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Bachelor of Computer Science

- **Digital Systems Security**
- **Game and Mobile Development**
- **Big Data (until 31 Dec 2025)**
- **Cyber Security**

Bachelor of Information Technology

Bachelor of Business Information Systems

Bachelor of Computer Science (Digital Systems Security & Big Data) (until 31 Dec 2025)

Bachelor of Computer Science (Big Data & Cyber Security) (until 31 Dec 2025)

Bachelor of Computer Science (Digital Systems Security & Cyber Security)

These subjects are for all the above programmes. Please refer to the course structure table for the subjects offered for the respective programmes.

CSIT127– Networks and Communications

This subject introduces students to the fundamentals of data communications and computer networks. Topics covered include: different types of data and the history of data communications; signals; modulation and multiplexing, switching and routing, network architectures: LANs, WANs and the Internet; Internet services and protocols; and emerging topics. The subject explains computer networking models that interconnect diverse communication systems, including the ISO reference model and the TCP/IP protocol Suite.

CSIT128 - Introduction to Web Technology

This subject introduces students to fundamental web technologies that underlie the World Wide Web and its commercial applications. Topics include an overview of internet communications, an introduction to the web-browser/web-server client-server systems, HTML5/CSS/XHTML/XML markup languages, web forms and client side scripting. Students will build working web-sites with dynamic content. The subject explains the differences between client-side and server-side Web development, and demonstrates how to build simple applications using scripting and other tools. The subject also covers current Web “standards” and future W3C recommendations.

CSIT114 - System Analysis

This subject provides an introduction to different techniques and technologies for understanding and specifying what a computer based information system should accomplish. It examines the complementary roles of systems analysts, clients and users in a system development life cycle. Students will learn different fact-finding techniques to elicit system requirements and how to develop business models, data and process models, and object models representing a system. Students will also make use of a Computer Aided Software Engineering (CASE) tool to build those models that capture the specifications of a system.

CSIT115 - Database Management Systems

This subject investigates three major areas of modern data management systems: data modelling, data processing, and data integration. The goal is to learn fundamental concepts in data management, including conceptual modelling, relational data model, processing of relational data with Structured Query Language (SQL), and enforcing data availability. Students will develop skills in the design, implementation, processing of relational databases, as well as in

user management. Topics covered include data models, object-oriented and relational conceptual modelling, DDL, DML, advanced SQL querying techniques, database server architecture, and discretionary access control (DAC). By the end of the subject, students will be equipped to design, implement, and manage relational database systems.

CSIT121 - Object Oriented Design and Programming

The aims of this subject are to consolidate and extend student's knowledge and skills in structured programming and to develop their understanding and practice of object oriented programming. To achieve this aim the subject will provide students with an opportunity to develop further programming skills and good coding style; develop skills in using the object oriented concepts of encapsulation, inheritance, polymorphism, access control, overloading and messaging; develop and display competency in the design and implementation of object oriented programs to solve business problems.

CSIT110 - Fundamental Programming with Python

This subject uses Python language to introduce students with fundamental programming concepts such as procedural programming, variable, data type, array, recursive function, conditional expression, selection statement, repeating instruction. This subject also develops student skills in the design and implementation of well-structured algorithms to a range of mathematical problems.

CSIT214 - IT Project Management

The primary aim of this subject is to acquaint students with the methodologies and processes associated with the task of managing information technology and software development projects. Topics include: stakeholder and impact analysis, setting project objectives and conflict resolution, project planning and the selection of appropriate project approaches, software project effort estimation, cost-benefit analysis, activity planning and scheduling, risk management, contract management, quality assurance, professional and ethical responsibilities, and case studies.

CSIT226 - Human Computer Interaction

The subject provides students with an understanding of Human Computer Interaction (HCI) principles and practices, and how to apply them in the context of developing usable interactive computer applications and systems. The subject also emphasises the importance of taking into account contextual, organisational, and social factors in the design of computer systems. Students will be taken through the analysis, design, development, and evaluation of user interfaces. They will acquire hands-on design skills through an interaction design project. The subject will cover topics including user-centred design, the development process, prototyping, usability testing, measuring and evaluating the user experience and accessibility.

CSIT314 – Software Development Methodologies

The subject introduces to students modern methodologies for software development. Topics may include software development life cycle activities, the role of software process models, different types of evolutionary models, Unified Process and UML, agile principles of software development, Dynamic Systems Development Method (DSDM), Scrum and extreme programming, test driven software development, the Capability Maturity Model Integration (CMMI), software engineering knowledge management, software architecture, and emerging trends in software development processes.

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CSIT321 – Project

This subject is the capstone project for students in Computer Science and Information Technology it aims to provide students with: practical experience in complete systems development. The projects connect groups of students with supervisors and clients that are facing an ICT-based problem for which the students are required to find innovative and creative solutions. Working in groups, students design, implement, and document a system. This involves: project planning and scheduling, seminars and individual presentations, group coordination, research of proposed application domain, use of design methodologies, design documentation, coding, module and system integration, testing, verification, and implementation. Teams will meet weekly with supervisors to discuss progress and problems.

CSCI203 - Algorithms and Data Structures

Approaches to analysing algorithm complexity and implementation efficiency will be introduced; and used to motivate the development of appropriate abstract data types. Students will be taught to recognise the role of abstract data types and algorithms in solving real-world problems; and given the opportunity to implement solutions to such problems.

CSCI235 - Database Systems

The subject presents advanced topics in the modern relational database technology and it introduces the new non-relational (NoSQL) database technologies. The relational database technology component of the subject includes database normalization, introduction to indexing in relational database systems, programming of relational database server with stored procedures, functions, and triggers, concurrency control and database recovery techniques, design and programming of distributed database systems. The non-relational (NoSQL) database technology component of the subject includes a review of non-relational data models such as the key-value data model, document-oriented model, column-family stores, and graph data model. The non-relational component of the subject presents the new approaches to database design, data distribution, consistency preserving, and transaction processing in distributed and clustered database systems. Programming of NoSQL database server includes the new data definition and data manipulation languages, a new query language, indexing, design and implementation of replication and sharding.

CSCI251 – Advanced Programming

This subject develops a thorough understanding of advanced programming features, and how to implement them in modern C++. It consists of three primary components, namely procedural programming, object-based/object-oriented programming, and generic programming. In addition to the core of each of those components, this subject addresses topics including resource management tied to RAII, in particular the management of dynamic memory; the use of the standard template library; profiling and debugging; programming for efficiency including concepts such as moving; exception handling; C++ RTTI; and recent additions to C++.

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ISIT204 - Principles of eBusiness

This subject aims to provide students with an understanding of eBusiness fundamentals. Today most businesses compete in a global environment and a sound strategy for online business is essential to facilitate this. This subject covers key areas of eBusiness, including: business-to-consumer, business-to-business and business-to-government electronic commerce (EC); online business models and electronic payment systems (EPS) and EC technology basics. Standards, regulation and policy, security and social and economic issues will also be considered in the contexts of business Intranets, Extranets and the Internet. The subject also provides an introduction to the 'Patterns for eBusiness' approach to eBusiness analysis and design.

ISIT224 – Management Information Systems

This subject introduces students to an overview of all the major Information Systems found in a typical business covering systems such as finance, HR, payroll, inventory, sales, CRM, SCM and ERP. Students will be introduced to the processes involved in managing information systems in the contemporary business environment. Students will gain a deep understanding of the issues surrounding the key components of IS (i.e. people, software, hardware, data, and communication technologies), systems and development concepts, technology acquisition, and IT-enabled improvement in quality, speed and agility in modern organisations.

ISIT219 – Knowledge and Information Engineering

This subject explores issues in using IT to support knowledge sharing and reuse. Challenges in representing and sharing knowledge in the context of deploying knowledge systems are studied. Additional challenges in heterogeneous IT environments are also examined. The subject presents systematic approaches for knowledge engineering via a contemporary Web and modern information modelling approach. The appropriate application environments, acquisition tools and representation schemes for content management are examined along with their relationship to contemporary issues in Web technology.

MGNT110 - Introduction to Management

This subject introduces management as a process designed to communicate and coordinate action to achieve organisational objectives. The subject introduces students to the concepts of managing and organisations through dominant management perspectives and theories. Students will develop skills relating to critical thinking, collaboration and communication skills as tools for analysing management and organisational issues.

ECON251 – Industry and Trade in Asia

This subject studies the neo-classical, structuralist and culturalist views on industrialisation in Asia using country specific examples. It examines and applies trade and industry policies, economic integration, investment flows and the international monetary system. It further explores the ‘East Asian Model’ and its application by other countries in the region. The causes of extraordinary growth and meltdown in Asian countries are analysed. The recent challenges in the region and the strategies to overcome the main challenges are emphasised.

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CSIT242 – Mobile Application Development

The proposed subject provides students with knowledge for mobile application design, development, implementation and deployment. The students will examine different mobile platforms and learn how to use different tools for mobile application development. The subject includes issues such as mobile interface design and data persistence. Students will develop technical skills necessary to develop applications using several languages, frameworks and tools.

CSCI262 - System Security

The subject covers some fundamental computer security technologies in the following aspects: (1) Operating system security such as physical security, file protections, system abuses, attacks and protections; (2) Database security including data integrity, data recover, data encryption/ decryption, access control, and authentication; (3) Mobile code security including malicious logic, host and mobile code protection, mobile agents' security. (4) Intrusion detection; (5) Security policies; (6) Security management and risk analysis.

CSCI361 - Cryptography and Secure Applications

This subject develops the skills and knowledge necessary to identify and address security problems in a variety of simple communication models. Topics covered include: Classical cryptology, Modern secret key cryptography including block (DES, AES) and stream ciphers (RC4), security properties (authentication, integrity, confidentiality, availability), public key cryptography (knapsacks, RSA, Rabin, Elgamal), digital signatures (RSA, DSS, Elgamal) , hashing (birthday paradox, Merkle-Damgard construction), MACS's, Key management (PKI, certificates, key establishment/exchange/transport, Diffie-Hellman), Identification protocols, Privacy preserving (mix-nets), Secret sharing. Applications studied include some of: email security, SET, E-payment, E-voting, Fair exchange.

CSCI368 - Network Security

This subject provides a survey of network security technologies, and explores them in practice. This includes but is not limited to, network-based threats, security failure in network protocols, authentication servers, certificates and public-key infrastructures, security provisions in communication protocols and standards, and electronic mail security.

CSCI236 - 3D Modelling and Animation

This subject provides students with a hands-on introduction to the use of computers for developing models of three-dimensional objects and viewing them in 3D as still images and animations. Topics covered include basic modelling primitives, from polygons to spline surfaces; tools to modify simple objects; surfacing concepts such as textures and bump maps; basic lighting of scenes; the animation process including key frames, articulated structures, camera movement and morphing; lighting effects such as volumetrics and radiosity. The subject uses the industry standard software package Maya.

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CSCI336 – Interactive Computer Graphics

This subject examines concepts and techniques underlying interactive computer graphics. The subject will introduce principles fundamental to understanding components in the graphics pipeline. Students will acquire practical hands-on experience in graphics programming using appropriate application programming interfaces. Among others, topics covered will include graphics programming, shaders, vectors and matrices, transformations, homogeneous coordinate systems, viewing and projection, lighting and shading, clipping, rasterisation, hidden-surface algorithms, discrete techniques, and current trends (e.g. graphics for mobile devices).

CSCI356 – Game Engine Essentials

This subject will introduce fundamental concepts and techniques required in the development of games and game engines. Game engine components that will be examined include rendering, collision and physics, artificial intelligence among others. The design and development of these components will be illustrated using appropriate software and application programming interfaces. Among others, topics covered in this subject will include game loops and time management, handling input, cameras, particles, collision detection, rigid-body dynamics, terrain, path-finding, and state machines.

CSCI316 - Big Data Mining Techniques and Implementation

The subject considers the problems related to data mining techniques and implementation in a Big Data environment. The topics include data pre-processing techniques, pattern, association and correlation discovery; classification and clustering; stream and real-time processing techniques; and post-processing techniques like outlier detection, as well as statistical, proximity, and clustering based approaches. Laboratory classes and hands-on programming exercises related to these topics will provide the students with the abilities to design and implement Big Data algorithms and to use already existing software libraries. The subject also addresses the problems of scalability, selection of appropriate implementation techniques, and performance aspects when mining Big Data.

CSIT302 – Cybersecurity

Cybersecurity is a global issue that knows no boundaries and affects national security, businesses and individuals alike. Students in this subject will be introduced to the broad area of cybersecurity in conjunction with issues related to cybersecurity. Among others, topics covered in this subject will include cyber threats and attacks, mobile security threats and malware, cloud security, security testing, digital forensics, cybercrime, and trusted computing.

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CSCI369 – Ethical Hacking

This subject introduces the use of hacking skills for defensive purposes. The subject develops critical thinking and troubleshooting skills. It aims to re-purpose tools and resources to acquire more out of them in order to discover entirely new things, which will be useful for other purposes. It develops the students ability to think outside the box and learn new skills. The subject prepares students for the ethical hacking certification.

CSCI322 – Systems Administration

This subject will cover the practical and theoretical aspects of system administration. The various resource areas which have to be managed will be discussed and examined, and the possible methods of monitoring and controlling them in various systems will be investigated. The features unique to both single processor and networked systems will be investigated.

ISIT332 – Business Process Management

Business process management (BPM) combines a process-centric and cross-functional approach to improving how organizations achieve their business goals. A BPM solution makes use of IT to model, automate, manage and optimize business processes to increase productivity. Within this subject students learn important process-centric issues in business system design and implementation. Focus will be placed on both business and technical perspectives of BPM. Topics covered include: Basic business process concepts; Business process modelling; Business process outsourcing; Business process re-engineering; Business process improvement; Workflow and business process automation; Business process management and service-oriented architecture.

ISIT306 – Strategic eBusiness Solutions

This subject aims to provide students with an understanding of how to design integrated solutions for eBusiness using a pattern-oriented approach. Enterprises, both large and small, as well as government institutions, are increasingly becoming reliant upon eBusiness infrastructure. Knowing the strategic business and technology principles and practices related to the design process is becoming increasingly important for a given organisation. This subject will cover business scenarios including electronic data interchange (EDI), supply chain management (SCM), enterprise application integration (EAI), customer relationship management (CRM), sales force automation (SFA); and knowledge management systems (KM).

ISIT207 – Frontend Web Programming

The subject provides students with a practical knowledge of web programming concepts and techniques and user interface design techniques used in the creation of dynamic web sites. The subject will provide students with an opportunity to develop an understanding of the principles of client and server-based scripts as well as user-interface constructs. Students will also be able to apply these principles. The subject provides an in-depth look at the object-oriented features of web programming. Students will have exposure to appropriate software development tools to complete a data cycle of input data –store data –output data via the web.

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ISIT307 – Web Server Programming

The subject aims to integrate the previous knowledge which students have gained through subjects on web technologies, web programming and databases to create real-world web applications like shopping carts or advanced form processing systems etc. It also introduces students to open-source programming languages in web development so that they can inexpensively develop sophisticated web applications. Students will become familiar with the integration of programming, databases, web-applications, and structural and object oriented programming.

ISIT312 – Big Data Management

The subject addresses the problems of managing and processing of extremely large data sets in a single-server centralized computing systems and in multi-server clustered and distributed computing systems. The topics related to processing of large data sets in centralized environments include the techniques based on the classical data warehouse technologies such multidimensional data model, data warehouse architecture, data warehouse design both at conceptual and logical levels, and data warehouse processing with appropriate specialised query operations. The topics related to processing of large data sets in distributed environments include the techniques that can be implemented on the clusters of inexpensive computing nodes using MapReduce programming model. The subject introduces the students to the real time analytical processing of large data sets with analytical cluster-based distributed data processing systems. Discussion and hands on exercises related to these topics will equip students to meet the challenges in Big Data environments and appreciate the added challenges of dealing with unstructured data. Students will be presented with opportunities to do hands-on work with appropriate commercial tools.

CSCI366 – Mobile Multimedia

This subject will in general introduce fundamental knowledge regarding the acquisition, representation, processing and manipulation, compression and consumption (i.e. visualization) of multimedia data including audio, images and video. The treatment will focus on mobile devices and mobile development platforms. The subject will include a laboratory component where students design and implement simple multimedia applications on a mobile platform.

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ECON100 – Economic Essentials for Business

This subject introduces students to essential macroeconomic and microeconomic ideas, models and reasoning. This economic knowledge is used to explore important questions such as, is economics a value free science?, do individuals behave rationally?, how and why do market structures vary across different industries and why is this knowledge important?, do markets ever fail, and if so, why?, what are some causes and implications of inflation and unemployment?, how do monetary and financial systems operate?, and how do governments typically respond to domestic macroeconomic volatility? While these questions will not be fully answered in this introductory subject, policy challenges and case studies will be used to demonstrate the importance of basic economic reasoning if sensible answers to economic and social challenges are to be found, and to stimulate greater awareness of economic approaches to the analysis of contemporary social issues.

MGNT102 - Professional Communication: Concepts and Practices

MGNT102 introduces the theory and practice of communication in social and professional settings, to develop competencies in a fundamental and important human practice which is also a valuable workplace skill.

This subject focuses on culturally sensitive, respectful, ethical, and effective communication, personally and professionally, using a range of modes and environments. It examines and discusses cultural, organisational, and interpersonal communication processes, and incorporates practical professional skills including presentations and writing for focussed purposes such as academia and social media. Other concepts addressed, which assist in building relationships and understanding, are non-verbal communication, active listening, and feedback.

MARK213 - Marketing Principles

Marketing is a set of activities and processes for creating, communicating and delivering offerings and facilitating satisfying exchange relationships in a way that delivers value for consumers and society. Organisations need to know how to define and segment a market and how to position themselves strongly by identifying marketing opportunities and problems, and developing products, services, experiences and ideas for chosen target markets more effectively than their competitors. Marketing is essential for all organisations including manufacturers, wholesalers, retailers, professional services firms including lawyers, accountants and architects, and non-profit institutions including charities and museums. The subject examines the fundamental concepts underpinning the marketing process and theories relevant to the study and practice of marketing. It serves as a foundation for further studies in business by developing an overview of where marketing fits within organisations and what framework marketing provides for enhancing and enabling the conduct of a business.

CSIT123 - Computing and Cyber Security Fundamentals

This subject aims to equip students with an understanding of fundamental computing knowledge. In addition, the subject aims to introduce students to key cyber security concepts and principles. To achieve these aims, topics covered in this subject include fundamental computing content such as the history of computing and the evolution of technology; concepts in information processing, computer architecture, and operating systems; and cyber security topics including forms of attack, detection, and prevention, cyber security policy and risk assessment.

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CSIT213 - Java Programming

The aims of this subject are to consolidate students' knowledge and skills in object-oriented programming and to develop their understanding and practice of Java programming. To achieve these aims, the subject will provide students with opportunities to develop their Java programming skills using concepts such as class encapsulation, inheritance, polymorphism, interface, exception handling, files, input/output streams, JavaFX GUI, and Lambdas and streams.

CSCI218 - Foundations of Artificial Intelligence

This subject presents the foundations of artificial intelligence (AI). It introduces the history of AI, its evolution, and the recent development. Also, it presents the representative topics selected from the important areas in the field of AI. For each of these topics, this subject introduces the fundamental concepts, classic methods, and important applications. This subject concludes with a summary of the present of AI and its future trends. By providing the fundamental knowledge of AI, this subject helps students to gain the basic idea of this important field, paving their way to study more advanced AI techniques.

CSIT375 - Artificial Intelligence and Cybersecurity

Artificial Intelligence (AI) has emerged as a popular solution for building smarter and safer security systems. AI assists in keeping pace with cyberattacks by predicting and detecting suspicious network activities and automating incident analysis. In this subject, students learn how AI techniques are used to prevent cyberattacks and detect threats and network anomalies, in conjunction with issues related to cybersecurity. Students will gain practical experience in developing strong cybersecurity defences using AI. Topics covered in this subject include fundamental AI techniques for cybersecurity, machine learning-based malware detection, automatic intrusion detection, and securing data with machine learning.

ACCY122 - Accounting Principles

This subject introduces students to the principles of a double-entry accounting system to identify, classify, process, record and present accounting information. Students use accounting software to record business transactions, process accounting information and prepare financial statements. The subject introduces the role of ethics and professional judgement, in the context of an evolving business environment.

MATH255 - Mathematics for Computing

This subject provides key mathematical and statistical knowledge and skills for students in both computer science and information technology. The subject is split into two strands, namely Discrete Mathematics and Data Analysis.

In the discrete mathematics strand students will develop basic skills in propositional logic, predicate logic, formal proof, set theory, graph theory, as well as the theory of relations and functions, with a focus on skills required for learning computing. Further, students will study elements of pre-calculus and calculus that support the data analysis strand. The data analysis strand focuses on knowledge to support analysis in the IT workplace. It begins with a review of fundamental probability, followed by exploratory data analysis for univariate data, leading into correlation and simple linear regression for bivariate data. Study continues with discrete probability distributions including binomial and Poisson; and continuous probability distributions including the normal and exponential. Final topics include sampling distributions, an introduction to confidence intervals and hypothesis testing for means and proportions. These topics will be taught with appropriate statistical computing software.

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CSIT328 - Web Security

The web, also known as World Wide Web (WWW), is now one of the essential Internet services. However, as web services become versatile, the number of web vulnerabilities has increased dramatically. In this subject, students will gain insight into the latest web threats. They will also learn the fundamentals of web security and understand the technical aspects of web defence.

CSCI323 - Modern Artificial Intelligence

This subject introduces students to the advanced theories, algorithms and applications in the modern development of AI. For each topic covered, its important concepts and principles will be presented to help students gain an essential understanding. Advanced approaches, methods and algorithms will be introduced to show how artificial intelligence is realised. State-of-the-art applications, tools, and platforms will be demonstrated and analysed to connect theories with practices. This subject will equip students with advanced knowledge of modern AI and enhance their skills to appropriately choose and apply AI techniques to resolve practical problems.

MATH255 - Mathematics for Computing

This subject provides key mathematical and statistical knowledge and skills for students in both computer science and information technology. The subject is split into two strands, namely Discrete Mathematics and Data Analysis.

In the discrete mathematics strand students will develop basic skills in propositional logic, predicate logic, formal proof, set theory, graph theory, as well as the theory of relations and functions, with a focus on skills required for learning computing. Further, students will study elements of pre-calculus and calculus that support the data analysis strand.

The data analysis strand focuses on knowledge to support analysis in the IT workplace. It begins with a review of fundamental probability, followed by exploratory data analysis for univariate data, leading into correlation and simple linear regression for bivariate data. Study continues with discrete probability distributions including binomial and Poisson; and continuous probability distributions including the normal and exponential. Final topics include sampling distributions, an introduction to confidence intervals and hypothesis testing for means and proportions. These topics will be taught with appropriate statistical computing software.

CSIT213 - Java Programming

The aims of this subject are to consolidate students' knowledge and skills in object-oriented programming and to develop their understanding and practice of Java programming. To achieve these aims, the subject will provide students with opportunities to develop their Java programming skills using concepts such as class encapsulation, inheritance, polymorphism, interface, exception handling, files, input/output streams, JavaFX GUI, and Lambdas and stream

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ISIT212 - Corporate Network Planning and Design

The systematic design of networks includes requirements gathering, requirements analysis, the development of logical design and the conversion of the logical design to a physical design. The use of architectures will provide students with a high level framework that consists of addressing and routing, performance characteristics, security and network management. The subject will teach students to relate this framework to basic data communication techniques developed in previous subjects as well extend their knowledge of addressing and routing and performance characteristics.

THESE SUBJECTS ARE NOT OFFERED AT SIM :

Information and Communication Security

This subject provides students with a real-world approach to Information and Communication Security Issues. Both managerial and technical aspects are addressed. The subject will cover the need for security, professional and regulatory considerations, security technology, physical security, information security, and personnel issues. Students will be required to engage in problem solving activities that apply the principles learned in the subject, and will also be required to acquire knowledge of current practice and technologies.

Web Technologies

This subject introduces students to fundamental web technologies such as HTTP, markup languages, XML,and client-side scripting. The subject teaches students how to use some of these technologies to develop static and dynamic web pages with an emphasis on client-side scripts. The subject explains the differences between client-side and server-side Web development, and shows students how to build simple applications using scripting and other tools. The subject also covers current Web “standards” and future W3C recommendations.

Social Impact of Technology

The subject will address the social impact of technologies related to individuals in a home, university and social environment. The issues of social impact will draw from the following areas: social networking, intellectual property, privacy, security and social vices. Students will learn to critically argue the role of technology in society.

Professional Practice & Ethics

This subject covers the body of ideas and commonly held principles that broadly apply to ethical behaviour in the information technology environment. ISIT301 will examine the social and ethical implications of information technologies as they apply to citizens and information technology professionals. It will present legal, regulatory, social and ethical perspectives on the use of such technologies through topics of intellectual property, privacy, networking, security, reliability. The inclusion of a professional ethics is to prepare students for careers in the information technology industry. The extent to which technological advancements have altered societal expectations is also examined.

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Industry Placement

Industry placement should: 1. provide students with the opportunity to gain significant exposure to the industry environment and develop a significant appreciation and understanding of the various activities that are associated with the ICT industry; 2. enable students to participate in a hands-on learning experience in real-time industry situations; 3. allow students to observe, and where possible, engage in a practical project or task, in order for them to apply and challenge their knowledge and skills in design, development and problem solving; 4. expose students to industry networks and career opportunities that are available to them as they further their studies and instill confidence in their ability to be able to participate in the workforce in roles that require the inherent traits of motivation, responsibility, sound decision making and effective communication across cultures; and 5. satisfy requirements for the degree by professional bodies such as ACS.

Information Technology Project

This subject is a group project, conducted under the supervision of an academic staff member(s). Staff members will propose real-world IT projects ranging from the selection and implementation of IT to the development and implementation of software systems. Involves: project planning, group coordination, seminars and individual presentations, research of proposed application domain, preparation of reports and, depending on the project, various system development methodologies. Students will form teams, each of which will design, implement and document a solution to one of the proposed projects. Teams will meet weekly with supervisors to discuss progress and problems.