Diploma in Information and Communications Technology – Fast Track

Subject Description

Tertiary Study Skills
This non-award subject is designed to introduce students to academic writing conventions provide knowledge of different academic genres, taking lecture notes, exam preparation methods, effective study techniques and organisational skills.

Computer Networking
This introductory subject in computer systems networking covers basic networking topologies, Ethernet fundamentals, ISO OSI layers, routing, switching and sub-nets, the Internet architecture, networking protocols including TCP/IP, important networking devices such as repeaters, hubs, bridges, routers and getaways, basic management and security issues. This unit is also the first of three units which will prepare students for industry based networking certification.

Database Design and Development
This subject provides students with an opportunity to gain a basic knowledge of database design and development including data modelling methods and techniques and database implementation using a database management system.

Information Systems in Context
This subject aims to give students the ability to recognise and expound about business information systems with regard to type, function, and purpose, and the frameworks within which these systems are used.

Object Orientated Analysis
Analysing and modelling requirements using the object-oriented (OO) approach is the core strength of this subject. The Unified Modifying Language (version 2.0) is used as a modelling standard for creating OO models in the problem space. This unit consolidates and extends the knowledge gained by students in Introduction to Analysis and Design unit and applies it to practical OO analysis work through a case study.

Principles of Professional Communication 1
This unit offers students an introductory understanding of a range of communication theories and practices necessary for academic work and professional success.

Programming Fundamentals
Programming Fundamentals covers basic computer architecture, basic data and file structures, concept of algorithms, programming constructs, programming language features and functions.
System Analysis and Design
This unit provides problem solving experience in computerised information systems. This subject incorporates systems concepts, theories and methodologies. Students will gain the ability to derive system requirements from problem definitions and to produce system models using process, data, object and network modelling.

Statistical Decision Making
This unit provides an introduction to Systems Analysis and Design. It incorporates systems concepts, theories and methodologies to provide elementary problem solving experiences in computerised information systems. Students gain the ability to derive systems requirements from problem definitions and to produce system models using process, data, object and network modelling. Design and implementation issues include (but may not be limited to) elementary database design, input, output and user interface design and prototyping. Students are introduced to roles and responsibilities in information systems development, selection of packaged solutions and the principles of software quality.

OR

Statistics for Business
This subject introduces the basic concepts and techniques of statistics that are particularly relevant to problem solving in business. The subject encompasses a broad coverage of descriptive statistics, including the presentation of data, descriptive statistics, the role of uncertainty in business decision making, hypothesis testing and basic forecasting.