

ICT5356 Principles of Artificial Intelligence

Unit Description

Principles of Artificial Intelligence provides students with a solid understanding of the fundamental concepts, techniques, and applications of artificial intelligence (AI).

This unit covers the history of AI, the different types of AI, and examines real-world applications. Students will gain hands-on experience with machine learning, deep learning, natural language processing and computer vision. Students will examine ethical considerations in AI development and investigate AI applications in various domains.

By the end of the unit, students will have a strong foundation in AI, enabling them to tackle challenges and opportunities presented by this rapidly evolving field.

Credit Points	8 credit points
Duration	12 weeks (10 teaching weeks and 2 revision and assessment weeks)

Unit Learning Outcomes

On successful completion of this unit, students will be able to:

1. Analyse the evolution of AI technology and contrast AI and machine learning with traditional programming and software.
2. Research machine learning techniques and apply them to the development of machine learning models.
3. Design and interpret deep learning neural networks, including Convolution Neural Networks (CNNs) and Recurrent Neural Networks (RNNs).
4. Plan, design and create AI applications in various domains, including Natural Language Processing (NLP) and computer vision.
5. Evaluate the ethical considerations in the development and use of AI technology.
6. Appraise the future of AI and its impact on our society, industries, and culture.