COMP 4701 for Fall 2026

Computing, Society, and Ethics

Course Outline

Course Information

Instructor: Alan Tsang (https://people.scs.carleton.ca/~alantsang/)
Contact: Alan.Tsang@carleton.ca
Course Website: https://brightspace.carleton.ca
Lectures: **1135 – 1255 (Tue, Thu)** in-person (see Carleton Central)
Office Hours: **1300 – 1345 (Thu)** in-person at HP 5411

> *Alternative hours: 1605 – 1655 (Tue) but they are prioritized for another course.*
> *You may book additional appointments (including Zoom meetings) via email. Emails and Discord messages during this hour will be replied to promptly. If you have questions that may be useful for the rest of the class,* ***please post them online*** *so your classmates can benefit from the discussion.*

Last Revised: Sep 8, 2026

Teaching Assistants

Contact info for your TA will be posted on Brightspace once the course starts.

Course Calendar Description

This course examines ethical questions raised by computing technologies - both motivated by recent developments and through the lens of fiction. Students will identify possible ethical issues in future technologies and use formal ethics frameworks to evaluate the merits and pitfalls of different solutions.
Format: Blended, Flipped Classroom
Prerequisites: Any two of COMP 2108, COMP 3004, COMP 3005, COMP 3008, (COMP 3105 or SYSC 4415), COMP 3106, COMP 3804.

Learning Outcomes

By the end of this course, you will be able to…

- Understand and apply the core concepts of three commonly used ethical theories
- Identify and articulate ethical risks emerging in computer science domains
- Identify and critique poor ethical decision making
- Weigh and explain decisions using ethical frameworks

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Course Format and Attendance

The course has **two in-person sessions every week**. As the course is heavily discussion based, **regular attendance** is expected (health related absences excepted). Lectures will not be recorded and it will be your responsibility to catch up on missed material.

The course operates primarily in a flipped classroom format (especially Weeks 6 and onwards), where you will be expected to read materials in preparation for classroom discussions. Most of these materials are short stories or shows, so hopefully they will be fun to consume! Engaging with the reading materials through critical examination, thoughtful reflection, and challenging discussions is the central mode of learning in this course. But you must read them before the class to benefit from the discussions.

Inquiries

If you have questions about the course (ex: clarification on readings, discussion about something said during class, questions about assignments) that may be helpful to other students, **post them online** so other students may benefit from the discussion. If your questions are particular to your situation or involve your assessments, you may email the instructor directly, or drop-in during office hours. Please **add COMP 4701 in your email subjects** to ensure they are prioritized.

Textbook(s) and Other Resources

The course will be using selected readings and multimedia content that will be made available through Brightspace. The main textbook for this course is *Understanding Technology Ethics through Science Fiction* by Burton, Goldsmith, Mattei, Siler, Swiatek (MIT Press); a few copies are available from the library.

Topics Covered

Please note that ethical quandaries invariably involve sensitive subject matter that may be difficult to broach and stressful to discuss. Nonetheless, this is the very reason why discourse and discussion are needed in these matters. The course aims to provide a safe space to discuss these challenging topics. If you feel distressed at any time during the course, please contact your instructor or seek assistance through university resources.

Most of the course will operate in the style of a flipped classroom. **Students must perform the required readings prior to class** (listed below as "Read"). These readings are short stories or multimedia content that will form the basis of the discussion and exercises for the indicated class. *The specific readings in the second half of the course are not finalized. Check Brightspace.*

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Topics	Content
1	**Introduction: Why Ethics?** **Codes of Conduct and Ethical Theory (A Brief Overview)** Recommended: *Understanding Technology Ethics* Chapter 1 Read: ACM Code of Ethics Read: IEEE Code of Ethics
2	**Virtue Ethics** Recommended: *Understanding Technology Ethics* Chapter 2.4 Read: The Machine Stops (Forster)
3	**Deontology** Recommended: *Understanding Technology Ethics* Chapter 2.3 Read: Dolly (Bear)
4	**Utilitarianism** Recommended: *Understanding Technology Ethics* Chapter 2.2 Read: Message in a Bottle (Hopkinson)
5	**Managing Knowledge** Read: Codename Delphi (Nagata)
6	**Data, Bias, and Unintended Consequences** Read: Asleep at the Wheel (Boyle)
7	**Special Topic: Generative AI**
8	**Privacy and Surveillance** Read: Here-and-Now (Liu) Watch: Arkangel (Black Mirror S4E2)

Other important dates and deadlines from the university can be found here.

Assessment Scheme

40% -- Final Project

	15%*	Final Paper
	20%*	Presentation / Discussion
	2%*	Project Proposal, **due mid Oct**
	3%**	Project Peer Review

30% -- In-class Debate

	5%†	Topic Proposal (share between both teams), **due early Oct**

	15%†	Debate Performance (team-based)
	10%†	Wrap-up Report (team-based)

25% -- Assignments

	16%	Four (4) Written Assignments
	9%	Reflection Activities

5% -- Participation

* Grade is shared with your group (2-4 students per group)
** Grade is shared with your table (4-6 students per table)
† Specific teams TBA (may be based on groups or tables)

Final Project (40%)

You will work in groups of 2-4. You may choose your own groups if you have preferred partners. The project can take a number of forms – you may choose to submit a survey paper that summarizes several papers, you may write an analytical paper that explores the ethical ramifications of an emerging technology, you may review a piece of science fiction literature in depth, or create an original work of fiction that highlights interesting ethical dilemmas.

Your project begins with a Project Proposal (due **mid Oct**), which outlines the nature of your chosen project. Because of the varied nature of the possible projects, this is a chance to clarify with the instructor what constitutes an acceptable final project. The proposal will act as a promise of deliverables in the final product.

During the semester, there is a scheduled session of peer review where you will present your in-progress paper or research to other groups for feedback. This activity is graded based both on your progress so far, and on the quality of feedback you provide for other groups.

The main deliverables for the project will be a final paper and hosted discussion. This discussion period will open with a presentation and will be followed by a guided discussion with the class, or a debate with another group. These discussions take place in the **last weeks of the semester**. If there are too many presentations to be scheduled for in-class presentation, some presentations may be schedule as an outside-of-course-hours session. Works of fiction do not present in class, but instead have a scheduled discussion session with the instructor / TAs during the exam period.

The final paper should incorporate points raised during the discussion, and is **due during the final exam period** (in-place of a scheduled exam). Grades for the discussion and final paper are shared with your group members, but may be adjusted based on group member evaluations (**submitted in Week 12**).

Students working in groups are expected to collaborate and divide the work in an equal and fair manner. A group member evaluation, to be submitted near the end of the term, will determine if group members have been eschewing their responsibilities. If this is the case, a hearing will be conduct with the group, which may lead to grade adjustments.

In-class Debate (30%)

In the second half of the semester, students take turns leading organized debates around topics important to them. Two teams draft a Topic Proposal which outlines a Resolution for debate (ex: "Should AI institutions be banned from pursuing research on Artificial General Intelligence?"), with one team taking the "Pro" position, and the other the "Con" position. The Proposal also outlines preliminary references for research, and ensures debates cover a wide range of topics.

After Topic Proposals are approved, teams will be assigned specific dates to host the debate. The debate takes place within a 30-minute period during class, where teams present and defend their case, using the ethical theory from class. Students from the class will be invited to ask questions to explore their respective positions. The debating teams will be graded based on the thoroughness of their research, soundness of their arguments, and the quality of their presentation and QA.

Assignments (25%)

All four assignments take place in the first half of the term, with smaller writing tasks (Reflections Activities) taking place throughout the term. The specific breakdown may be adjusting during the semester.

Participation (5%)

You will be graded based on your participation in organized activities, your professional conduct within the course, and your contribution to discussions with your peers within the classroom (or in online environments, as applicable). The *modal* participation grade of 3.5/5 reflects regular attendance (a basic expectation of the course) with occasional contributions to in-class discussions in a respectful and thoughtful manner. A higher grade can be earned by engaging extensively with discussions, stimulating interesting discourse, and actively facilitating a collegial and welcoming classroom environment.

Writing and Academic Integrity

This course includes significant written and oral evaluation components. This may be the first time you have written long form prose in some time. Nonetheless, clear and concise written

communication is a valuable skill for computer scientists. All written and oral communications should be **in your own words** (with several clearly marked and referenced quotations).

Marks will be deducted for grammar, spelling, and punctuation errors, and other mangled misuse of language. You are expected to follow academic integrity guidelines, particularly the section on plagiarism. Plagiarism is often *very obvious* to the grader. Don't do it!

Generative AI Tools

The learning objectives of this course can only be accomplished by personal reflection and the assessments in this course are designed to facilitate these outcomes. Therefore, you are discouraged from relying on generative AI tools such as chatbots (e.g., ChatGPT, Google Bard, Bing Chart) and research assistants (e.g., Elicit). You may use them to identify relevant resources and papers. However, you are personally responsible for content submitted for evaluation. As such, all submitted content should be original (in your own words) or properly cited – **you must cite AI tools in every situation** where you have used them with the nature of use; include this as an appendix or separate file in the submission. Keep in mind that output from generative AI tools is not considered an authoritative source. An exception is made for automatic grammar and punctuation checking tools (such as Grammarly), which may be used without citation.

Other academic boilerplate:
If you are unsure of the expectations regarding academic integrity (how to use and cite references, how much collaboration with lab- or classmates is appropriate), ASK your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is considered academic misconduct. You are never permitted to post, share, or upload course materials without explicit permission from your instructor. Academic integrity offences are reported to the office of the Dean of Science. Penalties for such offences can be found on the ODS webpage: https://science.carleton.ca/academic-integrity/*."*

Smart Glasses

Oral presentations and evaluations are considered examination environments and therefore should be carried out without unauthorized electronic aid. Use of Smart Glasses (or other assistive technology that provide real time AI feedback on recorded data) during oral presentations and evaluations is strictly prohibited and is considered an academic integrity violation. Even if you have prescription glasses with assistive technologies, you will not be allowed to use them during these periods, so please ensure you have acceptable prescription glasses. The instructor or TA has the right to ask to inspect your glasses before or during the presentation. In addition, unless authorized with PMC accommodations, you are NOT allowed to use headphones nor ear buds during these times.

Late Policy

Late assignments are **never accepted** for any reason. Assignments submissions are handled electronically (i.e., through Brightspace) and there is no "grace period" with respect to a deadline - an assignment submitted even one minute after the deadline is late and will receive a mark of zero.

Technical problems do not exempt you from this requirement, so if you wait until the last minute and then have issues with your connection, you will still receive a mark of zero. Consequently, you are advised to:

- Periodically upload you progress (e.g. upload your progress at least daily)
- Attempt to submit your final submission at least one hour in advance of the due date and time

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Undergraduate Academic Advisors

The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at scs.ug.advisor@cunet.carleton.ca. The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/tech-support/. Technical support staff may be contacted in-person or virtually, see this page for details: https://carleton.ca/scs/tech-support/contact-it-support/.

University Policies

Academic Accommodations

Carleton is committed to providing academic accessibility for all individuals. Please review the academic accommodation available to students here: https://students.carleton.ca/course-outline/.

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Academic Integrity

Student Academic Integrity Policy. Every student should be familiar with the Carleton University Student Academic Integrity policy. A student found in violation of academic integrity standards may be sanctioned with penalties which range from a reprimand to receiving a grade of F in the course, or even being suspended or expelled from the University. Examples of punishable offences include plagiarism and unauthorized collaboration. Any such reported offences will be reviewed by the office of the Dean of Science. Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy. Claiming ignorance of or confusion about the academic integrity standards as described in the Policy does not excuse a student from responsibility for violations of those standards. More information on this policy may be found on the ODS Academic Integrity page: Academic Integrity | Faculty of Science (carleton.ca).

Plagiarism. As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science. More information and standard sanction guidelines can be found here: https://science.carleton.ca/students/academic-integrity/. Please note that content generated by an unauthorized A.I.-based tool *is* considered plagiarized material.

Unauthorized Collaboration. Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis".