



This module provides a broad understanding of the Artificial Intelligence (AI) fields and the techniques used to understand how AI is applied to different scenarios and problems.

On Completion of this module the candidate will be able to:

- Explain "Artificial Intelligence" and how to identify systems using Artificial Intelligence.
- Differentiate among the major types and methodologies used in Artificial Intelligence.
- Explain how Artificial Intelligence enables capabilities that are beyond conventional technology.
- Characterise the goals of AI and the approaches and progress used in achieving these objectives.
- Describe the contributions and applications of artificial intelligence.
- Describe the key components of the artificial intelligence (AI) fields.
- Explain the role of Artificial Intelligence Agents and how they relate to the environment, including the ways to evaluate how agents act by establishing goals.
- Understand the fundamentals of knowledge representation, reasoning techniques, and know how to build simple knowledge-based systems.
- Understand how Artificial Intelligence is implemented in the real world.
- Define what are rule-based systems, statistical inferences, and fuzzy expert systems.
- Be familiar with some of the basic learning algorithms and techniques.
- Understand how Machine Learning (ML) is implemented in the real world.
- Understand the fundamentals of "deep learning" and how it works.
- Understand the role of Artificial Intelligence to analyse "Big data."
- Explain the basics of Artificial Intelligence Platforms and how they are used.

## WHAT ARE THE BENEFITS OF THIS MODULE?

- Explains the role of Artificial Intelligence (AI) and how to identify systems using AI. This certification provides an overview of the fundamentals of Artificial Intelligence and how to apply them.
- Certifies best practice in Artificial Intelligence.
- Developed with input from computer users, subject matter experts, and practising computer professionals from all over the world. This process ensures the relevance and range of module content.

## HOW DO I GET STARTED?

To find out more about this certification, please visit

<https://icdlarabia.org/modules-artificial-intelligence>

To locate your nearest accredited test centre, please visit

<https://icdlarabia.org/test-centres-near-you>

## SYLLABUS OUTLINE

CATEGORY	SKILL SET
Fundamental Concepts of Artificial Intelligence	<ul style="list-style-type: none"> <li>• Introduction to Artificial Intelligence</li> <li>• Basic Concepts of Artificial Intelligence</li> <li>• Agents and Environments</li> </ul>
Expert and Fuzzy Logic Systems	<ul style="list-style-type: none"> <li>• Introduction to Expert and Fuzzy Logic Systems</li> <li>• Fundamentals of Expert System</li> <li>• Concepts of Fuzzy Logic system</li> </ul>
Natural Language Processing (NLP)	<ul style="list-style-type: none"> <li>• Understand Natural Language Processing</li> </ul>
Artificial Neural Networks (ANN)	<ul style="list-style-type: none"> <li>• Introduction to Artificial Neural Networks (ANN)</li> <li>• Basic Concepts of Artificial Neural Networks (ANN)</li> </ul>
Concepts of Virtual Agents Learning	<ul style="list-style-type: none"> <li>• Key Elements of Virtual Agents Learning</li> <li>• Machine Learning (ML) Categories/Types</li> <li>• How does Machine Learning (ML) work?</li> </ul>
Deep Learning	<ul style="list-style-type: none"> <li>• The Essentials of Deep Learning</li> </ul>
Robotic Process Automation	<ul style="list-style-type: none"> <li>• Key Concepts of Robotic Process Automation</li> <li>• How Does a Robot Work?</li> <li>• Robotics in Life</li> </ul>
Big Data Analytics	<ul style="list-style-type: none"> <li>• Concepts of Big Data</li> <li>• Big Data Analytics</li> <li>• Overview of Analytics Tools</li> <li>• The Use of Big Data</li> </ul>
Artificial Intelligence (AI) Platforms	<ul style="list-style-type: none"> <li>• Overview of Platform Types</li> </ul>