



Microsoft AI Fundamentals AI-900 – ICT 901 023

Summer 2021

Instructor: Dr Vui Kien Liao

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Delivery Method: Online Synchronous

Classroom Location: N/A

Days/Time: Sat 8:00am – 4:00pm MDT (Mountain Time)

Course Duration: 14/Aug/2021

Optional Resources:

[Microsoft Learn Online Resources](#)

[Microsoft Azure Subscription](#)

Optional Software: [Visual Studio Code](#)

Course Description

Learn about the fundamental concepts for artificial intelligence (AI) and the services in Microsoft Azure to build AI solutions for FREE. Experience a hands-on approach to see AI in action and explore Azure AI services. Microsoft Azure includes a suite of tools that enables learners to ingest data, build machine learning (ML) models, and deploy those models as REST API web services. Azure also includes a number of platform-as-a-service cognitive services that offer learners access to pre-trained ML models.

This course covers the objectives for Microsoft Exam AI-900: Microsoft Azure AI Fundamentals. This exam is required to fulfill the requirements of the [Microsoft Certified: Azure AI Fundamentals](#) professional certification. Each learner enrolled in this course will get one free Microsoft certification exam voucher to write the [Microsoft Azure AI Fundamentals Certification Exam \(AI-900\)](#).

Course Learning Outcomes

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

- Describe Artificial Intelligence workloads and considerations
- Describe fundamental principles of machine learning on Azure
- Describe features of computer vision workloads on Azure
- Describe features of Natural Language Processing (NLP) workloads on Azure
- Describe features of conversational AI workloads on Azure

Welcome to the University of Calgary

On behalf of University of Calgary Continuing Education, I would like to take this opportunity to acknowledge the traditional territories of the people of the Treaty 7 region in Southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III.

At University of Calgary Continuing Education, we strive to create and maintain a positive and productive learning and working environment in which there is respect for the dignity of all persons and fair and equitable treatment of individuals.

Approach to Learning

This course uses a variety of approaches including live lessons in MS Teams, learning activities, readings and lab exercises.

Learning Resources

Your course will make use of Desire2Learn (D2L) – the University of Calgary learning management system. Your instructor will describe how D2L will be incorporated into your course experience.

MS Teams will also be used to provide interactive experiences in a virtual classroom, to provide student groups an online meeting space and may be used to record presentations that can be viewed throughout the course. MS Teams recordings will not be used for any purposes other than teaching this online course. It is your responsibility to inform the instructor prior to MS Teams session if you do not want your voice or image to be recorded in MS Teams sessions.

For help with D2L and IT support, go to: <http://conted.ucalgary.ca/info/online-resources.jsp>.

Workload Expectations

This is a 7-hour course running over a period of 1-2 weeks.

Optional: Learners are encouraged to spend about 5-6 hours a week on course tasks, in addition to online lessons.

Attendance

Your attendance is strongly encouraged. It is to your benefit to attend all scheduled sessions/events so that you are best prepared to succeed on your AI-900 certification exams.

Copyright: Guidance for Students

All material used in the course is for the sole use of the individual and should not be recopied in either print or digital format. For copyright guidelines, including those relating to photocopying and electronic copies, please refer to the fair dealing guidelines: https://library.ucalgary.ca/ld.php?content_id=34108857

Academic Accommodations

Student Accessibility Services (SAS) offers services to all UCalgary students with documented disabilities ranging from learning deficit, learning disabilities, chronic health issues, hearing and visual impairment and temporary impairment due to accident, illness or injury. If you are a student with a documented disability who may require academic accommodation, please [contact SAS](#), ideally a few weeks before your course begins at 403-210-6019 or access@ucalgary.ca. Students who have not registered with SAS are not eligible for formal academic accommodation.

Continuing Education Policies and Procedures

For more information about withdrawals, transfers, academic/non-academic misconduct and forms, please visit: <http://conted.ucalgary.ca/info/>

Continuing Education Contact Information

Visit Us

Office Hours:

Monday to Friday

8:30 a.m. to 4:30 p.m.

Location:

Energy Resources Research Building

N140, 3512 33rd Street NW

Calgary, AB

Call Us

403.220.2866

1.866.220.4992

(Toll-Free)

Email Us

conted@ucalgary.ca

Course Schedule

Please review this schedule of tasks. See above for specific assignment due dates.

Date	Topic	Learning Activities (Optional)
Pre-Course Activities	Set-up your computer	<p>Configure your computer and web browser for MS Teams.</p> <p>Make note of important course dates and match them against your schedule.</p> <p>Create Azure free account</p>
Workshop Aug 14, 2021	<p>Module 1: Introduction to AI</p> <ul style="list-style-type: none"> Common uses of artificial intelligence (AI) Types of workload associated with AI Considerations and principles for responsible AI development <p>Module 2: Machine Learning</p> <ul style="list-style-type: none"> Fundamental machine learning concepts How to use the Azure Machine Learning to create and publish machine learning models 	<p>D2L: MS Teams Workshop session</p> <p>Microsoft Learn Resources:</p> <p>Get started with artificial intelligence on Azure</p> <p>Create no-code predictive models with Azure Machine Learning</p>
Workshop Aug 14, 2021	<p>Module 3: Computer Vision</p> <ul style="list-style-type: none"> Computer vision concept Computer vision techniques and services <p>Module 4: Natural Language Processing</p> <ul style="list-style-type: none"> Scenarios for AI solutions that can process written and spoken language Solutions that analyze text, recognize and synthesize speech, translate between languages, and interpret commands. <p>Module 5: Conversational AI</p> <ul style="list-style-type: none"> Basic principles for working with bots Creation of a bot that can respond intelligently to user questions 	<p>D2L: MS Teams Workshop session</p> <p>Microsoft Learn Resources:</p> <p>Explore computer vision in Microsoft Azure</p> <p>Explore natural language processing</p> <p>Explore conversational AI</p>

Date	Topic	Learning Activities (Optional)
Check D2L for classroom hours	Preparation for AI-900 Certification Exam	<p>D2L: Classroom Hours – Preparation for AI-900 Exam</p> <p>The journey to Microsoft Certified: Azure AI Fundamentals</p> <p>Certification Skills Outlines for AI-900</p> <p>Create an account with Certiport</p>