University of Pretoria Yearbook 2016

Imperative programming 132 (COS 132)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BCom Statistics
	BEng Computer Engineering
	BEng Computer Engineering Engage
	BEng Electrical Engineering
	BEng Electrical Engineering Engage
	BEng Electronic Engineering
	BEng Electronic Engineering Engage
	BIS Multimedia
	BIT Information Technology
	BSc Information Technology Information and Knowledge Systems
	BSc(Computer Science) Computer Science
	BSc Actuarial and Financial Mathematics
	BSc Mathematical Statistics
	BSc Mathematics
	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 tutorial per week, 1 practical per week, 3 lectures per week
Language of tuition	Both Afr and Eng
Academic organisation	Computer Science
Period of presentation	Semester 1

Module content

*Note: All students registered for degrees within the School of IT, excluding the two four year programmes, BIS (Information Science) and BIS (Publishing), need to enrol for this module.

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.