



Information Technology

What is Information Technology?

Information Technology is a dynamic area characterised by frequent change. The use of information technology systems has changed how tasks and jobs are undertaken, creating new opportunities in many aspects of people's lives. The study of information technology systems will allow students to critically analyse the limitations and consequences of present technologies and to consider the implications of potential technologies.

Information Technology allows students to develop the knowledge, skills, and attitudes required to be active, informed, and self-reliant members of society who are able to both initiate and manage change. Students develop the ability to critically analyse and reflect on issues related to the increased use of and dependence on computer-based systems in society, and the ethics associated with these issues. They gain an understanding of the potential of information technology to support what people do today and what they will do in the future.

Why study Information Technology?

The study of Information Technology will develop student understanding of information systems used in society and develop an ability to design and develop software solutions.

Information Technology offers a unique problem solving experience. The practical knowledge of critiquing, designing and making systems helps develop analytical and problem solving skills that can be transferred to a wide range of other situations.

Students will have the freedom to define their own Application Programming project and Website project which requires a level of initiative and complexity. The projects focus on the System Development Life Cycle to design, develop and validate your projects.

Course content of Information Technology

This is a 20-credit subject organized into topics that emphasise the development of skills and understanding in evaluating, designing, and making systems. Each topic contains key questions and concepts related to the topic focus, design and development processes, and issues of social responsibility. Information Technology focuses on the theory and practical applications and includes an in-depth study of computer and communication systems.

Information Systems (3 weeks)

Allow students to develop an understanding of an information system by considering how the elements interact and impact on society.

Computer and Communication Systems (7 weeks)

Allow students to develop an understanding of computer and communication systems concepts that underpin computer devices and how these concepts apply to networks.

Application Programming Visual Basic (10 weeks)

Allows students to familiarize themselves with programming by constructing an application program that accepts input from, and interacts with, the user to produce outcomes. Visual Basic is used to develop the concepts of structured programming including algorithms, variables and control structures. Students use the problem-solving approach of the systems development life cycle. Issues attached to programming, such as marketing, debugging and future trends are also investigated.

Website Programming (HTML and Java Script) (10 weeks)

Allows students to develop programming skills in a client-side web environment using various forms of media. They will discover how to develop systems with high levels of interactivity through input and output. They will develop an understanding of accessibility and user friendliness through the standards of publishing, the design of the user interface, navigation, integration of media and finished layout.

Information Technology continued

Assessment Components

Assessment in Information Technology consists of the following components:

School-based component (70%)

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| • Folio | 20% |
| • Skills and Applications Task | 30% |
| • Project | 20% |

Externally moderated component (30%)

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| • Exam | 30% |
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Learning Requirements of the Course

At the end of the program in Stage 2 Information Technology, students should be able to:

- Apply and use appropriate communication methods and tools to explain information technology concepts, including how data is represented and transferred in computer-based systems
- Apply skills and concepts to manipulate computer application components and process data to produce outcomes involving complex processes.
- Apply information technology knowledge, skills, and problem-solving techniques to create and document user-friendly, reliable, and accurate systems;
- Critically analyse the responsibilities of the developer of systems;
- Critically analyse and discuss ethical use of current and potential computer-based systems/technologies and their social impact on individuals and society.

Future Pathways in subject

Information Technology professionals have a wide range of roles in industry from integrating existing components into larger systems, to designing efficient software for small-scale devices such as mobile phones. Information Technology is a rapidly growing area with cutting-edge applications such as bioinformatics and advanced physics. Almost every sector of the workforce uses information technology in some form. Information Technology provides a good base for tertiary education, vocational education or professions including:

- Computer Science
- Multimedia
- System Analysis
- E-commerce
- Database Administration
- Web Application Developer
- Web Application Developer
- Interactive Game Developing

It is also a useful foundation in other professional fields such as:

- Business and Commerce
- Medicine
- Law
- Education
- Engineering

Required Text(s) for subject

Recommend (not compulsory)

Discovering Computers 2008: (Complete or Brief) by Gary B. Shelly

Programming Visual Basic – Introduction to Visual Basic.NET (3rd edition) by Graeme Summers

What are the prerequisites?

- Pass in Stage 1 Information Technology

OR

- Passes in Mathematics Methods or higher and English.



TRINITY COLLEGE
Senior

Contact Details

For more information about studying Year 12 at Trinity College Senior, please contact the Head of Year 12 on 8523 8705 or visit: www.trinity.sa.edu.au/curriculum/index.htm

Further Information

More information about SACE may be obtained from the SACE Board of South Australia webpage at: www.sace.sa.edu.au