

SUBJECT: INFORMATION PROCESSING AND TECHNOLOGY (IPT)

PREREQUISITE JUNIOR SUBJECT

Sound Achievement in Mathematics and English.

OVERVIEW

Information Processing and Technology is an Authority subject, which means a student's results contribute towards their Overall Position.

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 provides students with knowledge, skills, processes and understanding of information technology. It emphasizes problem identification and solution rather than the use of specific applications, and is an intellectual discipline that involves a study of information and intelligent systems, software and system engineering, human-computer interaction, and the social and ethical issues associated with the use of information technology.

Information Processing and Technology touches many aspects of human life and finds itself drawing on and being applied to diverse fields of study. Students will be exposed to a variety of intellectual challenges involving distinctive approaches to problem solving, communication and a range of associated practical skills. As a result, the study of this course will contribute in a significant way to the general education of students, whether or not they intend proceeding to further studies or employment specific to information technology.

This course should prove especially relevant to students by helping them cope with the rapid rate of change associated with information technology and to appreciate its advantages and disadvantages.

AIMS

Information Processing and Technology aims to:

- develop in students an awareness and understanding of the concepts, practices and effects of information technology.
- provide students with a body of knowledge essential to understanding the interaction between society and new ways of accessing and manipulating information.
- equip students with problem-solving skills that allow them to design, develop and evaluate solutions.
- develop students' communication skills in order that they may comprehend and respond effectively using a variety of techniques and media.
- encourage students to think critically and purposefully about the uses of information technology.
- encourage students to propose and reflect upon possible future uses of information technology.
- promote responsible, discriminating and competent use of information technology.
- foster personal development and social skills conducive to a concern for others, cooperation in the workplace and self-reliance.

SUBJECT COMPATIBILITY

Information Processing and Technology may be studied in conjunction with either the Authority subject Information Technology Systems or the Authority Registered subject Information and Communications Technology.

COURSE ORGANIZATION

The major topics of study are:

- Information and Intelligent Systems (IIS)
- Software and System Engineering (SSE).

The minor topics, Social and Ethical Issues (SEI) and Human-Computer Interaction (HCI), will be integrated across the major topics.

Semester	Unit Code	Description
1	IIS1	Knowledge Discovery 1
	SE11	Legal Issues, The Internet
	SSE1	Computer Systems Architecture and Operating Systems and Environments
	IIS2	Database Theory and Practice 1
2	IIS2	Database Theory and Practice 1
	SSE2	Algorithm Theory and Design, and Software Programming 1
	IIS3	Knowledge Discovery 2
3	SE12	Privacy and Security, The Internet
	IIS4	Database Theory and Practice 2
	IIS5	Database Theory and Practice 3
	SSE3	Algorithm Theory and Design, and Software Programming 2
4	SSE3	Algorithm Theory and Design, and Software Programming 2
	SSE4	Algorithm Theory and Design, and Software Programming 3
	SSE5	Algorithm Theory and Design, and Software Programming 4

ASSESSMENT

Assessment items will require students to be motivated enough to study for examinations and complete assignment work out of school hours.

- **Examinations** will involve students working individually and will be conducted under supervised test conditions.
- **Written Responses** will require extended responses of at least 800 words.
- **Projects** will be up to six weeks duration and will follow the design, develop, evaluate cycle.