Artificial intelligence 314 (COS 314)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	18.00
NQF Level	07
Programmes	BIS (Multimedia)
	BSc (Computer Science)
	BSc (Information and Knowledge Systems)
	BSc (Applied Mathematics)
	BSc (Mathematics)
	BSc (Physics)
Prerequisites	COS 110
Contact time	1 practical per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Computer Science
Period of presentation	Semester 1

Module content

The main objective of this module is to introduce a selection of topics from artificial intelligence (AI), and to provide the student with the background to implement AI techniques for solving complex problems.
This module will cover topics from classical AI, as well as more recent AI paradigms. These topics include: search methods, game playing, knowledge representation and reasoning, machine learning, neural networks, genetic algorithms, artificial life, planning methods, and intelligent agents. In the practical part of this module, students will get experience in implementing
(1) game trees and evolving game-playing agents;
(2) a neural network and applying it to solve a real-world problem; and
(3) a genetic algorithm and applying it to solve a real-world problem.

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