

AI-901T00: INTRODUCTION TO AI IN AZURE



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Beginner	Azure	Instructor-led / VILT	N/A

INTRODUCTION

This course introduces fundamental concepts related to artificial intelligence (AI), and the services in Microsoft Azure that can be used to create AI solutions. It teaches a mix of AI concepts and technology skills that are considered foundational to a successful career implementing AI solutions on Microsoft Azure.

AUDIENCE PROFILE

This course is for aspiring technology professionals at the beginning of their career in AI solution development. Some knowledge of Python coding syntax and programming techniques is useful. Additionally, knowledge of core cloud concepts, including cloud storage, cloud compute, and cloud-based authentication and authorization is recommended.

PREREQUISITES

- Before starting this learning path, you should already have a basic understanding of computing concepts and math.
- Students should already have a basic understanding of computing concepts and Python.
- A conceptual understanding of machine learning can be helpful
- Ability to navigate the Azure portal

COURSE OBJECTIVES

After completing this course, students will be able to:

- Know more about the kinds of solutions AI can make possible and considerations for responsible AI practices.
- Describe core concepts of generative AI.
- Explain how large language models (LLMs) work.
- Consider how to create effective prompts for LLMs.
- Describe core concepts of agents and agentic AI solutions.

COURSE CONTENT

Module 1: Introduction to AI concepts

Curious about artificial intelligence? Want to understand what the buzz is about? This module introduces you to the world of AI.

Lessons:

- Introduction to AI
- Generative AI and agents
- Text and natural language
- Speech
- Computer vision
- Information extraction
- Responsible AI
- Exercise - Explore AI workloads
- Module assessment
- Summary

After completing this module, students will be able to:

- Use the kinds of solutions AI can make possible and considerations for responsible AI practices.

Module 2: Introduction to generative AI and agents

Generative AI powers applications that can create content, answer questions, and assist with tasks. In this module, you'll explore the fundamentals of generative AI, including large language models (LLMs), prompts, and AI agents.

Lessons:

- Introduction
- Large language models (LLMs)
- Prompts
- AI agents

- Exercise - Explore generative AI
- Module assessment
- Summary

After completing this module, students will be able to:

- Describe core concepts of generative AI.
- Explain how large language models (LLMs) work.
- Consider how to create effective prompts for LLMs.
- Describe core concepts of agents and agentic AI solutions.

Module 3: Introduction to natural language processing concepts

Natural language processing (NLP) supports applications that can

analyze text to infer semantic meaning.

Lessons:

- Introduction
- Tokenization
- Statistical text analysis.
- Semantic language models
- Exercise - Explore text analytics
- Module assessment
- Summary

After completing this module, students will be able to:

- Explore concepts and techniques for text analysis.

Module 4: Introduction to AI speech concepts

Imagine AI apps and agents that you can talk to. Explore the concepts behind AI speech, including speech recognition and synthesis.

Lessons:

- Introduction
- Speech-enabled solutions
- Speech recognition
- Speech synthesis
- Exercise - Explore AI speech
- Module assessment
- Summary

After completing this module, students will be able to:

- Identify different scenarios for AI speech
- Describe how speech recognition works
- Describe how speech synthesis works

Module 5: Introduction to computer vision concepts

Introduction to computer vision concepts

Lessons:

- Introduction
- Computer vision tasks and techniques
- Images and image processing
- Convolutional neural networks
- Vision transformers and multimodal models
- Image generation
- Exercise - Explore computer vision
- Module assessment
- Summary

After completing this module, you will be able to:

- Identify different types of computer vision tasks
- Describe how filters are used in image analysis
- Describe the main features of a convolutional neural network (CNN)
- Describe the main features of a vision transformer (ViT)
- Describe how generative AI can be used to create images

Module 6: Introduction to AI-powered information extraction concepts

AI information extraction enables you to extract data values from documents, images, and other unstructured data sources.

Lessons

- Introduction
- Overview of information extraction
- Optical character recognition (OCR)
- Field extraction and mapping
- Exercise - Explore AI information extraction
- Module assessment
- Summary

After completing this module, you will be able to:

- Understand the key concepts of information extraction.
- Describe how optical character recognition (OCR) extracts text from images.
- Explain how form extraction maps extracted text to data fields.

Module 7: Get started with AI in Azure

Learn how Microsoft enables you to build AI with the latest technology, securely, and at scale.

Lessons

- Introduction
- Understand Azure
- Developing AI apps on Azure
- Microsoft Foundry for AI
- Using Microsoft Foundry endpoints
- Exercise - Get started with Microsoft Foundry
- Knowledge check
- Summary

After completing this module, you will be able to:

- Use AI applications and agents in Azure

Module 8: Get started with generative AI and agents in Azure

Learn how to use generative AI models and agents with Microsoft Foundry.

Lessons

- Introduction
- Generative AI models
- Using a generative AI model
- Creating an agent
- Exercise - Get started with generative AI and agents in Microsoft Foundry
- Knowledge check
- Summary

After completing this module, you will be able to:

- Describe how an agent encapsulates model behavior using system instructions and tools

- Identify the right model for a task using the Foundry model catalog
- Deploy a model in the Foundry portal and replicate Playground settings in code
- Create and test an agent in the Foundry portal
- Use an agent in the Playground to validate prompts and behavior
- Call an agent from code using the Foundry Project API

Module 9: Get started with text analysis in Azure

Learn how to use both general-purpose AI models and Azure Language in Foundry Tools, then build a lightweight Python client application that analyzes text.

Lessons

- Introduction
- Understand text analysis in Foundry
- Create a client application that analyzes text
- Use Azure Language with an agent
- Exercise - Get started with text analysis in Microsoft Foundry
- Module assessment
- Summary

After completing this module, you will be able to:

- To use Microsoft Foundry capabilities for text analysis

Module 10: Get started with speech in Azure

Learn how to recognize and synthesize speech using Azure Speech in Foundry Tools.

Lessons

- Introduction
- Speech recognition
- Speech synthesis
- Creating a speech-capable agent
- Exercise - Get started with speech in Microsoft Foundry
- Module assessment
- Summary

After completing this module, you will be able to:

- Learn to use Azure Speech's speech-to-text API for speech recognition
- Learn to use Azure Speech's text-to-speech API for speech synthesis
- Learn to use Azure Speech's Voice Live capabilities

Module 11: Get started with computer vision in Azure

This module introduces computer vision capabilities in Foundry, focusing on how developers can analyze images and generate visual content using multimodal,

image-generation, and video-generation models.

Lessons

- Introduction
- Multimodal models for image analysis
- Image generation models
- Video generation models
- Exercise - Get started with computer vision in Microsoft Foundry
- Module assessment
- Summary

After completing this module, you will be able to:

- Learn about multimodal models for image analysis
- Understand image generation capabilities

- Understand video generation capabilities

Module 12: Get started with AI-powered information extraction in Azure

AI gives you the power to unlock insights from your data. Learn how to use Azure Content

Understanding in Foundry Tools to extract information from content.

Lessons

- Introduction
- Extract information from documents
- Extract information from audio and video
- Exercise - Get started with Content Understanding in Microsoft Foundry

- Module assessment
- Summary

After completing this module, you will be able to:

- Identify Foundry Tools for information extraction
- Describe Azure Vision information extraction capabilities
- Describe Azure Content Understanding information extraction capabilities
- Describe Azure Document Intelligence information extraction capabilities
- Describe Azure AI Search information extraction capabilities

ASSOCIATED CERTIFICATIONS & EXAM

This learning path helps prepare you for Exam AI-901: Microsoft Azure AI Fundamentals (beta).