COMPUTER SCIENCE
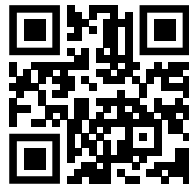
FACULTY OF SCIENCE

A Computer Science graduate is trained in the principles of computing, the structure of computers; the development and use of programming languages; and using computers to solve problems.

WHAT COURSES WILL YOU TAKE?
The compulsory courses below are the minimum a student must complete for the major.

1ST YEAR LEVEL COURSES
- Computer Science 1015
  - algorithm development and problem solving in Python
- Computer Science 1016
  - object-oriented design and programming in Java
- Mathematics 1

2ND YEAR LEVEL COURSES
- Computer Science 2001
  - Data Structures and Databases
- Computer Science 2002
  - Parallel and concurrent programming, Architecture, Theory of Computation
- Machine learning 2042

3RD YEAR LEVEL COURSES
- Computer Science 3002
  - networks, operating systems
- Computer Science 3003
  - theory of Algorithms, advanced software design

Comparative programming languages

WHO WOULD BE INTERESTED IN THIS MAJOR?
A Computer Science major is done by future IT professionals: programmers, network engineers and computer security specialists.

It is also good major to combine with other mathematical sciences, or with other subjects like physics or genetics.

If you are interested in computers, enjoy solving puzzles or making things, and you like working with numbers, then you are ideally suited to Computer Science. You don't have to have done Information Technology at school or any previous programming to do this major.

CAREER OPPORTUNITIES FOR GRADUATES
There is a shortage of Computer Science graduates in South Africa and worldwide, so there are many job opportunities.

Computer Scientist are not only IT specialists (in computer networks, computer graphics, etc.), but have many possible career paths including systems engineering, consultancy, banking, insurance, education, research in computational sciences (bioinformatics, computational chemistry, computational physics etc.), computer games developers, animation, manufacturing and distribution and entrepreneurs.

MINIMUM ADMISSION AND SUBJECT REQUIREMENTS
FPS of 550 (but admission only guaranteed at FPS above 660)
Mathematics 70% & Physical Science 60% (Physical Science can be replaced by Information Technology only for the Computer Science and Business Computing major combination. Information Technology will only be used for the FPS where Physical Science is not taken)
NBT in Mathematics, AL & QL to be written