

Department of Computer Science

ECE 9660B - CS 9147B - SS 9940B

Artificial Intelligence and Society: Ethical and Legal Challenges

Course Outline – Spring 2022



| Classes Start | Reading Week | Classes End | Study day(s) | Exam Period |
|---------------|----------------|-------------|--------------|-------------|
| January 3 | February 19–27 | April 1 | April 2–3 | April 4–30 |

* Feb 28, 2022: Last day to drop a second-term half course or a second-term full course without penalty

1. Course Information

Course information

The objective of this course is to introduce students to selected ethical and legal frameworks relevant to artificial intelligence, data science, and big data in the context of its societal, economic, and political applications in contemporary society. The course will be delivered by an interdisciplinary team of academic and industry experts in ethics, law, and artificial intelligence.

Zoom information will be published in OWL. **Recordings of lectures will be made available on the site.**

List of Prerequisites

No specific courses are required. Students are however expected to have previous working knowledge in either analytics, artificial intelligence, data science, or statistical modelling.

2. Instructor Information

| Course Coordinator | Contact Information |
|----------------------|--|
| Michael Barnes, PhD. | michael.barnes@uwo.ca |



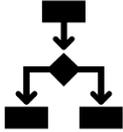
| Office Hours | Location |
|----------------|-----------------|
| TBD | WIRB – Room TBD |
| By appointment | Zoom |

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. I strive to answer all emails within 48 hours.

3. Course Syllabus, Schedule, and Delivery Mode

The topics covered in this module will include:

- Introduction to ethics: basic concepts, definitions and key works
- Ethics of artificial intelligence: key issues
- Introduction to data privacy and data protection regulations
- Emerging legislative and soft law initiatives concerning AI
- Case studies incorporating the above topics



| Type | Mode | Dates | Time | Frequency |
|---------|---|---------|---------------------------------|-----------|
| Seminar | Zoom, in Jan In Person, Feb–Apr (MC 320) | Mondays | 2-hours; times 4:30pm-6:30pm | weekly |

A recording will be provided for synchronous sessions

Contingency plan for an in-person class pivoting to 100% online learning

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

Learning Outcomes

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

1. Explain the meaning and purpose of an ethical theory in the context of Artificial Intelligence.
2. Make use of ethical theory to develop a rigorous, multifaceted understanding of ethical issues in the context of the impacts of Artificial Intelligence.
3. Describe selected national and transnational legal frameworks and codes governing artificial intelligence and its applications.
4. Identify consequences following from the implementation of legal frameworks regarding applications of artificial intelligence in organizations.
5. Explain the workings, usefulness and limitations of current technical solutions to fairness, accountability, transparency, and security problems arising in the application of Artificial Intelligence.
6. Develop solutions to specific ethical conflicts arising from the application of Artificial Intelligence.

Table of Contents and Schedule (tentative; subject to change)



| Week | Dates | Topics |
|---------------------|--------|---|
| 1 | Jan 3 | How to think like an ethicist: introduction to critical thinking and ethical reasoning; why we shouldn't be ethical relativists. (Barnes) |
| 2 | Jan 10 | Selected ethical theories: consequentialism and Kantian ethics; introduction to philosophical approaches to law and regulation. (Barnes) |
| 3 | Jan 17 | Ethical issues in AI: privacy, transparency, explainability. (Barnes) |
| 4 | Jan 24 | Ethical issues in AI: fairness, bias and regulation of AI technologies. (Barnes) |
| 5 | Jan 31 | Introduction to Law and AI: application of general principles and emerging regulatory initiatives. (Martin Petrin, Western Law) |
| 6 | Feb 7 | Data protection and privacy: legal aspects (I). (Aleksander Essex, UWO) |
| READING WEEK | | |
| 7 | Feb 14 | Data protection and privacy: legal aspects (II). (Salah Sharieh, Head of RBC's Technology Transformation Office) |
| 8 | Feb 28 | Guest lecture by Tim Leonard (Spotify) |
| 9 | Mar 7 | Case study 1 (Cristian Bravo Roman, UWO) |
| 10 | Mar 14 | Guest lecture by Matt Ross (Scribd) |
| 11 | Mar 21 | Case study 2 (Lucille D'Souza, V.P. & Associate General Counsel, Innovation & Operations, RBC) |
| 12 | Mar 28 | Class wrap-up and review (Barnes / Petrin) |

(Online) Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Instructors will specify the expected modes and form of participation, including participation during lectures, online discussion forum, or otherwise.

4. Course Materials

Core

Course materials or links to them will be provided on OWL



Additional Reading

Instructors may assign additional reading; a reading list will be available on OWL

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

5. Methods of Evaluation

Reading responses: 20% (Weeks 1-4 only)

Group presentations on case studies: 40%

Take-home exam: 40%

- Reading responses will consist of short (about one-page) responses to the readings, consisting of a quick summary and/or a discussion of aspects of the reading that you agree with, aspects you disagree with, and any issues that you think will require additional clarification. These responses won't be graded individually but in order to receive full marks, you'll have to complete them all satisfactorily.
- The group presentations will be oral presentations (recorded or live, as determined by the instructors) on one of the case studies covered in the course.
- The take-home exam will be a 24-hour take home exam with essay and/or problem questions (word limit: 2,000 words, including footnotes)
- *All assignments* must be completed in order to pass the course.

Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading.

Accommodated Evaluations

- Late assessments without illness self-reports will be subject to a late penalty discount of 10%/day (this means if your coursework gets an 80%, and you submit one day late, your final mark will be $80\% - 10\% = 70\%$). The day late starts at the 00:00 of the day after the deadline posted above.
- Late assessments with illness self-reports should be submitted within 24 hours of submission of the last illness self-report.
- An assessment cannot be submitted after it has been returned to the class. A final, summative assessment will be assigned if the assignment is missed.
- If a make-up assessment is missed, the student will receive an INC and complete the task the next time the course is offered.

Rounding of Marks Statement

We strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. **Final grades** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75.

6. Accommodation and Accessibility

Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The Academic Accommodation for Students with Disabilities policy can be found at:

[https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf)

Academic Consideration for Student Absence

Students will have up to two (2) opportunities during the regular academic year to use an on-line portal to self-report an absence during the semester, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 30% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 30% of the student's final grade,
- if a student has already used the self-reporting portal twice during the academic year

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate if the absence is medical or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs, see:

[https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Consideration for absences.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf)

and for the Student Medical Certificate (SMC), see:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. Additional information is given in the [Western Multicultural Calendar](#).

7. Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

All of the remote learning sessions for this course will be recorded.

The data captured during these recordings may include your image, voice recordings, chat logs and personal identifiers (name displayed on the screen). The recordings will be used for educational purposes related to this course, including evaluations. The recordings may be disclosed to other individuals participating in the course for their private or group study purposes. Please contact the instructor if you have any concerns related to session recordings.

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Completion of this course will require you to have a reliable internet connection and a device that meets the system and technical requirements for Zoom. Information about the system and technical requirements are available at the following link:

<https://support.zoom.us/hc/en-us>

* Please note that Zoom servers are located outside Canada. If you would prefer to use only your first name or a nickname to login to Zoom, please provide this information to the instructor in advance of the test or examination.

Professionalism & Privacy

Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:



- Students are expected to follow online etiquette expectations provided on OWL
- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed
- Students will be expected to take an academic integrity pledge before some assessments
- All recorded sessions will remain within the course site or unlisted if streamed

Copyright Statement

Please be aware that all course materials created by the instructor(s) are copyrighted and cannot be **sold/shared**. Those include materials used in tests/quizzes, midterms, and finals. Any posting/sharing of such materials in part or whole without owner's consent is considered as violation of the Copyright Act and will be considered as a scholastic offence.

In addition, online services such as Chegg are actively monitored. Any questions that are coming out during midterms and finals and are posted to an online service will be searched. Such an activity will be considered as a scholastic offence and will result in academic penalty.

8. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on add/drop courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Student Accessibility Services (SAS) at (519) 661-2147 if you have any questions regarding accommodations.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help. Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.