

### COURSE INFORMATION

Course title:	AI Commercialization	Credits:	1.5
Course code:	BAIT 515	Class location:	HA 132
Session, term, period:	2021W, Period 5	Class times:	Tuesdays, 6:00-9:30pm
Section(s):	001	Pre-requisites:	n/a
Course duration:	Nov 1 – Dec 11, 2021	Co-requisites:	n/a
Division:	Accounting and Information Systems		
Program:	FTMBA		

### INSTRUCTOR INFORMATION

Instructor:	Olivia Norton	Office location:	Online
Phone:	Contact by Email	Office hours:	By appointment
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### COURSE DESCRIPTION

Artificial Intelligence (AI) is demonstrating itself to be a powerful tool within existing businesses and industries as well as a gateway allowing for the creation of as yet unimagined products and services in brand new types of businesses and industries.

This course is an introduction to fundamentals and tools required to develop and commercialize a new AI product or service. We take a strategic approach, introducing concepts and technologies to a level of detail that lets you, as future leaders in this space, build and work with a team to design, deploy and scale AI systems.

During this course, in addition to gaining familiarity with key technologies, we cover the ethics and implications of AI, the regulatory and policy landscape, security and privacy, supporting cloud infrastructure as well as the talent acquisition and investment strategies. As global leaders in AI, where possible we root discussions in the BC and Canadian technology ecosystems.

The final group project is to propose a new, high impact AI project for an existing business.

### COURSE FORMAT

This course is in person, with class time used for discussion, in-class exercises, cases, group work with some lecture and guest speakers.

### LEARNING OBJECTIVES

At the end of this course, students should be able to

- Describe the basic concepts and key technologies in AI
- Describe the roles required in an AI commercialization effort
- Differentiate various types of AI-enabled business applications
- Formulate business projects in the AI context
- Recommend AI techniques and technologies for formulated business problems
- Critically evaluate the privacy, security, and ethical issues related to the use of AI
- Describe and leverage the breadth and network of the local AI ecosystem

## ASSESSMENTS

### Summary

<u>Component</u>	<u>Weight</u>
Assignments	20%
Group project	45%
Quizzes	20%
Class participation	15%
Total	<u>100%</u>

### Details of Assessments

#### Quizzes (20%)

Required and recommended reading material will be provided on Canvas for each class. Students will be asked to complete quizzes covering the required reading material online before each session. These quizzes will be completed individually and must be submitted electronically via UBC Canvas by the due date and time specified by the instructor. Late submission will receive a score of zero (no exceptions).

#### Assignments (20%)

Students will be given 2 assignments, which involve a short, structured research project on a company of their choosing. Details, including submission guidelines, will be posted on the course website. These assignments will be completed individually. All the work (report/references) should be submitted electronically via UBC Canvas (not email attachment) by the due date and time specified by the instructor. Late submission will receive a score of zero (no exceptions).

#### Group Project (45%)

Teams will be provided with a company profile and will be asked to select and develop one of several opportunities for the commercialization of an AI tool/product using the concepts covered in class. Details, including submission guidelines, will be posted on the course website. The class will be divided into groups of four or five, self-organized by the students. The high level evaluation criteria will be (1) innovativeness, (2) feasibility, (3) critical policy impacts, (4) ethical evaluation and (5) presentation. iPeer will be used for peer evaluation of each group members' contribution to the project. See Course Policies and Resources for more detail on the iPeer evaluation.

Teams will be required to submit 3 deliverables:

- Project Outline: 10%
- Final Project Report - 20%
- Final Presentation - Video Submission - 15%

#### Class Participation (15%)

Students will be expected to bring their experience and knowledge to share with the class, contributing to the learning of their classmates. High quality contributions are expected.

#### Grading Scale for Class Participation:

- 0 – Absent or late to class, or student video not on during Zoom sessions.
- 5 - Present but does not participate.

- 6 - Participates with basic information such as case facts.
- 7 – Offers an opinion or asks/answers a basic question.
- 8 – Engages in a meaningful discussion with other members of the class.
- 9 – Shares an analysis using data or evidence from the case or reading.
- 10 – Provides insight or asks a question that is instrumental in advancing understanding.

Attendance is mandatory for all lectures. If a student misses a class, the student is responsible for the materials covered. Contribution will be noted class by class.

### LEARNING MATERIALS

All reading, cases, and notes and any other material will be available on the course webpage on Canvas.

### COURSE-SPECIFIC POLICIES AND RESOURCES

#### *Missed or late assignments, and regrading of assessments*

Late submissions will not be accepted and will receive a grade of zero.

#### *Academic Concessions*

If extenuating circumstances arise, please contact the RHL Graduate School program office as early as reasonably possible, and submit an [Academic Concession Request & Declaration Form](#). If an academic concession is granted during the course, the student will be provided options by RHL, or by the instructor in consultation with RHL, per [UBC's policy on Academic Concession](#).

#### *Other Course Policies and Resources*

Students who are late to join the class will be required to do all missed assignments within one week of class signup.

iPeer will be used for peer evaluation of team deliverables. Students will evaluate and be evaluated by their team members anonymously. Downward grade adjustments will be applied to students who receive a score of 1 (Problematic) or 2 (insufficient) on any criterion by more than one team member. Final grades in this case will be computed as the team score, multiplied by the average peer score. For instance, if a student receives an average peer score of 78%, and that students team received a team score of 83%, then the student would receive a score of  $78\% \times 82\% = 64\%$ .

### POLICIES APPLICABLE TO COURSES IN THE ROBERT H. LEE GRADUATE SCHOOL

#### *Attendance*

Excepting extenuating circumstances, students are expected to attend 100% of their scheduled class hours. Absent students limit their own academic potential, and that of their classmates, and cause unnecessary disruption to the learning environment. Students missing more than 20% of the total scheduled class hours for a course (including classes held during the add/drop period) without having received an academic concession will be withdrawn from that course. Withdrawals, depending on timing, could result in a "W" or an "F" standing on the transcript.

*COVID-19 Policies for Attendance & Academic Concessions:*

If a student feels unwell, they should stay home and send a courtesy email to each impacted instructor and cc their program manager. The student should also submit an [Academic Concession Request & Declaration Form](#).

If a student suspects possible COVID-19 infection, they should use the BC Ministry of Health's [self-assessment tool](#), to help determine whether further assessment or testing for COVID-19 is recommended.

If a student is required to self-isolate (e.g., while waiting for test results), they should follow the steps above (stay home, email instructor(s) and program manager, submit an [Academic Concession Request & Declaration Form](#), and follow BC Health Guidance.

Students who are required to quarantine, should get in touch with their Program Manager to discuss the possibility of academic concessions for each impacted course. The Program Manager will work closely with your instructors to explore options for you to make up the missed learning.

*COVID-19 Safety in the Classroom:*

**Masks:** Masks are **required** for all indoor classes, as per the BC Public Health Officer orders. For our in-person meetings in this class, it is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. For the purposes of this order, the term "masks" refers to medical and non-medical masks that cover our noses and mouths. Masks are a primary tool to make it harder for COVID-19 to find a new host. You will need to wear a medical or non-medical mask for the duration of our class meetings, for your own protection, and the safety and comfort of everyone else in the class. You may be asked to remove your mask briefly for an ID check for an exam, but otherwise, your mask should cover your nose and mouth. Please do not eat in class. If you need to drink water/coffee/tea/etc., please keep your mask on between sips. Students who need special accommodation are asked to discuss this with the program office.

**Seating in class:** To reduce the risk of COVID-19 transmission, please sit in a consistent area of the classroom each day. This will minimize your contacts and will still allow for the pedagogical methods planned for this class to help your learning.

Visit the following website for the most recent updates regarding COVID-19 protocol on campus: <https://students.ubc.ca/campus-life/returning-to-campus>

*Punctuality*

Students are expected to arrive for classes and activities on time and fully prepared to engage. Late arrivals may be refused entry at the discretion of the instructor or activity lead. Students arriving later than halfway through a scheduled class will be treated as absent for that class.

*Electronic Devices*

Devices such as laptops, tablets, and cell phones are not permitted to be used in class unless directed by the instructor for in-class activities. Students who do not follow the School's policy in this regard may be required to leave the room for the remainder of the class, so that they do not distract others. Research

shows that students' use of laptops in class has negative implications for the learning environment, including reducing their own grades and the grades of those sitting around them.

### *Citation Style*

Please use the American Psychological Association (APA) reference style to cite your sources.

Details of the above policies and other RHL Policies are available at:

<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,199,506,1625>

### UNIVERSITY POLICIES AND RESOURCES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website at <https://senate.ubc.ca/policies-resources-support-student-success>.

### *Respect for Equity, Diversity, and Inclusion*

The UBC Sauder School of Business strives to promote an intellectual community that is enhanced by diversity along various dimensions including status as a First Nation, Metis, Inuit, or Indigenous person, race, ethnicity, gender identity, sexual orientation, religion, political beliefs, social class, and/or disability. It is critical that students from diverse backgrounds and perspectives be valued in and well-served by their courses. Furthermore, the diversity that students bring to the classroom should be viewed as a resource, benefit, and source of strength for your learning experience. It is expected that all students and members of our community conduct themselves with empathy and respect for others.

### *Academic Integrity*

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

### COPYRIGHT

All materials of this course (course handouts, lecture slides, assessments, course readings, etc.) are the intellectual property of the instructor or licensed to be used in this course by the copyright owner. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline and could be subject to legal

action. Any lecture recordings are for the sole use of the instructor and students enrolled in the class. In no case may the lecture recording or part of the recording be used by students for any other purpose, either personal or commercial. Further, audio or video recording of classes are not permitted without the prior consent of the instructor. Students may not share class Zoom links or invite others who are not registered to view sessions.

### ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the x<sup>w</sup>məθk<sup>w</sup>əyəm (Musqueam) people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

### COURSE SCHEDULE

(Subject to change with class consultation)

Class	Date	CLASS TOPICS	Deliverables
Week 1	November 2, 2021	Introduction to Artificial Intelligence, History of AI, Local Landscape  Technology Overview	Pre-Reading Quiz  Prepared for discussion of reading material  <b>Group Project Assigned</b>
Week 2	November 9, 2021	Application: Prediction, Anomaly Detection and Decision Making  Applied Ethics of AI	Pre-Reading Quiz  Prepared for discussion of reading material  <b>Assignment #1 (Due at the start of Class)</b>
Week 3	November 16, 2021	Application: Recommendation and Personalization  Security and Privacy	Pre-Reading Quiz  Prepared for discussion of reading material  <b>Group Project Outline (Due at the start of Class)</b>
Week 4	November 23, 2021	Application: Perception, Conversational AI, Language Models  Commercial AI Infrastructure: Cloud and Compute	Pre-Reading Quiz  Prepared for discussion of reading material  <b>Assignment #2 (Due at the start of Class)</b>
Week 5	November 30, 2021	Talent: Building a Team  Investment: Funding your AI Startup	Pre-Reading Quiz  Prepared for discussion of reading material

			<b>Group Project Report (Due at the start of Class)</b>
<b>Exam Week</b>		Team Presentations - Video Submissions	<b>Group Project Presentation</b>