UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Computer Science

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CPSC 383 - EXPLORATIONS IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING - FALL 2025

COURSE OUTLINE

The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which include the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta (Districts 5 and 6).

A. Course Information

1. **Course Coordinator(s)**

   Not Applicable

2. **Lecture Section(s)**

   Lecture 01 : MWF 10:00 - 10:50 in BI 186

Instructor	Email	Phone	Office	Student/Office Hours
Dr. Jonathan Hudson	jwhudson@ucalgary.ca	N/A	ICT 712	MW 11:00 - 11:50

3. **Lab and Tutorial Sections**

Tut 01 TR 09:00 - 09:50 in MS 239	Tut 02 TR 10:00 - 10:50 in MS 239	Tut 03 TR 16:00 - 16:50 in MS 239
Tut 04 TR 12:00 - 12:50 in MS 239	Tut 05 TR 13:00 - 13:50 in MS 239	Tut 06 TR 14:00 - 14:50 in MS 239

4. **Scheduled Out-Of-Class Activities**

   There are no scheduled out of class activities for this course.

5. **Additional Course Delivery Details**

   No course textbooks need to be bought. Content can be found in course slides or open textbook resources.

   The instructors will hold office hours (noted earlier in outline). Students should attend these for questions about course material.

6. **Course Site & Materials**

   Course Website: https://cspages.ucalgary.ca/~jwhudson/CPSC383F25/

   D2L: CPSC 383 L01-(Fall 2025)-Explorations in Artificial Intelligence and Machine Learning

   Technology:

   In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:
   - A computer with a supported operating system, as well as the latest security, and malware updates;
   - A current and updated web browser;
   - Webcam/Camera (built-in or external);
   - Microphone and speaker (built-in or external), or headset with microphone;
   - Current antivirus and/or firewall software enabled;
   - Stable internet connection.

   For more information please refer to the UofC ELearning online website.

   Lecture slides and assignments will be posted on course website. Other support materials (like tutorial worksheets) will be posted in D2L.

   D2L will be used primarily for sensitive content like assignment/reflection submissions and returning/viewing of grades.

7. **Approved Mandatory & Optional Course Supplemental Fees**

   There are no mandatory or optional course supplemental fees for this course.

8. **Requisites**

See section 3.5.C in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Computer Science 217 or Computer Science 231.

9. **Course Learning Outcomes**

B. **Assessment and Evaluation Information**

1. **Assessment Components**

The University policy on grading and related matters is described in F.1and F.2 of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Component	Weight	Due Date	Modality	Location
Quizzes (D2L) [1]	15%	Ongoing		
Participations (tutorial) [2]	15%	Ongoing		
Discussion/Reflection 1 [3]	7%	Oct 03 2025		
Assignment 1 [4]	15%	Oct 03 2025		
Discussion/Reflection 2 [5]	9%	Oct 31 2025		
Assignment 2 [6]	15%	Nov 07 2025		
Discussion/Reflection 3 [7]	9%	Dec 05 2025		
Assignment 3 [8]	15%	Dec 05 2025		

[1] There will be 6 quiz collection dates (best 5 of 6 used). These timed assessments will be available on D2L on the six Fridays indicated in the posted course schedule. Each assessment will be available for 24 hours. You will have 15-30min (depending on the quiz) to complete and submit it. Planned dates Sep. 12, Sep. 26, Oct. 10, Oct. 24, Nov. 7, and Nov. 28

[2] There will be 9 participation collection dates (best 8 of 9 used). These assessments will occur weekly in tutorials through-out the semester.

[3] In-class discussion to be held on Sep 26th. with submission of corresponding reflection to D2L by Oct 3rd.

[4] Individual assessment. Submitted via the D2L dropbox.

[5] In-class discussion to be held on Oct 24th. with submission of corresponding reflection to D2L by Oct 31st.

[6] Small team project based on components from Assignments 1 and additional skills. There will be a competitive component for bonus marks with best teams presenting strategies attempted later in term. Submitted via the D2L dropbox.

[7] In-class discussion to be held on Nov 28th. with submission of corresponding reflection to D2L by Dec 5th.

[8] Individual assessment. Submitted via the D2L dropbox.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

2. **Assessment & Grading**

Reappraisal of Graded Term Work and Final Grades:

See Section I of the University Calendar and https://science.ucalgary.ca/current-students/undergraduate/program-advising/grade-reappraisals-and-appeals .

3. **Examination Policy**

There will be six online quizzes in D2L. These are individual assessments and open book.

Two of the three assignments are individual work. One will be a small group assignment which will involve internal group collaboration but not collaboration with other groups.

Reflections are completed in-person in tutorial sometimes in either an individualized or group setting.

Reflections include group discussions completed in-person in lecture.

The instructor will use an automated code similarity detection system on assignments.

All instances where breaches of academic integrity are suspected or alleged will be investigated and reported to the Faculty of Science.

See also of the Calendar, on Academic Assessments and Examinations.

4. **Missed Components of Term Work**

Quizzes will have a hard deadline with no extensions in D2L. Only the best 5 of 6 **quiz** submissions for each will be used towards the final grade, so the first missed **quiz** will immediately become the lowest grade of 6 and dropped in the grade calculation.

Participations are in-tutorial worksheets that will require attendance recorded in tutorials for credit. Late submissions will receive a grade of 0. Only the best 11 of 12 **participation** submissions for each will be used towards the final grade, so the first missed will immediately become the lowest grade of 12 and dropped in the grade calculation.

For late individual **assignments**, those submitted within 24 hours of the initial deadline will receive 10% off, and within 48 hours will receive 20% off. After 48 hours, no late **assignments** will otherwise be accepted.

Reflections require in-person attendance on a specified lecture day for a discussion. Missing the in-person discussion will result in getting no marks for the **reflection**.

Any requests around deadline issues should come the Friday a week before the deadline. Later emergency long-term requests will be reviewed on a case-by-case basis by the instructor. Students will be required to provide evidence such as through the FoS missed term work form, office hours, or by email. Any documentation collected will be handled according to university policies and regulations around its collection.

See also Sections and of the Calendar, on Absence from In Course Assessments and Supporting Documentation for Absences.

5. **Letter Grade Conversion**

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	98 %	93 %	88 %	83%	78%	73 %	68 %	63%	58%	53 %	48 %

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: https://science.ucalgary.ca/current-students/undergraduate/program-advising/undergraduate-processes

C. **Course Policies & Procedures**

1. **Equity Diversity & Inclusion**

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Course Communication**

Students must use their U of C account for all course correspondence.

Students must use their U of C account for all course correspondence (university email filters flag many email addresses outside of the ucalgary.ca email network as spam)

Course communication policy: An optional community discussion platform will be used for the semester (Discord). You are not required to participate and no information or assessment will occur using the platform. We will reply to the discussion board, post notices, and send emails between 8:30am-4:30pm on Monday-Friday. We will do our best to read and respond to posts/emails within 24 hours Monday-Friday, and those received during the weekend by the end of the following Monday. If you do not receive a response within this time frame, please follow up in email (sometimes emails or discussion posts are lost in spam filters or mistakenly overlooked!).

3. **Academic Integrity and Misconduct**

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

Student Handbook on Academic Integrity
Policy and Procedure for Student Academic Misconduct
Faculty of Science Academic Misconduct Process

Additional information is available on the Student Success Centre Academic Integrity page

4. **Acceptable & Prohibited Tools and Resources**

For **assignments** limited use of generative AI in writing assistance is acceptable. For example, grammar suggestion, or code suggestion tools for programming. Programming or text that is largely generative AI produced is not allowed. Learners are ultimately accountable for the work they submit. Use of AI tools must be documented in an appendix for the assignment. The documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work. Failure to cite the use of AI generated content in an **assignment** will be considered a breach of academic integrity and subject to Academic Misconduct procedures.

For **reflections** limited use of generative AI in writing assistance is acceptable. For example, grammar suggestion. The requested **reflections'** contents will require specific references to in-class participation and students prior submitted draft. Over use of generative AI will produce inconsistent and incorrect statements will be punished strongly in the grading document as this is a core requirement in its assessment. Learners are ultimately accountable for the work they submit. Use of AI tools must be documented in an appendix for the reflection document. The documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work. Failure to cite the use of AI generated content in **reflections** will be considered a breach of academic integrity and subject to Academic Misconduct procedures.

Students may not use generative AI to complete their **tutorial worksheets** unless explicitly instructed to do so.

5. **Writing Across the Curriculum**

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, members of faculty can and should use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Support , part of the Student Success Centre, can be utilized by all undergraduate and graduate students who feel they require further assistance. See also Section E.2 of the University Calendar.

6. **Academic Accommodations**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Accommodation in Academic Courses Form and sending by email to science@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

7. **Instructor Intellectual Property.**

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy) and requirements of the copyright act (laws-lois.justice.gc.ca/eng/acts/C-42/index.html) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

8. **Recording of Lecture**

Audio recording of lectures, other than where an audio recording is an accommodation, shall be permitted for individual private study only at the discretion of the instructor. For any other use, whether by duplication, transcription, publication, sale or transfer of recordings, written approval must be obtained from the instructor for the specific use proposed. Any use other than that described above constitutes academic misconduct and may result in suspension or expulsion. For more information, see Section E.6 Recording of Lectures of the University Calendar.

9. **Freedom of Information & Privacy**

This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see Legal Services website.

10. **Human & Living Organism Studies Statements**

Students will not participate as subjects or researchers in human studies.

See also of the University Calendar.

D. **Copyright Legislation**

All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

E. **Support & Resources**

Student well-being and safety resources that are not course-specific can be found on the Office of the Registrar's website: https://www.ucalgary.ca/registrar/registration/course-outlines

F. **Addendum**

Course Learning Outcomes:

1. **Definitions**: Define simple artificial intelligence and machine learning terms.

2. **Areas**: Identify common areas of artificial intelligence and where they occur in computing contexts.

3. **History**: Identify important eras and dates from artificial intelligence and machine learning and describetheir characteristics and impact.

4. **Create**: Implement simple deployments of artificial intelligence solutions using existing technologies to solve fundamental computing problems.

5. **Compare**: Compare and contrast the capabilities of different solutions from different areas of artificial intelligence.

6. **Reflect**: Reflect on current societal, ethical, and legal considerations related to artificial intelligence.

7. **Future**: Recognize and discuss developing research areas in artificial intelligence.

Electronically Approved - Aug 06 2025 12:57

Department Approval