

**MDSC 307**  
**Science, Philosophy and Society**

**Instructors:**

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Department of Community Health Sciences  
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**Office Hours/Policy on Answering Student Emails**

Students are encouraged to meet with the instructor outside of class time. Get in touch by email or in person to arrange a meeting. All efforts will be made to respond to emails within 48 hours.

**Time and Location:**

WF 1300-1415hrs  
G384

**Prerequisite/Co-Requisite:**

Second year or higher standing in the BSc Honours program.

**Course Description:**

A survey of underlying ideas concerning the objectives, methods, ambitions, and responsibilities of the natural and social sciences

**Overarching Theme**

The overarching theme for this course is science's role in society. Students will develop an understanding of this role by engaging with such philosophical ideas as...

- Demarcation: What distinguishes genuine science from pseudoscience?
- Confirmation: How does observational evidence give us reason to accept scientific theories?
- Theory Change: When a theory is succeeded by a new one, how should we understand the relationship between new and old? What is scientific progress?
- Critiques of science: Science is generally seen as a source of emancipation that has freed us from a superstitious world view. Is this still true of science? Or is science oppressive?

The course will begin with lectures on the above concepts. Students will then apply these ideas as they explore such issues as the impact of technological change and public trust in science.

**Global Objectives**

The main goal of this course is to develop a toolkit of resources for thinking about science and to use that toolkit to make sense of science's role in society.

**Course Learning Outcomes**

By the end of this course, students should be able to:

- Grasp fundamental conceptual issues about science such as demarcation, confirmation, theory change, and critiques of science
- Analyze original works by philosophers of science and other scholars
- Lead a discussion on a scholarly paper
- Apply conceptual tools to elucidate problems at the intersection of science and society

### **Transferable Skill Development:**

Many of the skills and abilities that you are developing in your coursework are transferable to the workforce, graduate and professional studies and other facets of life. Employers seek applicants with transferable skills because they can be an asset in the workplace, regardless of industry or sector. Transferable skills are core skills for your success in building your future career.

The work that you will do in MDSC 307 will help you build the following transferable skills:

- **Collaboration:** Work respectfully with others from different backgrounds, cultures, and countries.
- **Verbal Communication:** Learn and share information by presenting, listening, and interacting with others.
- **Creativity and Innovation:** Find different and better ways to do things, being curious, thinking imaginatively.
- **Critical Thinking:** Actively and skillfully conceptualize, apply, analyze, synthesize, and/or evaluate information (data, facts, observable phenomena, and research findings) to make a reasoned judgement or draw a reasonable conclusion.
- **Information Literacy:** Find, understand, and use information presented through words, symbols, and images
- **Problem solving:** Identify an issue, find and implement a solution, and assess whether the situation has improved.
- **Written Communication:** Share ideas and information by using words, images, and symbols.

### **Learning Resources**

Links or citations for all required readings will be available through D2L.

### **Recommended Textbooks/Readings**

*The Stanford Encyclopedia of Philosophy*—<http://www.plato.stanford.edu>

### **A Note Regarding Readings**

A list of required readings will be outlined on D2L and links and documents will be made available, where possible. 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 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.

### Evaluation

The University policy on grading and related matters is described in section F of the 2022-2023 Calendar.

In determining the overall grade in the course, the following weights will be used:

ASSIGNMENT	VALUE	LEARNING OUTCOME
Discussion Board Questions and Responses (lecture readings)	20%	<ul style="list-style-type: none"> <li>Analyze original works by philosophers of science and other scholars</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> </ul>
Paper Discussion I	20%	<ul style="list-style-type: none"> <li>Lead a discussion on a scholarly paper</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> <li>Analyze original works by philosophers of science and other scholars</li> </ul>
Paper Discussion I Planning Document	10%	<ul style="list-style-type: none"> <li>Analyze original works by philosophers of science and other scholars</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> </ul>
Paper Discussion II	25%	<ul style="list-style-type: none"> <li>Lead a discussion on a scholarly paper</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> <li>Analyze original works by philosophers of science and other scholars</li> </ul>
Paper Discussion II Planning Document	15%	<ul style="list-style-type: none"> <li>Analyze original works by philosophers of science and other scholars</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> </ul>
Participation	10%	<ul style="list-style-type: none"> <li>Grasp fundamental conceptual issues about science such as demarcation, confirmation, theory change, and critiques of science</li> <li>Analyze original works by philosophers of science and other scholars</li> <li>Lead a discussion on a scholarly paper</li> <li>Apply conceptual tools to elucidate problems at the intersection of science and society</li> </ul>

A student's final grade for the course is the sum of the separate assignments. It is not necessary to pass each assignment separately in order to pass the course.

There is NO Registrar-scheduled exam for this course.

## Brief Description of Graded Items (detailed instructions available on D2L)

**Discussion Board Questions and Responses:** Post 1x question about each of the lecture readings (i.e. the 8x readings chosen by the course instructor) and respond to 2x student questions about each of the lecture readings.

**Paper Discussion I:** Working in groups of 3, lead a ~60-minute discussion of a reading selected by the student group and approved by the instructor. (See Course Schedule)

**Paper Discussion I Planning Document:** a description of the reading selected for your Paper Discussion I, 1 or 2 learning objectives and an explanation of how the reading's topic relates to course themes. Due 1 week prior to your in-class Paper Discussion I.

**Paper Discussion II:** Working in groups of 2 lead a ~60-minute discussion of a reading selected by the student group and approved by the instructor. (See Course Schedule).

**Paper Discussion II Planning Document:** a description of the reading selected for your Paper Discussion II, 2 or 3 learning objectives and an explanation of how the reading's topic relates to course themes. Due 1 week prior to your in-class Paper Discussion II.

**Participation:** Participation scores will be a function of attendance to and contribution at student-led discussions.

### 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 2022-23 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 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	90-95.99
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

<b>C-</b>	Approaching satisfactory performance	57-59
<b>D+</b>	Marginal pass	54-56
<b>D</b>	Minimal pass	50-53
<b>F</b>	Does not meet course requirements	0-49

**Missed Components of Term Work:**

Students will lose 10% per day late past the deadline for all assignments.

**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)).

**Attendance**

While attendance will not be taken in MDSC 307, and there is no formal participation grade, attendance is EXTREMELY IMPORTANT. Students should make every effort to attend classmates’ in-class paper discussions. Just as you will want a lively audience when you present, you should provide one for your classmates.

**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/legal-services/university-policies-procedures>.

**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 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, 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>). 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/).

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 Dr. Ebba Kurz ([kurz@ucalgary.ca](mailto:kurz@ucalgary.ca)), Associate Dean (Undergraduate Health and Science Education).

### **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. **It also includes using of third party websites/services to access past/current course material, essay/assignment writing services, or real-time assistance in completing assessments, seeking answers to assessment questions and similar, whether paid, bartered or unpaid.**

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 (or similar) 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 and Gender-Based 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/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-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>
Student Advocacy and Wellness Hub (CSM)	<a href="https://cumming.ucalgary.ca/student-advocacy-wellness-hub/home">https://cumming.ucalgary.ca/student-advocacy-wellness-hub/home</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 [suypaca@ucalgary.ca](mailto:suypaca@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

The following is a list of topics for class, associated readings, and assignment / exam due dates. Please note that unforeseen circumstances may cause changes to the schedule with respect to the timing of topics and readings. Students will be notified of all changes in a timely manner by way of email and D2L announcements.

DATE	TOPIC	READING
11-Jan	Introduction/Syllabus Review	NONE
13-Jan	Introduction to Philosophical Analysis	NONE
18-Jan	Intro to Philosophy of Science	NONE
20-Jan	Demarcation	Thagard, Paul (1978) "Why Astrology is a Pseudoscience" <i>PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association</i> , Vol. 1978 contributed papers, pp. 223-234
25-Jan	Demarcation	Simon Schaffer Podcast <a href="https://www.cbc.ca/player/play/1479821350">https://www.cbc.ca/player/play/1479821350</a>
27-Jan	Rise of the Machines	Sparrow, Robert (2007) "Killer Robots" <i>Journal of Applied Philosophy</i> Vol. 24, No. 1, 2007
01-Feb	Disability	Amundson, Ron (2005) "Disability, Ideology, and Quality of Life: a bias in biomedical ethics" in Wasserman, Bickerbach, Wachbroit (2005) <i>Quality of Life and Humanb Difference</i> . Cambridge University Press. pp. 101-124
03-Feb	Testimonial Injustice	Karen Frost-Arnold (2016) "Social Media, Trust, and the Epistemology of Prejudice," <i>Social Epistemology</i> , 30:5-6, 513-531
08-Feb	Genocentrism	Evelyn Fox-Keller Podcast: <a href="https://www.cbc.ca/radio/ideas/how-to-think-about-science-part-14-1.464990">https://www.cbc.ca/radio/ideas/how-to-think-about-science-part-14-1.464990</a>
10-Feb	Paper Discussion Assignment Q&A	NONE
15-Feb	Genocentrism	Tallbear, Kim (2007) "Narratives of Race and Indigeneity in the Genographic Project" <i>Journal of Law, Medicine &amp; Ethics</i> . Volume: 35 issue: 3, page(s): 412-424
17-Feb	Scientism	Feyerabend, Paul: How to Defend Society Against Science (PDF on D2L)
22-Feb	Term Break-NO CLASS	
24-Feb	Term Break-NO CLASS	
01-Mar	Group 1 Paper Discussion I	TBD
03-Mar	Group 2 Paper Discussion I	TBD
08-Mar	Group 3 Paper Discussion I	TBD
10-Mar	Group 4 Paper Discussion I	TBD
15-Mar	Group 5 Paper Discussion I	TBD

17-Mar	Group 1 Paper Discussion II	TBD
22-Mar	Group 2 Paper Discussion II	TBD
24-Mar	Group 3 Paper Discussion II	TBD
29-Mar	Group 4 Paper Discussion II	TBD
31-Mar	Group 5 Paper Discussion II	TBD
05-Apr	Group 6 Paper Discussion II	TBD
07-Apr	Easter Friday-NO CLASS	
12-Apr	Group 7 Paper Discussion II	TBD