

Artificial Intelligence

The Artificial Intelligence module introduces the potential of artificial intelligence (AI) – the intelligence demonstrated by a machine when it perceives its environment and takes actions that maximise the likelihood of achieving specific goals.

By deploying the right AI technology, businesses and organisations can save time and money and can innovate by automating routine processes and tasks, increasing productivity and operational efficiencies and making faster business decisions based on outputs from cognitive technologies.

This module is suitable for a wide range of candidates; for example, non-technical professionals who wish to build and demonstrate an understanding of Artificial Intelligence, facilitating engagement with their technical colleagues or their suppliers, or students who wish to add general technical knowledge to sector-specific or general studies.

Module overview

Category	Content
What is Artificial Intelligence (AI)?	<ul style="list-style-type: none">• Define the term AI• Three stages of AI: narrow, general, super• Key milestones in the development of AI
How does AI work?	<ul style="list-style-type: none">• Key principles underpinning AI: algorithms, complexity, heuristics• Machine learning definition and key characteristics• Neural network: definition and key characteristics• Deep learning: definition and key characteristics
Common AI examples	<ul style="list-style-type: none">• Identify the need for AI in organisations and society• Examples of how AI supports data mining• Examples of how AI supports natural language processing• Examples of how AI supports decision making
AI adoption: challenges and potential	<ul style="list-style-type: none">• Recognise limits to AI• Recognise ethical guidelines that should inform the operation of AI: clarity and desirability of purpose, transparency, competence in operations• Social and economic impact of AI• Potential and implications of AI for different sectors

- Implications of adopting AI in a given scenario

Main learning outcomes

The Artificial Intelligence module consists of elearning followed by a brief certification test. Together, these components deliver a short, focused professional development solution. On completion, candidates will be able to:

- define Artificial Intelligence and recognise the stages and development milestones
- understand how AI works, including the key principles underpinning AI
- define the terms machine learning, neural network and deep learning and the characteristics of each
- identify the need for AI and recognise examples of how AI supports data mining, natural language processing and decision making
- recognise the limits, ethical guidelines, social and economic impact, as well as the potential and implications of AI