

Course: **SOFTWARE DESIGN AND DEVELOPMENT**

2 units for each of Preliminary and HSC



Board Developed Course

Exclusions: Computing Applications CEC

Course Description

The Preliminary course introduces students to the basic concepts of computer software design and development. It does this by looking at the different ways in which software can be developed, the tools that can be used to assist in this process and by considering the interaction between software and the other components of the computer system.

The HSC course builds on the Preliminary course and involves the development and documentation of software using a variety of data structures and language facilities. Students learn to solve a number of interesting and relevant software problems

Preliminary Course

Concepts and Issues in the Design and Development of Software (30%)

- Social and ethical issues
- Hardware and software
- Software development approaches

Introduction to Software Development (50%)

- Defining and understanding the problem
- Planning and designing software solutions
- Implementing software solutions
- Testing and evaluating software solutions
- Maintaining software solutions
- Developing software solutions (20%)

HSC Course

- Development and Impact of Software Solutions (15%)
 - Social and ethical issues
 - Application of software development approaches
- Software Development Cycle (40%)
 - Defining and understanding the problem
 - Planning and design of software solutions
 - Implementing software solutions
 - Testing and evaluating software solutions
 - Maintaining software solutions
- Developing a Solution Package (25%)
- Options (20%)

Study one of the following options:

 - Programming paradigms
 - or
 - The interrelationship between software and hardware

Particular Course Requirements

There is no prerequisite study for the Preliminary course. Completion of the Preliminary course is a prerequisite for the HSC course.

It is a mandatory requirement that students spend a minimum of 20% of Preliminary course time and 25% of HSC course time on practical activities using the computer.