Current Questions in Mathematics and Sciences PSCD02H3

Course Instructor

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"Current Questions in Mathematics and Sciences" (PSCD02H3) is a rather unique course. It is intended to increase overall scientific literacy through writing, presenting and discussing materials on current topics in mathematics and sciences. For this academic year, I have selected two topics of current interest for this year's course: The COVID-19 Pandemic and Big Data.

Further particulars of the course requirements will be explained through the grading scheme, which is as follows:

Class attendance	10 %
Discussion participation	5 %
Short quizzes	5 %
Preparing and delivering an oral presentation	25 %
Writing an executive summary (1 page)	15 %
Writing a short project report (3 pages)	20 %
Preparing a poster presentation	20 %

On-line class attendance is mandatory. I also would like you to keep your cameras on during the entire class. In exchange, however, there are no tests in this course (i.e. no midterm or final exam). Thus, just by attending each class you'll earn 10 % of your mark. You will **lose** 1% for each missed class.

You are expected to actively **participate in class discussions**. In order to be an effective participant in the discussions you should do some research on the presentation topics. What is expected of class discussions and what you are going to be evaluated on is: engagement, asking relevant questions, expanding the depth of the topics, providing answers to questions, maintaining class dynamics, and comments/questions showing topic understanding.

On two occasions there will be **short quizzes** on a topic discussed the week before. The quizzes will have two to three short questions only and they are designed to test your general understanding of the topics covered in a lecture – not any details.

You will be giving an **oral on-line presentation** of 12 minutes introducing and summarizing a particular topic related to the COVID-19 pandemic. The available presentation topics and guidance on preparing and delivering this talk are provided in separate documents. After each talk we will:

- have a discussion on the technical content of the presentation,
- critique the presentation itself (structure and flow, delivery, quality of visual aids, etc.). The purpose of this critique is to help the presenter and the others in class to improve their presentation skills.

In order to test your ability to write concisely about a scientific topic, you will be writing a **short executive summary** (or abstract) on the topic of your oral presentation (500 words or less). Details on how to write such a summary will be provided at a later date.

You will conduct a small course project on the topic of "Big Data" using Google Data (or another similar data source) and summarize your findings in a **short project report** (1500 words or less). Details on how to conduct the project and how to write the report will be provided at a later date.

Finally, you will prepare a **poster** on your course project and present it to the class. Again, we will have a discussion on the presented material and critique the poster and its presentation. Again, more details will be provided later.

Tentative Schedule

1a	Jan. 14	Introduction to course
1b	Jan 15, 10:00 am	Guest lecture: Linsey Marr, Virginia Tech, Transmission of SARS-CoV-2 and Other Viruses in Aerosols, Departmental Colloquium of the Dept. of Chemistry, U of Toronto Zoom link: https://utoronto.zoom.us/j/83225830875 Meeting ID: 832 2583 0875, Passcode: 679312
2	Jan. 21	1st quiz on Marr lecture Lecture on how to give a good presentation: David Chan
3	Jan. 28	Oral presentations
4	Feb. 4	Oral presentations
5	Feb. 11	Oral presentations
	Feb. 18	Reading Week
6	Feb. 25	Oral Presentations
7	Mar. 4	Oral Presentations
8	March 11	Introduction to 2nd course topic: Big Data
9	March 18	2nd quiz Poster presentations
10	March 25	Poster presentations
11	April 1	Poster presentations
12	April 8	Class discussion: The scary side of Big Data

Email Policy

- Use UTSC account for all your correspondences. If other accounts (Yahoo, Gmail, Hotmail, etc.) are used, your email will be filtered out as spam and may not be received.
- Put PSCD02 in the subject line followed by the reason for the email.
- Use professional language with a formal greeting - NOT "Hey".
- Sign the email with your first and last name. Include your student ID number after your name.

- Every effort will be made to respond to student emails within 36 hours (M-F) provided that the above protocol is used.

Accessibility

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach us and/or the Access*Ability* Services Office as soon as possible. We will work with you and Access*Ability* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC Access*Ability* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Academic Integrity

Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community, which honours the values of honesty, trust, respect, fairness and responsibility and to protect you, the students within this community, and the value of the degree towards which you are all working so diligently.

According to Section B of the University of Toronto's Code of Behaviour on Academic Matters http://www.governingcouncil.utoronto.ca/policies/behaveac.htm, which all students are expected to know and respect, it is an offence for students to:

- To use someone else's ideas or words in their own work without acknowledging that those ideas/words are not their own with a citation and quotation marks, i.e. to commit plagiarism.
- To include false, misleading or concocted citations in their work.
- To obtain unauthorized assistance on any assignment.
- To provide unauthorized assistance to another student. This includes showing another student completed work.
- To submit their own work for credit in more than one course without the permission of the instructor.
- To falsify or alter any documentation required by the University. This includes, but is not limited to, doctor's notes.
- To use or possess an unauthorized aid in any test or exam. There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values, which they protect. Offences against academic integrity will be dealt with according to the procedures outlined in the Code of Behaviour on Academic Matters.