SUBJECT: INFORMATION PROCESSING AND TECHNOLOGY

STATUS: **Authority Subject** **CODE: IPT**

COST: **TBA**

(Virtual Schooling Option Only)

COURSE OVERVIEW:

Information technology refers to the creation, manipulation, storage, retrieval and communication of information, and to the range of technological devices and systems used to perform these functions. The course includes many aspects of modern human life and finds itself drawing upon and being applied to diverse fields of study. The emphasis is on software development rather than the use of application packages.

In studying information processing and technology, students investigate the nature of, and methods associated with, information processing and related technologies, using a computer as a primary tool. Students are exposed to a variety of intellectual challenges involving formal approaches to problem identification and solution while developing a range of practical skills. Consequently, the study of this course contributes in a significant way to students' general education irrespective of whether they intend proceeding to further studies or employment in information technology.

Students not only acquire and apply knowledge associated with information processing and technology, but also develop skills in analysis, synthesis, evaluation and effective communication.

COURSE STRUCTURE

Information Processing and Technology has the following topics:

- **Social and ethical issues** encourages students to develop an appreciation and understanding of the impact that developments in information technology have on themselves and communities worldwide. To make valid judgments about social and ethical issues, students should be able to collect information from a variety of sources, analyse it and use it as a basis to form opinions.
- **Human computer interaction** makes students aware that we are surrounded by many interfaces to technological systems that affect how people come to understand the workings of information and communication technology systems and the ways they communicate with these systems.
- **Information and intelligent systems** introduces a formal model to describe the architecture of information and intelligent systems, presents a methodology for the development of these systems, and allows students to implement these to produce working information and intelligent systems. The emphasis placed on the design and implementation of information and intelligent systems requires that good speaking, listening and writing skills be developed.
- **Software and system engineering** involves the study of software development and computer systems. Students will gain some expertise and skills in the design, development and evaluation of computer programs that solve practical problems. Students will also gain knowledge of computer systems architecture and operating systems.

ASSESSMENT TECHNIQUES:

Students assessment will be in the form of:

- Written exam each semester
- Written and Oral tasks throughout the course
- Programming assignments and projects

SPECIAL REQUIREMENTS:

- Suggested prerequisite High Level of Achievement in Maths B Strand and a High Level of Achievement for English Year 10.
- A computer at home, while useful, is not necessary as out of class-time access will be available.