University of Pretoria Yearbook 2021

Theoretical computer science 210 (COS 210)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	8.00
NQF Level	06
Programmes	BSc Computer Science
	BSc Information and Knowledge Systems
	BSc Physics
Prerequisites	COS 110 and COS 151
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

This module introduces students to a framework for investigating both computability and complexity of problems. Topics include, but are not limited to: finite-state machines, regular expressions and their application in a language such as awk, the Halting problem, context-free grammars, P vs NP problem, NP-complete class, reduction techniques, regular languages, DFAs and NFAs, Lattices, Church-Turing thesis.

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