Software Design and Development

Software Design and Development students are given time to research and code independently during class time on their projects. They learn to apply a systematic approach to creative problem solving. Students interested in the fields of software development and computer science will find this subject of value as they also learn team and communication skills. This is a practical subject with a major focus on coding and creating projects that culminate in a major project in Year 12.

There is no prerequisite study for the Preliminary Course. The subject provides students with a systematic approach to problem solving with an opportunity to be creative in their larger programming tasks.

The Preliminary Course

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

The HSC Course

- Development and Impact of Software Solutions (15%)
- Software Development Cycle (40%)
- Developing a Solution Package (25%)
- Option (20%)

The major focus of the course reflects the traditional structural approach to software development and the top-down development of source code. **Python** is our preferred choice of coding software. This is freely available to students and they will be required to install it on their personal devices in order to practice the language syntax and to complete practical tasks. Python is used in the Sydney University's Computer Science course. Our students are encouraged to audition for the 10-day Sydney University coding camp in the summer holidays that increases their exposure to real-world coding and professionals working in computing fields.

Practical activities using a computer occupy a minimum of 20% of the Preliminary Course and 25% of the HSC Course time.

For more information on Software Design and Development visit the NESA website at:

https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/technologies/software-design-development