

University of Toronto
MSC4001H: Foundations of Resuscitation and Critical Care Research
2021-2022 Course Syllabus

1. Course Contacts

This course is administered by two instructors:

Benjamin Leung
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Dakota Gustafson
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In addition, two alumnae from past years of MSC4001 will serve as “course mentors”:

Julie Moore
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Tiffany Jefkins
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2. Course Information

Objectives

1. To provide students an enhanced understanding of the breadth of research in resuscitation and critical care science.
2. To ensure that students with disparate fields of research enquiry assemble to discuss common areas of interest, thereby further reinforcing a spirit of interdisciplinary research.

Description

This 0.5-credit, full-year seminar course introduces students to foundational principles and ongoing research within the fields of resuscitation and critical care science. Topics encompass the system of care of resuscitation and cover the spectrum of basic, clinical, and translational science, across the pre-hospital, in-hospital, and post-hospital settings. Students will engage with leaders in resuscitation, emergency, and critical care research to discuss the experimentation, development, and implementation of cutting-edge science. No prior knowledge is required and graduate students from all disciplines are welcome. This course is a prerequisite for the Advanced Topics in Resuscitation Science course (MSC4002H).

Course Sessions

- 2-hour session approximately every other Monday (see Section 4)
- Session times: 4:30pm – 6:30pm, Eastern time
- All sessions will be online conducted via Zoom – links to be provided via Quercus.

3. Course Evaluation

Students will be evaluated under the following criteria:

1. Research Papers (2 x 30%)

- Each semester, each student will write one research paper on a topic relevant to resuscitation and/or critical care research. The topic will be selected by the student and must be approved by the course instructors.
 - Students must submit a paragraph (no more than 1/2 page) outlining their intended topic (see due date below).
 - In the event of a “no-go” decision, students will be given additional time to find a suitable topic, which will be communicated via email.
- The research paper must adhere to the following constraints:
 - Title/cover page (no abstract, must include name and student number)
 - No more than 1,500 words (not including references)
 - Double-spaced, 1-inch margins, 12-point font
 - Cite references according to the APA or AMA/Vancouver style
- Due dates (no later than 11:59pm on each date):

	Topic Selection	Full Paper
Fall Paper	Oct 25	Dec 13
Winter Paper	Feb 14	Apr 11

- Late submissions for research papers will not be accepted in general.
- In the event of unforeseen circumstances (e.g., illness) that prevent students from making an on-time submission, they must contact the course instructors as soon as possible to discuss alternate arrangements.
- Requests for reconsideration of a research paper mark must be made between 48 hours and one week of the graded submission being returned and must contain a written explanation of your concerns. The decision of the instructors is final.

2. Fall Oral Presentation (10%)

- This will be a group presentation in the form of a “business pitch” of a topic/idea assigned by the course instructors.
- Students will be assigned to groups and topics at the start of the scheduled class.
- Groups will prepare their topic and present it to the course instructors, plus invited guests that may attend.
- No preparation prior to the class is necessary.

3. Winter Oral Presentation (10%)

- This will be a presentation following a structured format that will be announced in class and on Quercus during the Winter semester.
- Students will present during class to the course instructors, plus invited guests that may be in attendance.

4. Individual Development Plan (6%)

- Each student will complete a structured development plan for the course highlighting their background knowledge, learning objectives, and targeted outcomes for the course.
- A plan template will be made available on Quercus.
- A first draft of the IDP is due no later than **Sept 27, 11:59pm**, and comments will be provided in the following week.
- The final draft of the IDP is due no later than **Oct 18, 11:59pm**.

5. Attendance and Engagement (14%)

- Students are required to attend all sessions and participate actively, contribute to discussion, and complete all tasks required during sessions.
- Failure to do so may result in forfeiture of engagement marks for that session.
- In the event of predicted absences (e.g., religious observances), please email the course instructors at least two calendar weeks in advance of the class being missed to discuss alternate arrangements.

4. Course Content

Course sessions are generally divided into three themes:

- Pre-hospital and emergency care
- In-hospital and/or critical care
- Integration throughout the system and community of care

Some sessions of this course will be facilitated by at least one senior clinician scientist/investigator, which will allow students to understand the current state of resuscitation science and critical care/emergency medicine research.

Tentative session timeline (topics and facilitators subject to change):

Session	Date	Topic	Facilitators
1	Sept 13	Course introduction: What is resuscitation and resuscitation science? What is the system of care?	Course instructors
2	Sept 27	Social determinants of resuscitation	Brian Grunau

3	Oct 4	Engineering better response systems for resuscitation	Steve Brooks, Gareth Clegg
4	Oct 18	Paramedicine research in resuscitation	Shannon Leduc, Ian Drennan
5	Nov 1	Bystander considerations in pre-hospital resuscitation	Katie Dainty, Tiffany Jefkins
6	Nov 15	The opioid epidemic and its effects on resuscitation	Aaron Orkin, Lee Chapman
7	Nov 29	Fall presentations	Course instructors
Winter break			
8	Jan 10	At the interface: basic science, resuscitation, and critical care	Lauralyn McIntyre, Dakota Gustafson
9	Jan 24	Rapid response mechanisms for in-hospital resuscitation	Natalie Wong, Julie Moore
10	Feb 7	Nursing research in resuscitation and critical care	Marion Leary
11	Feb 28	Optimizing translational research in resuscitation	Steve Lin, Katie Allan
12	Mar 14	Resuscitation research and policy for the lay community	Sam Vaillancourt, Quinn Grundy
13	Mar 28	Advancing resuscitation guidelines and the system of care	Laurie Morrison
14	Apr 4	Course wrap-up; Winter presentations	Course instructors

5. Policies and Resources

- a. Grade determination: Each course deliverable will be given a letter grade. In accordance with School of Graduate Studies policies, the final grade on students' transcripts will also be a letter grade, corresponding to the following table.

Letter Grade	%
A+	90 - 100%
A	85 - 89%
A-	80 - 84%
B+	77 - 79%
B	73 - 76%
B-	70 - 72%
FZ (fail)	0- 69%

- b. Writing help: The University offers one-on-one writing consultations for graduate students through the Graduate Centre for Academic Communication. You can find more information here: <https://www.sgs.utoronto.ca/resources-supports/gcac/writing-centre/>
- c. Communication: All course information will be sent via the course portal on Quercus (<https://q.utoronto.ca>). Students should check Quercus regularly. General questions may be posted on the Discussions tab. Please limit sending emails to instructors regarding questions or issues of a personal nature.
- d. Academic Integrity: The Code of Behavior on Academic Matters pertains to all students and faculty at the University of Toronto. It is an offence for a student knowingly “to represent as one’s own any idea or expression of an idea or work of another in academic examination or term test or in connection with any other form of academic work, i.e., to commit plagiarism”. It also defines several other offences, which the University expects all students to know about and avoid. You can find more information here: www.utoronto.ca/academicintegrity
- e. Plagiarism checking software: Written assignments for this course will be screened via Quercus to Turnitin, an online service that reviews submissions for textual similarity and possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarism. Please contact the course instructors if you have any questions or concerns.
- f. Accessibility and accommodations: The University supports accommodations for students with diverse learning needs. If you have a learning need requiring an accommodation, the University recommends that students register as soon as possible with Accessibility Services: <https://studentlife.utoronto.ca/service/accessibility-services-registration-and-documentation-requirements/>
- g. Respect for diversity: We believe diverse perspectives enrich the conversation and enliven the research process. In that spirit, we intend to conduct this course in a manner that clearly respects the diversity of students and their perspectives. Through course content, activities, and various materials, we will provide examples that respect and value a wide variety of perspectives. We welcome and appreciate any feedback and/or suggestions you might have to increase the value of diversity in this course.