Syllabus

Instructor: Prof. Doreen Fraser
Course Meeting Time and Location: Mondays, Wednesdays, and Fridays 11:30a.m.-12:20p.m. in HH 334
E-mail (for quick questions): dlfraser@uwaterloo.ca
Office Hours (for substantive questions): Mondays 12:30-1:30p.m. and Wednesdays 10-11a.m.
Office: HH 330

Course Description
The sciences are widely considered to be one of our best sources of knowledge about the world. In this course we will investigate the nature and status of scientific knowledge. We will study several different accounts of the methods used by scientists, including accounts proposed by Carnap, Popper, and Kuhn. We will also ask whether science describes reality. Does the real world actually contain electrons or genes, for example, or is a literal interpretation of our scientific theories unwarranted?

Readings
Readings available electronically through the course web site

The books and the readings available electronically are required. The books are available from the UW Bookstore and are on reserve at the Dana Porter Library. The course web site contains links to all of the online readings (see below). There is a schedule of readings and topics for the course on pp.5-6 below.

LEARN Course Web Site
There is a LEARN course web site for this course. This site will contain links to the online readings, instructions for the assignments, the Power Point slides that are shown in class, and your grades. The Analysis of an Example and Paper assignments are to be submitted electronically using the LEARN web

Territorial Acknowledgement
We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River.
site. To log in, the username and password should be the same as your UW Quest/WATIAM userid and password. Please ensure that the e-mail address that you have listed on WATIAM is one which you check regularly.

**UW Library e-Reserve Course Web Site**
Some of the readings may be available electronically through UW Library e-Reserves. These readings may be accessed through the LEARN course web site. You will need to enter your WatIAM username and password to enter the site. For copyright reasons, only students registered in the class may access these materials. Alternatively, you can log in to the library e-reserves site directly.

**Expectations**
In addition to fulfilling the coursework requirements outlined below, it is expected that students will complete the assigned readings. Students are also expected to attend class regularly and to participate in class discussions.

**Policy on Laptops, Tablets, Phones, etc.**
Laptops and other electronic devices may only be used in class to access course materials. Please turn off the ringer on your phone prior to the start of class.

**Coursework**
The grade for the course will be broken down as follows
45% - Best 3 out of 4 quizzes (each worth 15%)
20% - Analysis of an Example
35% - Paper

**Quizzes**
Each quiz will consist of several short answer questions (i.e., requiring an answer of at most a few sentences) and one paragraph-length answer. Quizzes will cover material from class and from the assigned readings. Your best three quizzes (out of four) will count towards your final grade. THERE WILL BE NO MAKE UP QUIZZES.

**Analysis of an Example**
Choose an example of a scientific discovery described in a contemporary source (e.g., Globe and Mail, Science). Explain how one of the accounts of science discussed in the course applies to your example. Maximum length 500 words (i.e., 2 pages doublespaced). A handout with a detailed description of the requirements will be posted on the course web site later in the term. Your assignment must be submitted electronically to the online Dropbox on the LEARN web site for this course. Late assignments will be penalized 10% per 24 hours unless there are extenuating circumstances (e.g., a grade of 72% would be reduced to 62% if the assignment is handed in 24 hours past the deadline). Extensions may be granted in extenuating circumstances (e.g., serious illness,
death in the family) if appropriate documentation is provided (e.g., note from doctor). If there are extenuating circumstances, contact me prior to the deadline (unless, of course, your extenuating circumstance prevents you from doing so).

**Paper**
A short paper on a topic covered in the course. Maximum length 1,200 words (i.e., 4 pages doublespaced). A handout with paper topics and a detailed description of the requirements will be posted on the course web site later in the term. Your assignment must be submitted electronically to the online Dropbox on the LEARN web site for this course. Late papers will be penalized 10% per 24 hours unless there are extenuating circumstances (e.g., a grade of 72% would be reduced to 62% if the paper is handed in 24 hours past the deadline). Extensions may be granted in extenuating circumstances (e.g., serious illness, death in the family) if appropriate documentation is provided (e.g., note from doctor). If there are extenuating circumstances, contact me prior to the deadline (unless, of course, your extenuating circumstance prevents you from doing so).

**Writing and Communication Centre**
The Writing and Communication Centre (WCC) works with students as they develop their ideas, draft, and revise. Writing and communication specialists offer one-on-one support in planning assignments, synthesizing and citing research, organizing papers and reports, designing presentations and e-portfolios, and revising for clarity and coherence.

You can make multiple appointments throughout the term, or you can drop in at the Library for quick questions or feedback. To book a 25- or 50-minute appointment and to see drop-in hours, visit the Writing Centre web site. Group appointments for team-based projects, presentations, and papers are also available.

Please note that communication specialists guide you to see your work as readers would. They can teach you revising skills and strategies, but will not change or correct your work for you.

**Accommodation for Students with Disabilities**
*Note for students with disabilities:* The AccessAbility Services office, located on the first floor of the Needles Hall extension (1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.
Cross-listed course
Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

Academic Integrity and Discipline
Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See the Office of Academic Integrity webpage for more information.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. Check the Office of Academic Integrity for more information. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline. For typical penalties check Guidelines for the Assessment of Penalties.

Grievances and Appeals
Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4. When in doubt, please be certain to contact the department’s administrative assistant who will provide further assistance.

Appeals: A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 - Student Appeals.