



CUMMING SCHOOL OF MEDICINE
GRADUATE COURSE OUTLINE

COURSE TITLE:			
Course	MDSC 623.02		
Pre/Co-Requisites	This course is one of the required courses for the Critical Care Specialization Graduate Program at the University of Calgary. It is intended for graduate students with an interest in critical illness and students interested in translational biology, basic statistics and clinical trials. It is open to residents in their PGY4 year or beyond registered in subspecialty and research training programs.		
Faculty	Cumming School of Medicine, Graduate Science Education		
Instructor Name(s)	Dr. Brent Winston	Email	bwinston@ucalgary.ca
Office Location	HRIC 4AC45	Office Hours	0800-1600 M-F
Instructor Email Policy	none		
Telephone No.	403-220-4341		
TA Name, if applicable		Email	
Class Term, Days	Thursdays		
Class Times	3:00 – 6:00 pm		
Class Location	McCaig Tower, Room 04140		

COURSE INFORMATION/DESCRIPTION OF THE COURSE
To teach the molecular biology aspects and physiological basis of critical illness with emphasis on the following areas: Inflammation/immunology/blood, cardiovascular, neurosciences, gastrointestinal, and endocrine basis of critical illness. We will also cover aspects of translational biology and clinical trials. Since advanced pulmonary physiology, ventilator and respiratory physiology of the critically ill will be covered in MDSC 623.03 and MDSC 623.04, it will not be covered in this course.
LEARNING RESOURCES/REQUIRED READING
LCD Projector and Screen

COURSE OBJECTIVES/LEARNING OUTCOMES

To teach the molecular and physiological basis of critical illness with emphasis of the following areas: inflammation, immunologic, hematologic, cardiovascular, neurosciences, gastrointestinal, and endocrine systems. We will also cover aspects of translational biology and clinical trials.

CUT POINTS FOR GRADES

This course adheres to the grading system outlined in the University of Calgary, Faculty of Graduate Studies Calendar. Grades of A+ and A are not distinguished in the calculation of GPAs. Percentage/letter grade conversion used for this course is as follows

Grade	Grade Point Value	Percentage Conversion	Graduate Description
A+	4.00	95-100	Outstanding
A	4.00	90-94	Excellent – superior performance showing comprehensive understanding of the subject matter
A-	3.70	85-89	Very Good Performance
B+	3.30	77-84	Good Performance
B	3.00	72-76	Satisfactory Performance
B-	2.70	68-71	Minimum Pass for Students in the Faculty of Graduate Studies
C+	2.30	63-67	All grades below ‘B-’ are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements

Assessment Components: The University policy on grading related matters is outlined in the [2019-2020 Calendar](#).

Assessment Methods	Description	Weight %	Due Date and Time
Exams	Take home exams x 3	25%each	As per schedule
Assignments	3 assignments in the stats section equally weighted	25% of final mark	As per schedule

ASSESSMENT AND EVALUATION INFORMATION

ATTENDANCE AND PARTICIPATION EXPECTATIONS:

GUIDELINES FOR SUBMITTING ASSIGNMENTS:

Take Home Examinations (75%)

Each speaker will provide a question informed by their lecture and reference material along with a corresponding model answer. From this pool of questions, three exams over the course will take place, each accounting for 25% of the final grade. The exams are take-home examinations. Exams will be evaluated according to the model answers provided by lecturers. Take Home examinations are due back one week following their distribution to students.

Assignments (25%)

The clinical trials and translational biology section will have a series of take-home assignments worth 10 marks each that taken together will be worth 25% of the final course grade. Each week you will receive an assignment based on the epidemiologic and statistical concepts covered that week. Assignments will seek to have you demonstrate practical application of the theory presented during the lecture. Assignments are due one week after they are distributed. Assignments will be marked by the lecturer (worth 10 marks for each assignment) and your overall performance on the series of assignments will constitute 25% of the final grade.

FINAL EXAMINATIONS:

None

EXPECTATIONS FOR WRITING:

It is expected that all questions from take home exams can be answered in one typed page, double-spaced. Sentence answers or short answers are acceptable but the answers should be clear and brief.

LATE AND/OR MISSING ASSIGNMENTS:

Without prior arrangement late assignments will not be accepted.

Is a passing grade on a particular component essential to pass the course as a whole?

COURSE TIMETABLE			
Course Schedule Date	Topic & Reading	Instructor	Assignments/Due Dates & Times
	See below		



Course Timetable:

Lectures will occur weekly on Thursdays from 3-6 PM in the ICU classroom McCaig Tower room 04140. Students are responsible for all the reading material and the material covered in class. Tutorials will be on an as needed basis scheduled for 14:00 – 15:00 on Thursdays.

A tentative course schedule follows below. Due to lecturer availability, the dates of the topics covered may change as necessary.

Outline of course:

January 9, 2020	SIRS/MODS/Cytokines – inflammatory mediators	Dr. B. Yipp
January 16, 2020	Leukocyte-endothelial cell interaction in inflammation	Dr. P. Kubes
January 23, 2020	Coagulation/thrombosis and disease pathogenesis in Critical illness	Dr. C. Jenne
	*Note start time 1:00 pm. to 3:00 pm	
January 30, 2020	EXAM 1 Distributed	Worth 25% of Final Grade
January 30, 2019	Adrenergic and cholinergic receptor function	Dr. H. Banijamali
	*Please note start time 5:00 PM	
February 6, 2020	Cardiac physiology – left-right interdependence and function.	Dr. S. Belenkie
February 6, 2020	EXAM 1 Due	
February 13, 2020	Cardiac Dysrhythmias	Dr. B. Mitchell
February 20, 2018	Reading Week – No classes	
February 27, 2020	Humoral Regulation of the Circulation And Vascular Biology	Dr. T. Anderson
February 27, 2020	EXAM 2 Distributed	Worth 25% of Final Grade
March 5, 2020	EXAM 2 Due	



March 5, 2020	Diagnostic Tests Clinical Trials #1 Stats assignment (Due March 12)	Dr. D. Niven
March 12, 2020	Basic Biostatistics Biostatistics Human and Bench-Top #2 Stats Assignment (Due March 19)	Dr. T. Stelfox
March 19, 2020	Biostatistics Continued #3 Stats assignment (Due March 26)	Dr. K. Fiest
March 26, 2020	Final Stats Assignment Due (Assignments worth 25% of final grade)	
March 26, 2020	Mechanisms of neuronal injury	Dr. P. Stys
April 2, 2020	ICP, CPP, jugular venous bulb directed therapy for head injury	Dr. J. Kromm
April 9, 2020	Aneurysmal subarachnoid hemorrhage: a complex, multi-system disease	Dr. A. Kramer
April 9, 2020	Exam 3 Distributed Worth 25% of Final Grade	
April 16, 2020	Exam 3 Due	

INTERNET AND ELECTRONIC COMMUNICATION DEVICE INFORMATION

Cell phones must be turned off in class unless otherwise arranged with the instructor.

The use of laptop and mobile devices is acceptable when used in a manner appropriate to the course and classroom activities. Students are to refrain from accessing websites that may be distracting for fellow learners (e.g. personal emails, Facebook, YouTube). 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-communicationspolicy.pdf>.

MEDIA AND RECORDING IN LEARNING ENVIRONMENTS

Media recording for lesson capture

The instructor may use media recordings to capture the delivery of a lecture. These recordings are intended to be used for lecture capture only and will not be used for any other purpose. Although the recording device will be fixed on the Instructor, in the event that incidental student participation is recorded, the instructor will ensure that any identifiable content (video or audio) is masked, or will seek consent to include the identifiable student content to making the content available on University approved platforms.

Media recording for 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.

Media recording for self-assessment of teaching practices

The instructor may use media recordings as a tool for self-assessment of their teaching practices. Although the recording device will be fixed on the instructor, it is possible that student participation in the course may be inadvertently captured. These recordings will be used for instructor self-assessment only and will not be used for any other purpose.

Student Recording of Lectures

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

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

ACADEMIC ACCOMMODATIONS

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/. 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. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>

IMPORTANT INFORMATION

Any research in which students are invited to participate will be explained in class and approved by the appropriate University Research Ethics Board

COPYRIGHT

It is the responsibility of students and professors to ensure that materials they post or distribute to others comply with the Copyright Act and the University's Fair Dealing Guidance for Students (library.ucalgary.ca/files/library/guidance_for_students.pdf). Further information for students is available on the Copyright Office web page (<https://library.ucalgary.ca/copyright>)



A NOTE REGARDING INSTRUCTOR INTELLECTUAL PROPERTY

Generally speaking, course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor (s). 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 INTEGRITY

The Cumming School of Medicine expects intellectual honesty from its students. Course participants should be aware of University policies relating to Principles of Conduct, Plagiarism and Academic Integrity. These are found in the printed Faculty of Graduate Studies Calendar, or online under Academic Regulations in the Faculty of Graduate Studies Calendar, available at [Faculty of Graduate Studies Academic Regulations](http://www.ucalgary.ca/pubs/calendar/current/k.html)

ACADEMIC MISCONDUCT

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

EMERGENCY EVACUATION AND ASSEMBLY POINTS

Assembly points for emergencies have been identified across campus. The primary assembly points for South Campus (Health Science Centre (HSC); Health & Research Innovation Centre (HRIC); Heritage Medical Research Building (HMRB) and Teaching, Research and Wellness (TRW)) are:

- HSC and HMRB: HRIC Atrium (alternate assembly point is Parking Lot 6)
- HRIC: HMRB Atrium (alternate assembly point is Parking Lot 6)
- TRW: McCaig Tower (alternate assembly point is HMRB – Atrium)

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 N of the Faculty of Graduate Studies Calendar. Students must follow the official process and should contact the Student Ombuds Office (<http://www.ucalgary.ca/provost/students/ombuds>) for assistance with this and with any other academic concerns, including academic and non-academic misconduct

THE FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY (FOIP) ACT

This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP) and students should identify themselves on written assignments (exams and term work.) by their name and ID number on the front page and ID on each subsequent page. Assignments given by you to your course instructor will remain confidential unless otherwise stated before submission. The assignment cannot be returned to anyone else without your expressed permission to the instructor. Grades will be made available on an individual basis and students will not have access to other students' grades without expressed consent. Similarly, any information about yourself that you share with your course instructor will not be given to anyone else without your permission

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 (Room 370, MacEwan Student Centre), <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services> and the Campus Mental Health Strategy website <https://www.ucalgary.ca/mentalhealth/>

SUPPORTS FOR STUDENT LEARNING, SUCCESS, AND SAFETY

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

Student Union: The SU Vice-President Academic can be reached at (403) 220-3911 or suvpaca@ucalgary.ca; Information about the SU, including elected Faculty Representatives can be found here: <https://www.su.ucalgary.ca>

Graduate Student's Association: The GSA Vice-President Academic can be reached at (403) 220- 5997 or gsa.vpa@ucalgary.ca; Information about the GSA can be found here: <https://gsa.ucalgary.ca>

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.