concerns cannot be resolved, students can proceed with an academic appeal, as per Section I of the University Calendar. Students must follow the official reappraisal/appeal process and may contact the Student Ombuds' Office (<http://www.ucalgary.ca/ombuds>) for assistance with this and with any other academic concerns, including academic and non-academic misconduct. Students should be aware that concerns about graded term work may only be initiated **within 10 business days** of first being notified of the grade. <https://www.ucalgary.ca/pubs/calendar/current/i-2.html>

## **Sexual Violence Policy**

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that



occur off-campus in certain circumstances. Please see the policy available at <http://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>

## **Resources for Support of Student Learning, Success, Safety and Wellness**

Student Success Centre	<a href="http://www.ucalgary.ca/ssc/">http://www.ucalgary.ca/ssc/</a>
Student Wellness Centre	<a href="http://www.ucalgary.ca/wellnesscentre/">http://www.ucalgary.ca/wellnesscentre/</a>
Distress Centre	<a href="http://www.distresscentre.com/">http://www.distresscentre.com/</a>
Library Resources	<a href="http://library.ucalgary.ca">http://library.ucalgary.ca</a>

## **Wellness and Mental Health Resources**

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (<https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>) and the Campus Mental Health Strategy (<http://www.ucalgary.ca/mentalhealth/>).

## **Student Ombuds' Office**

The Student Ombuds' Office supports and provides a safe, neutral space for students. For more information, please visit [www.ucalgary.ca/ombuds/](http://www.ucalgary.ca/ombuds/) or email [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca)

## **BHSc Student Faculty Liaison Committee (SFLC)**

The BHSc SFLC, with elected representatives from all majors, serves to raise issues of interest to BHSc students to the program administration, including items pertaining to curriculum, scheduling and events. A list of current representatives can be found on the BHSc website.

## **Student Union (SU) Information**

The SU Vice-President Academic can be reached at (403) 220-3911 or [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca); the SU representatives for the Cumming School of Medicine can be reached at [medrep1@su.ucalgary.ca](mailto:medrep1@su.ucalgary.ca) or [medrep2@su.ucalgary.ca](mailto:medrep2@su.ucalgary.ca).

## **Student Success Centre**

The Student Success Centre provides services and programs to ensure students can make the most of their time at the University of Calgary. Our advisors, learning support staff, and writing support staff assist students in enhancing their skills and achieving their academic goals. They provide tailored learning support and advising programs, as well as one-on-one services, free of charge to all undergraduate and graduate students. For more information visit: <https://www.ucalgary.ca/student-services/student-success>

## **Emergency Evacuation/Assembly Points**

As part of the University of Calgary Emergency Evacuation plan, students, faculty, and staff should locate the closest Assembly Point in case of Fire Alarm. Safety signage is posted throughout the campus showing the locations and the possible route to these locations. All students, faculty, and staff are expected to promptly make their way to the nearest Assembly Point if the Fire Alarm is activated. No one is to return into campus facilities until an all clear is given to the warden in

charge of the Assembly Area. For more information, see <https://www.ucalgary.ca/emergencyplan/building-evacuation/assembly-points>

### **Safewalk**

Campus security will escort individuals, day or night, anywhere on campus (including McMahon Stadium, Health Sciences Centre, Student Family Housing, the Alberta Children's Hospital and the University LRT station). Call 403-220-5333 or visit <http://www.ucalgary.ca/security/safewalk>. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths. Please ensure your personal safety by taking advantage of this service

### **Class Schedule**

<b>Unit</b>	<b>Unit Lead</b>	<b>Readings</b>	<b>Examination Date</b>
Neurophysiology	Dr. Fewell	TBA	Wednesday - October 7
Cardiovascular	Dr. Fewell	TBA	Friday – November 6
Respiratory	Dr. Fewell	TBA	Wednesday – December 9
Renal	Dr. Smith	TBA	Friday – February 5
Endocrine	Dr. Smith	TBA	Friday – March 12
GI & Liver	Dr. McCafferty	TBA	Wednesday – April 14