UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Computer Science
ICT 602
403 220-6015
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COURSE OUTLINE

1. **Course:** CPSC 383, Explorations in Artificial Intelligence and Machine Learning - Fall 2024

Lecture 01 : MWF 10:00 - 10:50 in MS 211

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

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 or the course project.

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

Lectures are in person and present high-level course material. There are two lectures in which in-class participation will be a mandatory portion of each of the two discussion/reflection assessments. Students should make sure to check the scheduled date to ensure in-person attendance on that date.

Tutorials are in person and present applied course material assignment assessments as well as chances to get help from teaching assistants.

There is no midterm or final exam.

There are 6 quizzes which will be available to attempt during a 24-hours window on the Fridays indicated on the course schedule. Students will need to ensure they have access to internet and D2L to complete these. The 6 participation deliverables and assignments must be submitted via D2L by the indicated deadlines.

There is no attendance component for lectures or tutorials outside the two discussion dates mentioned prior.

In the event of an absence from a lecture, you do not need to notify the course instructor. Please review the posted lecture slides and attend office hours to discuss any questions you have on the material missed. Attempts will be made to broadcast and record live lectures via Zoom, but no guarantees are made that the audio or video will be working every week. The instructors reserve the right to take down any recordings that may end up containing private information.

In the event of an absence from a lecture, you do not need to notify the TA. You can inquire as to what material was covered if you have questions.

Course Site:

D2L: CPSC 383 L01-(Fall 2024)-Explorations in Artificial Intelligence and Machine Learning

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

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!).

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. **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.

3. **Grading:**

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

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

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Quizzes (D2L)[1]	15%	Ongoing		
Participations (D2L)[2]	15%	Ongoing		
Discussion/Reflection 1[3]	12.5%	Ongoing		
Discussion/Reflection 2[4]	12.5%	Ongoing		
Assignment 1[5]	15%	Oct 04 2024		
Assignment 2[6]	15%	Nov 01 2024		
Assignment 3[7]	15%	Nov 29 2024		

[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 Sept. 20, Oct. 4, Oct. 18, Nov. 1, Nov. 22, and Dec. 6

[2] There will be 6 participation collection dates (top 5 of 6 used). These assessments are not timed but have due dates in D2L, like assignments. Planned due dates are Sept. 13, Sept. 27, Oct. 11, Oct. 25, Nov. 8, and Nov. 29

[3] In-class discussion to be held on Oct. 11, with submission of corresponding reflection to D2L by Oct. 18.

[4] In-class discussion to be held on Nov. 4, with submission of corresponding reflection to D2L by Nov. 11.

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

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

[7] Small team project based on components from Assignments 1 and 2 with additional skills. There will be a competitive component for bonus marks with best teams presenting strategies attempted in final week of class. 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.

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	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

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

4. **Missed Components Of Term Work:**

Students who are absent from an in-course assessment or who miss a deadline to submit course work are responsible for understanding and following the recommended steps provided in this Course Outline, and in the event of unexpected circumstances, contacting their course instructor to determine the impact of the missed assessment. At the discretion of the course instructor, alternative arrangements may be considered for missed components of term work, as described in Section G2.3 Absence from In-Course Assessments of the Calendar. For additional information and resources on the steps you can take in the event of unexpected circumstances interrupting your studies, see the website link in Section M.1 of the Calendar.

The course instructor may ask for supporting documentation to confirm an absence. For information on supporting documentation that you can provide, see Section M.1 Supporting Documentation for Absences of the Calendar.

In the event that an alternative arrangement is denied by the course instructor, students can email science@ucalgary.ca to discuss the matter further with an Associate Dean.

Quizzes and participation submissions will have a hard deadline in D2L. Late submissions will receive a grade of 0. Only the best 5 of 6 submissions for each will be used towards the final grade, so the first missed will immediately become the lowest grade of 6

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 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 that portion of the reflection rubric.

Any request for an altered deadline should come the Friday a week before the assignment 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.

5. **Scheduled Out-of-Class Activities:**

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

6. **Course Materials:**

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.

7. **Academic Assessment & 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. 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 the reflection limited use of generative AI in writing assistance is acceptable. For example, grammar suggestion. The requested reflection content 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 proposal. 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 the proposal will be considered a breach of academic integrity and subject to Academic Misconduct procedures.

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

8. **Approved Mandatory And Optional Course Supplemental Fees:**

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

9. **Writing Across The Curriculum Statement:**

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.

10. **Human Studies Statement:**

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

See also Section E.5 of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I of the University Calendar.

   a. **Term Work:** The student should present their rationale a s effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the **Reappraisal of Graded Term work form**, found on the Grade Reappraisals & Appeals web presence to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See Sections I.1 and I.2 of the Calendar and https://science.ucalgary.ca/current-students/undergraduate/program-advising/grade-reappraisals-and-appeals

   b. **Final Exam:** student seeking a reappraisal of a final grade should first attempt to review the final grade with the d epartment or faculty offering the course. After which, if the student wishes to initiate a formal grade reappraisal, they should refer to ucalgary.ca/registrar/student-centre/grades for more information. The student must indicate exactly what error was made in marking the final assessment and/or in computing the final grade. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See Section I.3 Reappraisal of Final Grades of the University Calendar.

12. **Other Important Information For Students:**

   a. **Wellness and Mental Health Resources** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

   b. **Student Wellness Services:** For more information, see their website or call 403-210-9355.

   c. **Student Success:** The Student Success Centre provides services and programs to ensure students can make the most of their time at the University of Calgary. Our advisors, learning support staff, and writing support staff assist students in enhancing their skills and achieving their academic goals. They provide tailored learning support and advising programs, as well as one-on-one services, free of charge to all undergraduate and graduate students. For more information visit: https://www.ucalgary.ca/student-services/student-success

   d. **Student Ombuds Office:** The Student Ombuds Office supports and provides a safe, neutral space for students. For more information, please visit www.ucalgary.ca/ombuds/ or email ombuds@ucalgary.ca

   e. **Student Union (SU) Information:** The SU Vice-President Academic can be reached at (403) 220-3911 or suvpaca@ucalgary.ca; Information about the SU, including elected Faculty Representatives, can be found here: https://www.su.ucalgary.ca. Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca.

   f. **Academic Accommodation Policy:**

   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.

g. **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
   Student Academic Misconduct Policy and Procedure
   Faculty of Science Academic Misconduct Process
   Research Integrity Policy

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

h. **Copyright Legislation:** 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.

i. **Copyright of Course Materials:** 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.

j. **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.

k. **Freedom of Information and 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.

l. **Surveys:** At the University of Calgary, feedback through the UCalgary Course Experience Survey provide valuable information to help instructors and programs evaluate the student experience. Your responses make a difference and facilitate instructors in improving the learning and teaching experience offered in our courses. For more information, please visit https://www.ucalgary.ca/provost/teaching-learning/student-surveys.

m. **Emergency Evacuation/Assembly Points:** Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees; from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website: https://www.ucalgary.ca/risk/emergency-management/evac-drills-assembly-points/assembly-points

n. **Safewalk:** Campus security will escort individuals, day or night, anywhere on campus (including McMahon Stadium, Health Sciences Centre, Student Family Housing, the Alberta Children's Hospital and the University LRT station). Call 403-220-5333 or visit https://www.ucalgary.ca/security/safewalk. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths. Please ensure your personal safety by taking advantage of this service.

o. **Campus Supports & Resources:** A link to required information that is not course-specific related to student wellness and safety resources, can be found on the Office of the Registrar's website: https://www.ucalgary.ca/registrar/registration/course-outlines

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 describe their 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 27 2024 08:58

Department Approval