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

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 Cloud Computing (3,3,0)

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 Financial Information System Development and Administration (3,3,0)

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: Pricing and Trading (3,2,1)

Prerequisite: Basic knowledge in probability and statistics

This course is designed to introduce the principles of computational finance and financial data analysis, with an emphasis on hands-on practice. The objective is to teach the theory and application of modern quantitative finance from a computer professional's perspective. The course will cover topics such as the modeling and pricing of derivatives, time series analysis, and trading strategies. The students will also gain hands-on experience in software tools such as Finance toolbox in MATLAB, as well as in implementing financial analysis instruments.

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

Prerequisite: Basic knowledge in Probability and Statistics

This course is to introduce the advanced algorithm design methodologies and techniques including divide-and-conquer, linear programming, numerical methods, randomized algorithm, greedy and approximate algorithms, dynamic programming, and genetic algorithm. The financial algorithms in term structure calculation and risk management will be described. Also, the applicability issue of algorithms in financial information systems will be addressed through case studies.

COMP 7400 Financial Analysis and Decision Support Systems (3,2,1)

This course introduces basic concepts in operational finance, such as opportunities, portfolio, risks returns, and liabilities. The aims of this course are to provide a study of the tools and techniques to support various stages of the decision making process and to explore key factors of successful decision support systems for finance problems. The students will learn how to apply decision support systems to various phases of financial processes.

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

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 Public Health and Clinical Decision Support Systems (3,2,1)

This course provides an in-depth knowledge of health care industry, health informatics technologies, expert systems, knowledge engineering, evidence-based medicine, and clinical decision support systems. Students will learn the methodology, techniques and models of clinical decision support. They will learn the architectural design, functions and components, deployment and evaluation of clinical decision support systems.

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

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 Care (3,2,1)

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 Usability Testing (3,2,1)

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 Systems (3,*,*)

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 practice in information systems, (2) creative and systematic problem solving skills for analysing, designing, and implementing information systems, and (3) report writing and presentation skills for effective communication in IT enterprises.

COMP 7510 Foundations of Information Technology (3,3,0)

This course introduces the basic structures and operations of the computer systems. Various components of operating systems are studied in detail. Basic concepts of data networks and LANs with respect to the OSI and TCP/IP models are examined. Students who complete this course will be suitably prepared for the other courses offered in the MSc in IT Management curriculum.

COMP 7520 Foundations of Management in the IT Context (3,3,0)

The course overviews the concepts in different business management disciplines so as to provide a foundation for students in managing IT projects and organizations.