University of Pretoria Yearbook 2021

Imperative programming 132 (COS 132)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
NQF Level	05
Programmes	BCom Statistics and Data Science
	BEng Computer Engineering
	BEng Computer Engineering ENGAGE
	BEng Electrical Engineering
	BEng Electrical Engineering ENGAGE
	BEng Electronic Engineering
	BEng Electronic Engineering ENGAGE
	BIS Multimedia
	BSc Computer Science
	BSc Information and Knowledge Systems
	BSc Mathematical Statistics
	BSc Physics
Service modules	Faculty of Economic and Management Sciences
	Faculty of Natural and Agricultural Sciences
Prerequisites	APS of 30 and level 5 (60-69%) Mathematics
Contact time	1 practical per week, 1 tutorial per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Computer Science
Period of presentation	Semester 1

Module content

This module introduces imperative computer programming, which is a fundamental building block of computer science. The process of constructing a program for solving a given problem, of editing it, compiling (both manually and automatically), running and debugging it, is covered from the beginning. The aim is to master the elements of a programming language and be able to put them together in order to construct programs using types, control structures, arrays, functions and libraries. An introduction to object orientation will be given. After completing this module, the student should understand the fundamental elements of a program, the importance of good program design and user-friendly interfaces. Students should be able to conduct basic program analysis and write complete elementary programs.