

computing, as well as secure information system development will also be discussed.

COMP 7340 Enterprise Application Architecture (3,2,1) and Integration

Pre/Co-requisite: COMP 7320 Professional Methodologies for Information Systems

This course aims to cover key concepts and design principles related to enterprise application architecture and enterprise application integration. It includes topics like layering structure, business logic organization, patterns for object/relational access layers, model-view-control patterns for Web, message-based enterprise application integration, and recent advances in enterprise application architecture.

COMP 7350 Enterprise Information Systems (3,3,0) (E) Development

Prerequisite: Postgraduate student standing

This course provides an in-depth knowledge of development of enterprise information systems (EISs). Topics include alternative development strategies, agile development, software maintenance and functionalities of EISs.

COMP 7360 Enterprise Networking and (3,3,0) (E) Cloud Computing

Prerequisite: Postgraduate student standing

This course provides an in-depth knowledge of enterprise networking and cloud computing. Topics include Ethernet LANs, wireless LANs, MANs, WANs, TCP/IP internetworking, network security, network management, cloud computing architecture, cloud computing services, design and implementation of cloud computing.

COMP 7370 Information Processing in Financial (3,3,0) (E) Services

Prerequisite: Postgraduate student standing

This course provides an in-depth knowledge of technology applications in financial industry. After completing the course, students will understand the financial operations and the impacts of information technology to the financial sector. Students will also practise the use of selected financial software and learn how to develop an application to support financial processes.

COMP 7380 Computational Finance (3,2,1) (E)

Prerequisite: Postgraduate student standing and basic knowledge in probability, statistics and differential equations

This course is designed to introduce the principles of computational finance. Topics covered include financial market mechanics such as options, futures, and other derivatives, hedging strategies using futures, and trading strategies involving options. Detail explanations of option pricing models such as the Black-Scholes-Merton equation and its solution and implementation will be given. Sensitivity factors affecting option prices will be discussed.

COMP 7390 Algorithms for Financial (3,2,1) (E) Information Systems

Prerequisite: Postgraduate student standing and basic knowledge in probability and statistics

This course is to introduce various algorithms in financial computation. Specifically, algorithms for interest rates, term structure, and bond price calculations will be studied. Factors affecting bond price volatility will be discussed. The Capital Asset Pricing Model will be studied. In addition, the theory of time series for financial forecasting will be investigated. Hands-on computer techniques for these calculations will be examined.

COMP 7400 Financial Analysis and Decision (3,2,1) (E) Making

Prerequisite: Postgraduate student standing

This course aims to introduce basic concepts in operational finance, such as financial statements concepts, financial ratio analysis, and etc., and to describe the techniques and tools that

support financial decision making. Students will learn how to apply the decision analysis and making techniques and tools to various phases of financial processes.

COMP 7410 Medical Image Processing, Analysis (3,2,1) (E) and Applications

Prerequisite: Postgraduate student standing

In this course, students will learn fundamental image processing techniques, characteristics of different types of medical images, and how to apply different classical image processing techniques to different types of medical images. Students will also learn the basic concept, structure as well as the components in Picture Archiving and Communication Systems (PACS).

COMP 7420 Decision Analysis and Support in (3,2,1) (E) Healthcare Systems

Prerequisite: Postgraduate student standing

In this course, students will learn the advanced techniques and methodology of health information management, and the models and algorithms used in computer-based public health and clinical decision making. They will also learn the related architectural design, structure, functions and components of decision support systems.

COMP 7430 Health Information Systems: (3,3,0) (E) Architecture and Technologies

Prerequisite: Postgraduate student standing

This course provides a comprehensive study of the key architectural principles, open standards and development technologies behind healthcare information systems. At the same time, it introduces the present state of the art as well as the future trends in the development of electronic health record systems, and discusses several core technical issues in acquiring, integrating, analyzing and utilizing healthcare data.

COMP 7440 Web-based and Ubiquitous Health (3,2,1) (E) Care

Prerequisite: Postgraduate student standing

This course covers the healthcare systems applicable to Web, social media, and ubiquitous environment. It will explain to students how the healthcare system can monitor patients and elderly as they maintain their normal everyday activities, through body sensors and home environment sensors. It will further introduce how the data are collected to make trend analysis, determine state of well-being and warn health workers of potential problems.

COMP 7450 User Interface Design and (3,2,1) (E) Usability Testing

Prerequisite: Postgraduate student standing

This course provides an introduction to and overview of user interface design and usability testing. It integrates theories and methodologies from computer science, cognitive psychology, design, and many other areas. Issues include: command languages, menus, forms, and direct manipulation, graphical user interfaces, computer supported cooperative work, information search and visualization, World Wide Web design, input/output devices, and display design.

COMP 7460 MSc Practicum for Information (3,*,*) (E) Systems

Prerequisite: Postgraduate student standing

Students work on group or individual system development projects. Each project is supervised by an academic staff, and it may be co-supervised by practising professionals. The project demands careful planning and creative application of underlying theories and enabling technologies. Students can select project in consultation with their project supervisors. A written report and an oral presentation are required upon successful completion of the project. Each project will be assessed by the supervisor(s) and one additional academic staff on four aspects: (1) project management and progress, (2) methodologies and results, (3) report writing, and (4) oral presentation. Through these projects, students will develop (1) mastery of integrating concepts with