CityUniversity
of Seattle

Syllabus

SCHOOL OF BUSINESS AND MANAGEMENT

BUS 424: Fundamentals of Artificial Intelligence (AI)

5 Credits

Effective: Spring 2020/2021

FACULTY

Faculty Name: FACULTY NAME

Contact Information: CONTACT INFORMATION

[INSTRUCTOR MAY INSERT PERSONAL MESSAGE IF DESIRED]

COURSE DESCRIPTION

The purpose of this course is to enable students to develop a well-rounded understanding of artificial intelligence and its methods. The key objective is to help students comprehend the history of AI and recent developments and techniques in the field and, in particular, Deep Learning methods. An emphasis is placed on equipping students with a working knowledge of basic Machine Learning and Deep Learning, how they work, and in what situations they can be most effective and applicable. Key topics include introduction to AI, Machine Learning and optimization, Neural Networks and Deep Learning, Supervised Learning, Unsupervised Learning, and Reinforcement Learning.

COURSE RESOURCES

Required and recommended resources to complete coursework and assignments are found on the course Reading List. The reading list can be found under *Course Information* in Blackboard as well as from the library homepage ("Find Your Textbook" button).

Note: Required resources that must be purchased by the student are tagged "Purchase from a vendor of your choosing." Required resources with a direct link, "Available through CityU Library", are available electronically at no cost to students.

Students in Canada may purchase course resources from the Canada Bookstore, and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

CITYU LEARNING GOALS

This course supports the following City University learning goals:
- Critical thinking and ethical practice

COURSE OUTCOMES

In this course, learners:

- Develop a high-level plan for the implementation of an AI initiative.
- Select appropriate stakeholders for implementing an AI project and detail their individual roles and responsibilities.
- Identify and analyze key business, social, and ethical challenges and potential benefits of AI.
- Demonstrate a manager-level understanding of fundamental concepts of AI.
- Outline the data acquisition process for an AI project.
- Assess alternative approaches to implementing an AI solution (e.g., outsourcing, in-house development, and third-party partners).

CORE CONCEPTS, KNOWLEDGE, AND SKILLS

- AI, machine learning, and deep learning
- Neural network
- Face recognition
- Language translation
- Speech recognition
- Ethical AI
- An enterprise AI strategy
- Data acquisition process
- Technical talent
- AI for enterprise functions

OVERVIEW OF COURSE GRADING

The grades earned for the course will be derived using City University of Seattle's decimal grading system, based on the following:

Overview of Required Assignments	% of Final Grade
Instructor Determined Assignments and Activities	30%
Individual Case Analysis (2)	40%
Enterprise AI Strategy Team Project	30%
TOTAL	**100%**

SPECIFICS OF COURSE ASSIGNMENTS

The instructor will provide grading rubrics that will provide more detail as to how this assignment will be graded.

Instructor Determined Assignments and Activities

Whether in class, online, or in a mixed mode setting, students will be graded on their participation in classroom discussions; ability to present, explain, or defend alternative viewpoints; and the degree to which they have mastered the concepts and principles inherent in the study of business management. Written work will be assessed not only on relevance to the subject presented, but also on adherence to good written form, APA style, and professional presentation. The instructor may also choose to create additional activities to support learning in the classroom or online.

Components	*% of Grade*
Quality of Responses	40%
Quantity of Responses	40%
Timeliness	20%
TOTAL	**100%**

Individual Case Analysis (2)

Throughout the course, students will be presented with two different scenarios involving business, social, and ethical challenges and potential benefits of AI. The instructor will assign a case or provide guidelines to use in selecting a case for analysis. If students select the case, they will need to submit it to the instructor for approval. The case analysis will focus on the specifications of AI adoption, consequences, and recommendations. Adherence to APA formatting is required and the case response should be 1000-2000 words in length (excluding cover page and reference page) and include a minimum of three (3) references.

Components	*% of Grade*
Analysis	75%
Style and Mechanics	15%
APA	10%
TOTAL	**100%**

Team Project: Developing an Enterprise AI Strategy and Implementation Plan

Throughout the course, students will be exposed to different AI capabilities and frameworks for the adoption of relevant technologies. At the start of the course, students will be assigned to teams and each team will select an organization to develop an Enterprise AI Strategy and implementation plan. Suggestions for the case will be provided by the instructor that teams can choose from or teams can select their own scenario to work on upon the instructor's approval. The Enterprise AI Strategy and implementation plan document must address the following components:

- Problem statement
- The proposed AI solution (a technical description)
- The high-level implementation plan:
  - Proposed solutions for building an AI-ready culture
  - A list of required technical stakeholders to staff the AI initiative. This should include each stakeholder's specific roles and responsibilities.
  - Effective alternatives to hire AI talent
  - AI solution justification using the AI Strategy Framework

- o Technical prerequisites: An evaluation to determine whether the identified problem needs the proposed AI solution.
- o An outline of the data acquisition process
- o Alternative approaches to implement the proposed AI solution (build vs. buy) and assessing each using a cost-benefit analysis
- o Estimated schedule and budget summary
- o Risks, challenges, and relevant mitigation strategies

Adherence to APA formatting is required and the case response will be 10-12 pages (excluding cover page and reference page) and should include a minimum of seven (7) professional references. Each team will present its project to the class during Week 9. If the course is in an online format, teams will record and submit their narrated presentation. The presentation should be approximately 15 minutes in length, covering the key sections of the project (see the outline above). Each team member will fill out an evaluation to indicate the level of individual performance on the team. This evaluation will contribute to the "Teamwork" component of the associated rubric.

Components	% of Grade
Requirements for the Enterprise AI Strategy & Implementation Plan	25%
Application of AI Fundamentals and Analysis	25%
Team Presentation	15%
Team Contribution	15%
Style and Mechanics	10%
APA	10%
TOTAL	**100%**

COURSE POLICIES

Late Assignments

A critical aspect of management is to meet predefined deadlines. Therefore, all assignments are expected to be submitted when due. No late assignments are accepted. Life-situations do occur. When an issue arises coordinate with the instructor PRIOR TO the assignment's due date and the due date may be adjusted. It is in the best interest of the student to ensure that all assignments are submitted on time.

Participation

Class participation will be evaluated during class. Participation includes being prepared for class discussions and contributing meaningful content when appropriate. It also includes individual effort contributed to team projects.

Professional Writing

Assignments require error-free writing that uses standard English conventions and logical flow of organization to address topics clearly, completely, and concisely. CityU requires the use of APA style.

UNIVERSITY POLICIES

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the University Catalog that is linked from the CityU Web site.

Antidiscrimination

City University of Seattle and its staff and faculty are committed to supporting our students. We value equity, diversity, and inclusion as a way of life as well as the educational opportunities it provides. CityU will not tolerate any form of discrimination based on race, color, ethnicity, sexual orientation, gender identification, socioeconomic status, or religious values. If you have experienced any discrimination based on any of the above, we encourage you to report this to the University. Please report this to your instructor. If you do not feel safe reporting this to your instructor, please report to the Provost or to the Vice President of Student Affairs.

Non-Discrimination & Prohibition of Sexual Harassment

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to the Title IX Coordinator. For a complete copy of the policy or for more information, visit https://my.cityu.edu/titleix or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person to person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at https://www.cityu.edu/discover-cityu/about-cityu/ under the Policies section or at https://www.cityuniversity.ca/about/.

Religious Accommodations

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

Academic Integrity

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. Students are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the University Catalog under *Student Rights and Responsibilities* on the page titled *Academic Integrity Policy.*

Attendance

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.
Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if they are present at any time during the class session. For online classes, a student has attended if they have posted or submitted an assignment. A complete copy of this policy can be in the University Catalog under *Student Rights and Responsibilities* on the page titled *Attendance.*

Final Assignment Due Date

Final assignments for each class at CityU must be due on or before the final date of the course as indicated in the university's course information system. Due dates that extend beyond the final date of the course may negatively impact tuition funding for students.

SUPPORT SERVICES

Disability Services Accommodations Statement

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at *disability@cityu.edu* or 206.239.4752 or visit the Disability Support Services page in the my.cityu.edu portal. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

Library Services

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the [Ask a Librarian](#) service, or access [library resources and services online](#), 24 hours a day, seven days a week.

Smarthinking Tutoring

CityU students have access to free online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at help@cityu.ed to request a user name and password.