WHY STUDY IPT?

Information Processing deals with the ways in which information is gathered, structured, represented, stored, accessed, manipulated and communicated.

In studying Information Processing and Technology, students investigate the nature of, and methods associated with information processing and related technologies, using a computer as the primary tool. Such a study assists students to cope with the rapid rate of change associated with computer technology and to appreciate its impact on society and the individual. Students are exposed to a variety of intellectual challenges involving formal approaches to problem solving 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 computing or information processing.

WHAT IS STUDIED IN IPT?

Information Processing and Technology has the following topics:

- **Information Systems** which introduces a formal model to describe the architecture of information systems (databases). A methodology for the development of these systems is presented and students are provided with opportunities to design and implement information systems using appropriate tools.

- **Software and System Engineering** which focuses on the design and implementation of algorithms for the solution of appropriate problems. Software development expertise and programming skills are learnt.

- **Intelligent Systems** which consists of a study of the concepts of Artificial Intelligence and Expert Systems together with an overview of Natural Language Processing, Emulation of Human Attributes, Search Techniques and Specialised Programming Languages.

- **Social and Ethical Issues** which encourages students to develop an appreciation and understanding of the effects that Information Technology has had on themselves and the wider community. Students collect information, analyse it and use it as a basis to form opinions which are critically evaluated and compared with other opinions. Structure of society, the individual, and computers and crime are sub-topics and at least one of these is studied in depth.

- **Human – Computer Interaction** which examines the complex relationship between the human environment and software and hardware systems.

HOW IS IPT STUDIED?

In studying Information Processing and Technology, students engage in a variety of practical and theoretical learning experiences. These might include retrieving information from databases; designing, implementing, testing, evaluating and writing documentation for databases, algorithms and expert systems; participating in class discussions, role plays, dilemmas and scenarios; examining and investigating programs they learn; critically evaluating media reports and advertisements and undertaking case studies to investigate existing or proposed systems.
HOW ARE STUDENTS ASSESSED?
Student achievement is assessed on the basis of two criteria: Knowledge (declarative knowledge – knowledge and understanding of information technology terminology, concepts and principles; and procedural knowledge – ability to apply these concepts and principles in practice) and Research and Development (with dimensions of analysis, synthesis, evaluation and communication).

Student responses to objective tests, writing tasks and projects are the principal sources of assessment data. Students may also be required to undertake practical exercises, oral presentations and collections of annotated media articles.

WHERE MIGHT IPT LEAD?
Knowledge and skills learned in the study of IPT will be useful for students wanting to pursue any tertiary course but will be especially helpful for courses in information technology, computer science, engineering, arts, applied science, business and information management (librarianship).

WHO SHOULD STUDY IPT?
Students interested in the increasing use of information technology in our lives would be well suited for this course. Good language skills, logical thinking, patience and perseverance would be valuable attributes for students considering IPT.

It is recommended that students should have reached a Sound Level of Achievement in English and Extension Mathematics in order to enrol in IPT.