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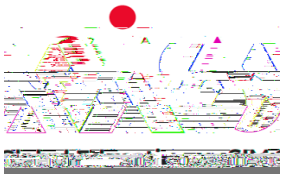


ACCY111 – Accounting Fundamentals in Society

This subject introduces the role of accounting information in society including its social and ethical aspects relating to both the individual and the organisation. The subject introduces basic accounting language, concepts and techniques to identify, classify, process, record and present accounting and financial information. The subject also considers accounting information that can be used for making decisions about past and future economic events in a variety of business and social settings.

ACCY112 – Accounting In Organisations

The subject advances understanding of accounting in organisations. The subject introduces accounting for complex equity structures, and develops the theoretical and technical aspects of accounting for assets and the protection of assets through internal controls. Accounting for the past and future is examined through the introduction of cost structures and their application in solving fundamental business problems using cost-volume profit analysis. The application of budgets is explored.

COMM121 – Statistics for Business

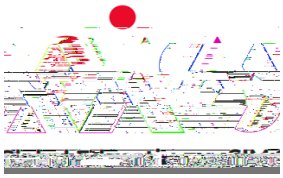
The aim of the subject is to introduce students to quantitative techniques and their application to the business world with an emphasis on the decision-making process. The main focus of the subject is business statistics and topics will include descriptive statistics, probability, sampling, confidence intervals, hypothesis testing, elementary correlation, regression analysis and time series forecasting. Students are also introduced to the use of computer programs for estimation and analysis to improve business decision-making.

CSCI203 - Algorithms and Data Structures

Approaches to analysing algorithm complexity, introduced in first year subjects, will be reviewed. The use of abstract data types as a design technique, and their implementation in solutions to problems, will form a large part of the subject. The concept of efficient code and ways to measure efficiency (both empirically, by timings, and theoretically) will be studied.

CSCI235 - Database Systems

This subject investigates the major areas of modern database systems: 1. Design and programming of relational databases 2. Design and programming of semistructured databases (XML native database systems) 3. Design and programming of distributed database systems (NoSQL database systems) 4. Concurrency control and data recovery in database systems. The following topics are included: Introduction to conceptual modelling; Principles of relational database model; Processing relational databases with Structured Query Language (SQL) and its procedural extension (PL/SQL); Principles of semistructured database model; Processing of semistructured databases with XQuery and



XPath; Design and implementation of distributed database systems; normalisation of relational databases; Transaction management and recovery in database systems.

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 LightWave.

CSCI251 – Advanced Programming

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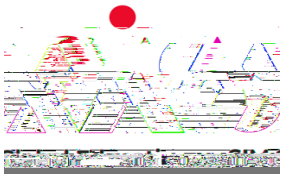

CSCI316 - Big Data Mining Techniques and Implementation

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.

CSCI317 –

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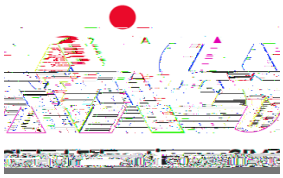
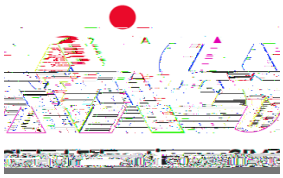


CSCI336 – Interactive Computer Graphics

Introduction to computer representation of lines and points; mathematical models; transformations in 2 and 3



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.

CSCI388 - Virtual and Augmented Reality

This subject explores concepts and principles underlying virtual reality and augmented reality applications for various platforms. The subject will introduce students to theories and techniques required to gain an understanding of virtual and augmented reality technologies, which will allow students to devise solutions for these interactive technologies. The subject will also provide students with practical hands-on experience in designing and developing virtual and augmented reality applications using appropriate hardware and software.

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.

CSIT111 - Programming Fundamentals

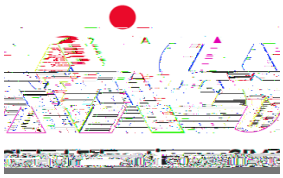
The broad aim of this subject is to develop in students an understanding of the fundamental principles of programming. The subject focusses on the object oriented view of problem analysis and solving. It enables students to develop skills in the design and implementation of well structured programs in a range of domains.

CSIT113 - Problem Solving

This subject introduces the analysis of problems and the strategies used to manage them, primarily in the context of computing. Problem classification is introduced, as are formal and informal approaches to problem solving. The importance of method and method classification for problem solving strategies is motivated, and the need to compare and analyse strategies is justified. Introductory tools for the analysis of strategies are covered. Appropriate representations for problem solving are explored.

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 - Data Management and Security

The subject investigates three major areas of modern data management systems: data modelling, data processing, and data security. The goal of the subject is to learn the fundamental concepts in data management including conceptual modelling, the relational data model, processing of relational data with Structured Query Language (SQL), enforcing the concepts of data confidentiality, integrity, and availability data management systems. The subject develops the skills in the design, implementation, processing, and security of data management systems. The subject covers the following topics in data security: discretionary access control, user management, enforcing data security and integrity. The subject also explains the important ethical issues associated with responsible disclosure, responsibility, liability, security weaknesses, and privacy in data management 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.

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.

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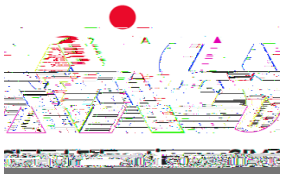

CSIT214 - IT Project Management

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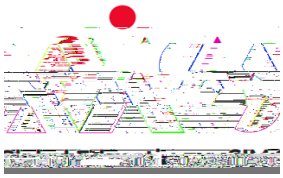


ISIT204 - Principles of eBusiness

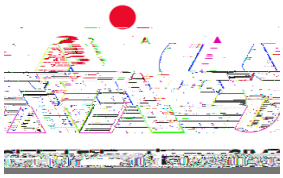
This subject aims to provide students with an understanding of eBusiness fundamentals. Today most businesses compete in a global environment and a sound strategy for online business is essential to facilitate this. This subject covers key areas of eBusiness, including: business-to-consumer, business-to-business 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.

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.

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 systemaTJETQrc wppropwithuTo)-3(n)-3(t)-3(o)4(n)-38(te)7(m)--3(.)-3(T)11(h)



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.

MATH223 - Mathematics for Information Technology

MATH223 is a core subject for information technology students, providing key mathematical and statistical knowledge. The subject is split into two strands: the Calculus Strand and the Data Analysis Strand. Calculus Strand: This strand begins by reviewing m