Course Information

Business and Information Technology
Computer Science | CSC
ATCSC

ATAR

Unit 3 Design and development of computer-based systems and database solutions

In this unit, students gain knowledge and skills to create software solutions. They use algorithms and structured programming and object-oriented techniques to design and implement software solutions for a range of problems. They consider the complex interactions between users, developers, the law, ethics and society when computer systems are used and developed. Students learn about network communications and the transfer of data through a network.

A major focus of the course is the creation of systems and digital solutions to specific problems. In creating solutions, it is expected that students will use a structured development process to guide their approach. This development process is iterative in nature and involved four phases – investigating the problem, developing ideas and designing a solution, developing a solution and evaluating the effectiveness of the solution.

The unit content includes theoretical aspects (Knowledge) and practical aspects (Skills) and these are organised into two content areas:
- Programming
- Network communications.

Unit 4 Design and development of communication systems and software solutions

In this unit, students learn about the design concepts and tools used to develop relational database systems.Students gain skills to create database solutions and create queries to extract relevant information. Students consider the security of network communications, considering a range of threats and measures used to keep networks secure. Students examine attitudes and values that lead to the creation and use of computer-based systems and their effect on society. They examine the ethical and legal obligations of the user and developer in the collection and storage of data.

This unit focuses on the creation of database systems. Students are expected to follow the technology process in order to produce quality products. The process includes four steps; investigate, design, produce and evaluate. This process is essential for the creation of solutions in the Computer Science course.

The unit content includes theoretical aspects (Knowledge) and practical aspects (Skills) and these are organised into two content areas:
- Cyber security
- Data management.

Prerequisites
Minimum **C grade in Year 11 Computer Science .**

Year of Study
Year 12

Type of Assessment
40% Project
20% Theory Test
10% Practical Test
30% Examination

Costs
$60 total