



Subject:	Information Technology
Subject Outline	<p>This subject provides an understanding of fundamental computer concepts and an opportunity to learn about and experience applications in the area of image manipulation, web coding, information systems and programming.</p> <p>This subject is strongly recommended for any student considering study in the field of Information Technology. The subject facilitates an entry pathway into higher/tertiary vocational education courses, at undergraduate degree or Diploma/Advanced Diploma level. The subject will support students to understand the foundational theories and skills relevant to Information Technology subjects.</p>
Online Subject Delivery	<p>Students in Information Technology complete blocks of learning, which consists of four interactive lessons and checkpoint tasks. These are completed on Moodle, our state of the art online learning platform. Students will be supported in completing these blocks of learning by live classes and live question and answer sessions via Zoom web-conferencing. These live online classes are student-focused and communicative with learners being expected to contribute to group discussion. Teachers monitor student's progress and provide individualised feedback on checkpoint tasks. Students have access to the Info Tech forum to post questions and review discussions.</p>
Face to Face Subject Delivery	<p>Students in Information Technology participate in a blended learning approach that includes class time supported by activities online via Moodle. Classes are student-focused and communicative with learners being expected to contribute to group discussion. Participation in online learning before class prepares students for in-class activities and maximises the value of face to face learning. Students can prepare for class, review content and skills learned as well as complete checkpoints online.</p>
Graduate Attributes (GA)	<p>On completion of the Foundation Program, students will be able to:</p> <ol style="list-style-type: none">1. Communicate effectively in English in a variety of contexts, circumstances and modes2. Demonstrate relevant, practical and theoretical knowledge in a subject area3. Apply relevant academic literacy skills in a subject area4. Apply relevant numeric literacy skills in a subject area5. Apply critical, analytical thinking, and problem solving skills for academic contexts6. Work independently and collaboratively in a cross-cultural context7. Demonstrate academic integrity
Objectives	<p>On successful completion of this subject, students will be able to:</p> <ol style="list-style-type: none">1. Explain and apply knowledge of fundamental concepts of information technology (GA 2, 4, 5);2. Apply knowledge of web coding principles to create a web page (GA 2, 4, 5, 6);3. Apply programming concepts to control objects in a web page (GA 2, 4, 5, 6);4. Apply knowledge to design and implement an information system (GA 2, 4, 5, 6).



Content	<p>Term One</p> <p>Computer Essentials Theory (CE)</p> <ul style="list-style-type: none">• Computer hardware• Computer Software including applications and operating systems• Networking fundamentals• Computer number systems - binary, decimal and hexadecimal <p>Web Coding (WC)</p> <ul style="list-style-type: none">• The html markup language• Layout elements• Form elements• Structure and content• International standards for HTML and CSS• Cascading style sheets <p>Term Two</p> <p>Computer Essentials Theory (CE)</p> <ul style="list-style-type: none">• Image file formats and manipulation fundamentals <p>Term Three</p> <p>Computer Essentials Theory (CE)</p> <ul style="list-style-type: none">• Social and ethical issues arising from effects of computer use in society <p>Information Systems (IS)</p> <ul style="list-style-type: none">• Database fundamentals and creating an information system• Tables columns rows• Datatypes• Unique and not null concepts• Primary and foreign keys• Importing data• Modelling information systems using ERM <p>Term Four</p> <p>Computer Programming (PR)</p> <ul style="list-style-type: none">• Programming fundamentals• Variables including arrays and parameters• Repetition structures• Decision structures• Functions• Algorithms <p>Information Systems (IS)</p> <ul style="list-style-type: none">• Structured Query Language
Attendance	<p>Attendance is a visa requirement. Attendance contributes directly to the academic success of the student. Attendance is monitored as described in the Attendance Policy.</p> <ul style="list-style-type: none">• Face to face: Students are expected to attend all classes and complete all Moodle checkpoints.



	<ul style="list-style-type: none"> Online: Students are expected to attend all live online classes and complete all Moodle checkpoints. Engagement with question and answer sessions and Moodle lessons is highly recommended.
Learning Resources	<ul style="list-style-type: none"> IES Subject Moodle site Free web coding and programming software for Windows and MacOS Free ERD design web-based software

Students are assessed through the following assessment activities:

Assessment Activity	Description	Weighting
TERM 1		
E-commerce Project Part 1	Students are expected to complete a proposal to explain the e-commerce site they intend to create for the year. This involves detailing the name of their business, the customer audience, the types of products they will sell, the options for each product that a customer can select, for example size and colour	2%
TERM 2		
E-commerce Project Part 2	Students demonstrate application of skills and knowledge of web coding (with HTML) by building the single page application framework for their e-commerce site from a scaffolded template. Students are required to style the pages using their knowledge and skills of styles in cascading style sheets (CSS).	12%
Online Examination 1	Students answer an extensive set of questions to assess their HTML, CSS and database knowledge via an online exam system.	20%
TERM 3		
E-commerce Project Part 3	Students demonstrate application of skills and knowledge in information systems by creating an entity relationship diagram, a relational schema and finally a database to store the products, customer data and purchase data for their e-commerce site.	5%
Moodle Activities	Students are expected to study online resources and answer eight quizzes to confirm their knowledge of computer essentials part 1 – computer fundamentals and computer essentials part 2 – image manipulation ethics and computer essentials part 3 – social issues of computing.	8%
Online Examination 2	Students answer an extensive set of questions to assess their SQL knowledge via an online exam system.	12%
TERM 4		
E-commerce Project Part 4	Students demonstrate application of skills and knowledge in programming, structured query language (SQL) and web coding. They use a scaffolded template to link their web page to their database to create a working single page application (SPA). The SPA should permit a customer to order a product and have that order recorded in the database for the store manager to inspect using SQL reports.	16%
Online Examination 3	Students answer an extensive set of questions to assess their programming knowledge via an online exam system.	25%