

**MDSC 569**  
**Advanced Topics in Physiology – Renal Physiology**

**Instructors:**

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Office: by Zoom as needed

**Office Hours/Policy on Answering Student Emails**

All course communications must occur through your @ucalgary email. Student emails from @ucalgary will be answered within 24 h during business hours.

**Time and Location:**

Classes: M/W 1:00 – 2:20 pm  
Tutorials: F 1:00 – 2:20 pm [as needed]

Zoom sessions will be released 15 min ahead and continue for 15 min after completion of the scheduled class. All sessions will be held by Zoom and synchronously presented. Students will work in teams and complete discussion boards on D2L as well as team presentations on powerpoint. When unable to participate due to unforeseen circumstance, inform the instructor in advance and propose to implement an alternative activity.

**Prerequisite:**

MDSC 404/604 or ZOOL 463 or consent of the instructor

**Course Description:**

Designed for undergraduates with a general understanding of human physiology who wish to pursue advanced topics in a physiological system(s). The physiological system offered will vary from year-to-year and students should contact the instructor for more information prior to enrolling in the course.

**Overarching Theme**

This is an advanced physiology half course detailing the functional organization of the kidney at all levels from cell to intact organism. Curricular content will be driven by student interest and may include topics such as: renal haemodynamics, glomerular ultrafiltration, fluid & electrolyte homeostasis, acid-base balance, neurohumoral factors that modulate renal haemodynamics & function, and the pharmacological therapies. The relevance of basic physiological processes to experimental medicine and therapeutics will be included in twice weekly interactive discussion sessions using recent literature and relevant topic reviews. Sessions will be facilitated by an established expert in the field of kidney physiology and will require student participation.

**Global Objectives**

To enhance knowledge in the area of kidney physiology as it relates to clinical disorders and advance understanding of the role of the kidney in body fluid homeostasis and blood pressure regulation at all stages of development

## Course Learning Outcomes

By the end of this course, students will:

- Develop an increased understanding of kidney physiology beyond the basic level
- Determine the relationship of kidney imbalances to clinical disorders
- Improve skills in independent learning, oral presentations, and scientific writing
- Learn to interact across a peer group using scientific argument
- Understand how to critically evaluate a journal article
- Improve skills in literature searching, investigation of relevant topics, and synthesis of published articles and reviews

## Learning Resources

There are no required textbooks for MDSC 569. All required reading materials will be posted onto D2L weekly as links to publications, according to copyright regulations.

## Recommended Textbooks/Readings

Brightspace (by D2L) will be used to provide links for all documents and course materials. Required readings will be carefully chosen to enhance your learning experience. **All students are required to (a) attend every class (Monday and Wednesday) by Zoom and (b) complete assigned reading BEFORE class.** Discussions in classes and tutorials will be conducted upon the assumption that assigned readings have been completed. Students should be aware that many of the readings they will be assigned may 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:

1. Assessment will be carried out by evaluation of short essays (maximum one page excluding figures, tables or references). These are to be submitted at regular intervals by each registered student, according to the course schedule, and together will be worth 40% of the total mark. The first assignment will be due on Monday September 28 and will continue to be due at regular intervals until December 7; exceptions will be made for statutory holidays. There will be five assignments in all, worth 8% each. Assignments will be both submitted onto D2L dropbox and marked and returned by D2L dropbox before the next scheduled essay due date. Late assignments will NOT be accepted and will receive a mark of zero (see Missed Components of Term Work below). There will be NO final examination.
2. There will also be oral presentations by groups worth 50%. Groups will be assigned randomly on the first day of class.
3. Class attendance and participation will be worth 10%.

*A student's final grade for the course is the sum of the separate assignments as outlined above.*

### 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 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.

### 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

**Missed Components of Term Work:**

***Extensions will NOT be granted on any assignment.*** Late assignments will not be accepted and will automatically receive a mark of zero. There will be NO exceptions to this policy except those in keeping with the University Calendar (debilitating illness, religious conviction, or severe domestic affliction) that are received in writing and with supporting documentation.

Please note that while absences are permitted for religious reasons, students are responsible for providing advance notice, as outlined in the University Calendar

(<https://www.ucalgary.ca/pubs/calendar/current/e-4.html>).

**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.

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.

## Attendance

As noted above, class attendance and participation are worth 10% of the student's total mark. In the event of internet difficulties, please communicate with the instructor before the class begins.

## 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 in respectful and appropriate language, always maintaining sensitivity towards the topic. Students and academic staff members 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 and academic staff members 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 or mobile devices is required for all Zoom sessions. However, research studies have found that inappropriate/off-topic use of electronic devices in a classroom setting can negatively affect the learning of others during class time. Please turn off all programs before entering the Zoom classroom, including text, DM, and email, along with any other programs not required for class.

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 reach 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, 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>

## **MEDIA RECORDING**

Please refer to the following statement on media recording of students: [https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP\\_FINAL.pdf](https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP_FINAL.pdf)

### **Media recording for the assessment of student learning**

The instructor may use media recordings as part of the assessment of students. This may include but is not limited to classroom discussions, presentations, clinical practice, or skills testing that occur during the course. These recordings will be used for student assessment purposes only and will not be shared or used for any other purpose. In all instances, students will be advised when recording is being carried out.

### **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 <https://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>

**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**

The schedule for the course will be presented and discussed on the first day of class. Readings and class topics will be selected and assigned during the first two weeks of classes. Topics and readings shall be selected by students with input from the Course Coordinator.