

## **Master of Computing (Data Analytics) (Top-up)**

### **Strategic Network Design**

The subject investigates the design and implementation of a strategic network plan. Topics to be covered include: The Need for Planning and the Planning Process: planning teams, strategic planning, the network plan, security planning and implementation planning. The Design Process: design teams, translating the plan into design criteria, requirements capture and specification, design requirements and criteria, choosing topographies and architectures, evaluating plans. The Implementation Process: implementation teams, design traceability, managing people and technology, managing the implementation process

### **Security Essentials**

This subject provides essential knowledge of security. The subject will also introduce a wide range of modern security topics including privacy, authentication, network defence, decentralized systems, cyber physical system security, usability and information warfare. Students will be able to apply the knowledge gained from this subject to address various security issues.

### **Enterprise Architecture and System Integration**

This subject explores enterprise architecture concepts, case studies and framework. This will equip students with the knowledge and skills to translate enterprise information systems strategy into infrastructure that supports the flow and processing of information in an organisation. Under an enterprise architecture, students will focus on integrating individual disparate information system into a seamless enterprise information system. The students will learn to develop system integration solutions by addressing issues from social, corporate, and technical perspectives.

### **Information Visualization and Decision Support**

This subject addresses the principles and techniques of information visualisation in Decision Support Systems. The first half of the subject focuses broadly on information visualisation, as well as on aspect of design, composition, and interactivity in information visualisation to give students the understanding of visual information representation in decision support systems. The second half of this subject focuses broadly on the role of analytics, modelling, interpretation, sensitivity, and risk

analysis in decision support. The subject concludes with current trends and future directions in information visualisation.

### **Enterprise Web Development**

Virtualisation and web services are widely used IT technologies currently implemented by many organisations. This subject aims to provide fundamental knowledge and applicable hands on skills of enterprise-level web system development. Typically, cloud computing and relevant technologies enabling microservice architecture, web API, mash up software and so on, will expose the ready-to-implement solutions for enterprise IT systems to the students. This subject also covers mainstream composable web components and services, including but not limited to .Net and AWS, for students to consider various design issues and to address common challenges in developing modern applications. Students will be equipped with a mixture of creative and technical abilities incorporating cloud networking, data storage and processing, application development frameworks and infrastructure provision.

### **IT-enabled Supply Chain Management**

Information technology (IT) enabled supply chains are transforming the modern business landscape. Lectures in this subject will show how IT is being used to create and support operational and strategic supply chain advantages. Laboratory activities will provide hands-on knowledge of the application of enterprise software in supply chain around the globe (e.g., SAP).

### **Security, Ethics and Professionalism**

This subject aims to provide students with a deep understanding of the security, risk management, and professional practice aspects, including ethical and social issues, of enterprises and organisations in the digital world. In today's world, organisations must be prepared to defend against threats in digital space. Decision-makers must be familiar with the principles and best practices of information security to better protect their organisations. This subject covers key issues in information security management, including security options, ethical and social issues, best practices, the regulatory environment and Government policy, risk management and control.

### **Information Design and Content Management**

This subject examines the use of information in organisations and how that information is acquired and represented using the latest information modelling techniques. The subject has a focus on the use of Web technologies to manage and access information. It addresses the growing need for systematic approaches to Content Management and document management.

## **Professional Capstone Project**

In this subject, students will work in a group on a professional project. Project tasks include eliciting and justifying project requirements, researching, designing and evaluating a solution, and communicating results of the project. During this process, students will need to demonstrate an understanding of the professional practice and ethical considerations.