

University of Pretoria Yearbook 2016

Artificial intelligence 314 (COS 314)

Qualification Undergraduate

Faculty [Faculty of Engineering, Built Environment and Information Technology](#)

Module credits 18.00

Programmes [BIS Multimedia](#)

[BIT Information Technology](#)

[BSc Information Technology Information and Knowledge Systems](#)

[BSc\(Computer Science\) Computer Science](#)

Prerequisites COS 131 or COS 110

Contact time 1 practical per week, 2 lectures per week

Language of tuition English

Academic organisation 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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