

## 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 asks students to plan, design and develop a software application. This course enables students to develop skills in coding, project management, problem solving and team work skills.

### Main Topics Covered:

#### 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.