



AI Everywhere
INT-D 161 - 800 & B2
Winter 2023
(Subject to change until Jan 9th)

Instructors: Adam White and Alona Fyshe
Offices: Adam: Ath 3-07; Alona: Ath 3-54
E-mail: amw8@ualberta.ca; alona@ualberta.ca
Web Page: eClass
Office Hours: Thursdays 5:00 - 6:30 pm both in person (Ath 3-07) and virtually via google meet: URL
There are no office hours on holidays, reading week, or after the last day of classes.
Please reach out via email for an appointment outside of office hours.

Teaching Assistant(s): Samuel Neumann sfneuman@ualberta.ca
Kailash Seshadri kailash@ualberta.ca

Lecture Room & Time: Tuesday & Thursday, 3:30PM - 4:50PM, T B-38. There is also an online section of the course (IND 161 - 800) which does not require in person attendance

Course Description: Artificial Intelligence (AI) Everywhere is a non-technical undergraduate online course focused on giving students a foundational understanding of AI and where it can be applied. Although AI is a technical topic, this course is intended to demystify the field and has no prerequisites. This course will first cover the history of AI and its multidisciplinary beginnings with connections to psychology, animal learning, neuroscience, and computing science. From there students will be introduced to the basic components of modern AI through several case studies. The course will explore the role of data collection and human inputs in a range of systems from classical expert systems, to supervised learning, to reinforcement learning systems that generate their own data by interacting with the world. Throughout, we will use simple terms to discuss the general approaches, successes and failures of AI and machine learning systems, as well as interactions with people, including privacy and our ability to understand machines that learn.

Course Objectives and Expected Learning Outcomes:

Upon successful completion of this course, students will be able to:

- give a definition of intelligence, but also describe why giving such a definition is difficult.
- given a description of the system (e.g. calculator, radio, google maps) identify if AI is part of that system. Identify additional ways how AI might be used as part of that system
- identify risks associated with AI systems when the system's goals are not understood, or are not well aligned with humans
- recognize that computer programs are a way of combining (1) our expert human knowledge and (2) data to make computers do useful things
- describe the key components of a machine learning system
- describe what it means to train and test a machine learning model, and how to evaluate if a model is working.

There are no required textbooks for this course.

Throughout the term students will be provided additional readings from shared documents and online resources

Important Dates: See the current Calendar for the [Academic Schedule, Dates, and Deadlines](#), which include the Registration Add/Drop deadline and Withdrawal date.

Lecture Schedule & Assigned Readings:

See the class schedule on eclass

Grade Evaluation:

** The table below contains an *approximate guideline* for the course, however the instructor reserves the right to adjust this table and assign appropriate grades based on relative performance.**

Distribution of Grades												
Letter grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	F
% Range	≥95	90-94	85-89	80-84	75-79	71-74	67-70	63-66	60-62	55-59	50-54	<50
Grade points	4.0	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0
Descriptor	Excellent			Good			Satisfactory			Poor	Minimal Pass	Fail

Grades are unofficial until approved by the Department and/or Faculty offering the course.

Components of Course Grade:

EXAMS	WEIGHTING	DATE
Assignments 1-9*	40%	See eclass schedule

Mini-essay	10%	Tentatively April 4th, 2024
Final Exam	50%	Tentatively April 22, 2024** @ 9:00 am

* 8 highest marks on the quizzes (5% each) count towards your final grade.

** WARNING: Students must **verify** this date on BearTracks when the Final Exam Schedule is posted.

Final exam will be in person. Students in the online section can choose an online exam.

Late Policy: the following deduction schedule applies to all submitted assessments (assignments and mini-essay):

- On time: no deductions
- 1 day late: 25% deduction
- 2 days late: 50% deduction
- 3 days late: 75% deduction
- >= 4 days late: 100% deduction (i.e., automatic grade of zero)

Re-examination: A student who writes the final examination and fails the course may apply for a re-examination. Re-examinations are rarely granted and are governed by [University Regulations](#) and Faculty Regulations (see Calendar information on Academic Standing for [Faculty of Science](#)). Misrepresentation of Facts to gain a re-examination is a serious breach of the *Code of Student Behaviour*."

Spot-checking assessments: for any submitted assessment (assignments and mini-essay) the instructors may call on you in-person or over video chat to explain your answers. The instructor may adjust your grades depending on your ability to explain your own answer.

Format of Tests and Exams:

All course evaluations (i.e. tests) involve written answers and multiple choice questions.

The final exam will contain:

- Several definitions and/or short-response questions.
- Multiple choice questions

The almost-weekly assignments are designed to keep students up-to-date with the required readings and lecture content. They will include:

- Short answer question(s) including definitions
- Multiple choice questions

The question(s) will be about lecture content, and online rise content (see eclass schedule for the readings and slides associated with each assignment).

Attendance to lecture: In person attendance is not required. After every lecture the slides presented in person and a recording of the lecture will be uploaded to eclass. **Lecture will not be live streamed.**

Representative Evaluative Material:

A practice exam will be shared with the class and discussed during the review lecture. Unfortunately, since this is the first offering of the course there are no past exams to share.

Missed Term Exams and Assignments:

For an excused absence where the cause is religious belief, a student must contact the instructor(s) within two weeks of the start of Fall or Winter classes to request accommodation for the term (including the final exam, where relevant). Instructors may request adequate documentation to substantiate the student request.

A student who cannot write a term test or complete a term assignment due to incapacitating illness, severe domestic affliction or other compelling reasons must contact the instructor via email within 48 hours of missed term test or quiz to apply for a deferred midterm examination, deferral of the weight of the missed quiz, and/or the final exam. In all cases, instructors may request adequate documentation to substantiate the reason for the absence at their discretion.

Note: Transferring the weight of missed work to the final exam could result in the student not being approved for a deferred final examination, as they may not have completed the required 50% of term work.

In all cases, instructors may request adequate documentation to substantiate the reason for the absence, at their discretion.

Deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Misrepresentation of Facts to gain a deferral is a serious breach of the *Code of Student Behaviour*.

Deferred Final Examination: A student who cannot write the final examination due to incapacitating illness, severe domestic affliction or other compelling reasons can apply to their Faculty for a deferred final examination. Students who failed at the start of term to request exam accommodations for religious beliefs are expected to follow the normal deferred final examination process. Such an application must be made to the student's Faculty office (Faculty of Science: advisor.science@ualberta.ca; Faculty of Arts: arts.undergrad@ualberta.ca) within **two** working days of the missed examination and must be supported by appropriate documentation or a Statutory Declaration (see Calendar for information on [Attendance](#)). Deferred examinations are a privilege and not a right; there is no guarantee that a deferred examination will be granted. Misrepresentation of Facts to gain a deferred examination is a serious breach of the *Code of Student Behaviour*.

The deferred final is May 1st 2024, 9:00 am.

STUDENT RESPONSIBILITIES:

Guidelines for Respectful Engagement:

Students from many different backgrounds participate in courses at the University of Alberta. Sexist, racist, homophobic comments and other inflammatory remarks are not conducive to learning in our courses, and are absolutely not permitted. All participants are governed by the [Code of Student Behaviour](#). Be mindful when discussions involve controversial topics or issues, and consider the possibility that members of our community have themselves experienced some of these issues and/or very different realities because of these issues. Participate in a respectful and considerate manner.

If you are witness to or the target of abusive or offensive behaviour in any course, please inform your instructor immediately. You may also contact the Psychology Undergraduate/Graduate Advisor, Associate Chair of Undergraduate/Graduate, or Chair.

Academic Integrity: The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the [Code of Student Behaviour](#) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should consult the [Academic Integrity website](#) for clarification on the various offences. If you have any questions, ask your instructor. All forms of dishonesty are unacceptable at the University. Any offence will be reported to the Associate Dean of the Faculty, who will determine the disciplinary action to be taken (please refer to the [Academic Discipline Process](#).) Typical sanctions include conduct probation, a mark reduction, a mark of zero on an assessment, a grade reduction, a grade of F in a course, a remark on the transcript, and/or a recommendation for suspension or expulsion from the University of Alberta.

Exams: Students should refer to the Calendar information on [Conduct of Exams](#) for more information.

Recording and/or Distribution of Course Materials: Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

STUDENT RESOURCES:

COVID-19 Information: Updates pertaining to university-related activities can be found on the [COVID-19 Information](#) website

Student Services and Resources: General information about various student services, including academic, financial, health and wellness, safety, and career development, can be found on the website for [Current Students](#). Additional information can be found on the [Campus Life](#) website.

Academic Success Centre (1-80 SUB): The [Academic Success Centre](#) provides professional academic support to help students strengthen their academic skills and achieve their academic goals. Individual advising, appointments, and group workshops are available year round in the areas of Accessibility, Communication, Learning, and Writing Resources. Modest fees apply for some services.

Academic Success Centre – Accommodation Services (1 – 80 SUB): The University of Alberta is committed to creating work and learning communities that inspire and enable all people to reach their full potential. The Academic Success Centre's Accommodation Services promotes an accessible, inclusive, and universally designed environment. For general information to register for services, visit the [Academic Accommodations](#) website. Eligible students have both rights and responsibilities with regard to accessibility-related accommodations. Consequently, scheduling exam accommodations in accordance with Accommodation Services' deadlines and procedures is essential, and adherence to procedures and deadlines is required for U of A to provide accommodations. Please visit the [Accommodation Processes and Responsibilities](#) website for further information.

Office of Universal Design and Accessibility Facilitation: In cases of temporary conditions that hamper a student's ability to complete an assignment or write an exam (e.g., broken arm), the Office of Universal Design and Accessibility Facilitation can help determine what temporary accommodations are required. To request assistance in such cases, please email the Dean of Students Office at doshelp@ualberta.ca.

The Centre for Writers (1-42 Assiniboia Hall): The [Centre for Writers](#) offers free one-on-one writing support to students, faculty, and staff. Students can request consultation for a writing project at any stage of development. Instructors can request class visits and presentations.

Office of Safe Disclosure and Human Rights: [The Office of Safe Disclosure and Human Rights \(OSDHR\)](#) provides confidential disclosure services as well as advising and consulting on any issue relating to Human Rights, Discrimination, Harassment, and Accommodation issues. There are several ways to contact them, including anonymous options.

First Peoples' House: [The First Peoples' House](#) provides an environment of empowerment for First Nations, Métis, and Inuit learners to achieve personal and academic growth.

Health and Wellness Support: There are many health and community services available to current students. For more information, visit the [Health and Wellness Support for Students](#) website.

Feeling Stressed, Anxious, or Upset? It is normal for us to have different mental health experiences throughout the year, particularly as we adjust to returning to campus as we move through a pandemic. Know that there are people who want to help. You can reach out to your friends and access a variety of supports available on and off campus at the [Need Help Now](#) webpage or by calling the 24-hour Distress Line: 780-482-4357 (HELP).

Office of the Student Ombuds: The [Office of the Student Ombuds](#) offers confidential interviews, advice and support to students facing academic, discipline, interpersonal and financial difficulties.

LEARNING AND WORKING ENVIRONMENT

The University of Alberta is committed to ensuring that all students, faculty, and staff are able to work and study in an environment that is safe and free from discrimination, harassment, and violence of any kind. It does not tolerate behaviour that undermines that environment. This includes virtual environments and platforms.

The University of Alberta acknowledges that we are located on Treaty 6 territory, and respects the histories, languages, and cultures of the First Nations, Métis, Inuit, and all First Peoples of Canada, whose presence continues to enrich our vibrant community.

Policy about course outlines can be found in the [Evaluation Procedures and Grading System](#) section of the University Calendar.

Disclaimer: Any typographical errors in this syllabus are subject to change and will be announced in class and/or posted on the course website (e.g., eClass). The date of the final examination is set by the Registrar and takes precedence over the final examination date reported in this syllabus.

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