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

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

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 Development (3,3,0) (E)

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) (E)

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 Services (3,3,0) (E)

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 Information Systems (3,2,1) (E)

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 Making (3,2,1) (E)

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 and Applications (3,2,1) (E)

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 Healthcare Systems (3,2,1) (E)

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: Architecture and Technologies (3,3,0) (E)

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 Care (3,2,1) (E)

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) (E)

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,*,*) (E)

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

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 7470 Health Information Privacy (3,3,0) (E)
Prerequisite: Postgraduate student standing
This course introduces health information privacy from legal, ethical, technical and economic aspects. Students will learn conceptions and legal foundations of health information privacy, security primitives, different privacy models, different anonymization algorithms, privacy technologies for biometrics, and privacy solutions for extended health data sharing scenarios. Students will also learn the economics of health information privacy. This course provides opportunities to explore cutting-edge privacy solutions in the context of health information and apply privacy technologies to real-life applications.

COMP 7480 Programming for Web and Mobile Information Systems (3,2,1) (E)
Prerequisite: Postgraduate student standing
This course aims at providing students with the opportunities to improve their understanding of the web and mobile information system developments. Through this course, students will learn: (1) how to install, manage and maintain the information systems, (2) the web programming and the database techniques, as well as hands-on experience, for developing web information systems, and (3) how to extend the information systems to mobile platforms.

COMP 7510 Foundations of Information Technology (3,3,0) (E)
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) (E)
The course overviews the concepts in different business management disciplines so as to provide a foundation for students in managing IT projects and organizations.

COMP 7530 IT Forum (1,1,0) (E)
Students are exposed to the current IT practices through seminars given by IT professionals and academic staff, interacting in small groups with IT practitioners, and/or company visits. After completing this course, students will understand the current IT practice.

COMP 7540 IT Management: Principles and Practice (3,2,1) (E)
This course deals with the management of information systems and technology as it is being practised in organizations today to produce value for businesses and consumers.

COMP 7550 IT Project Management (3,3,0) (E)
This course deals with project management and addresses issues in information technology project development. On completion of the course, students should (1) have acquired basic skills for project managers, (2) be able to develop and prepare project plans for effective resource utilization, and (3) be able to manage IT development projects.

COMP 7560 Information Systems Auditing (3,3,0) (E)
This course is to give students a thorough grounding in the theory, techniques and practical issues involved in computer-based information systems auditing. The students will have an in-depth understanding of auditing concepts and methods after taking this course.

COMP 7570 IT Laws and Ethics (3,3,0) (E)
This course examines legal and ethical issues in the use of information technology. On completion of the course, students should (1) understand privacy, intellectual property rights, contracts and licenses as well as common criminal issues, (2) understand the legal obligations of a computer professional, (3) understand computer ethics and the importance of professional codes of conduct, and (4) be able to derive and justify a personal position on moral and ethical matters related to computers in society.

COMP 7580 Electronic Transformation in Business (3,3,0) (E)
This course covers the use of technology in many aspects of a business, with particular emphasis on concepts and practices for modeling, specifying and integrating within-enterprise and B2B business processes. How the business process related to customer relationship management, enterprise resource planning, supply chain management, etc. could be transformed in the Internet era will be covered. Some case studies related to e-transformation in Business will also be discussed. Students after taking this course should be able to (1) understand how e-technologies can facilitate process/application integration with and across enterprise, and (2) evaluate the cost and benefit that e-transformation can bring to different business processes of an enterprise.

COMP 7590 Information Management Systems Development (3,2,1) (E)
To extend the student's knowledge of information management systems and development methodology through the study of advanced theories and methodologies, and to examine the critical issues of current information systems (IS) research, so as to provide a student an integrative perspective of information management systems and development.

COMP 7630 Web Intelligence and Its Applications (3,3,0) (E)
This course introduces the fundamental concepts as well as practical applications of Web Intelligence (WI) which combines contemporary Artificial Intelligence and advanced Information Technology in the context of Web-empowered systems, environments, and activities. Also, advanced topics related to Web Intelligence (WI) and their impact to different sectors of the society will be covered. After taking this course, students should be able to (1) identify the possible impact of Web Intelligence in the society, and (2) apply WI related techniques to advance existing Web-based systems and on-line business platforms.

COMP 7640 Database Systems and Administration (3,3,0) (E)
This course is to provide an in-depth knowledge of relational database management systems (RDBMS). Topics include: conceptual modeling of a database, relational data model, relational algebra, database language SQL, relational database design, data storage, index structures, query evaluation, transaction processing, concurrency control, and crash recovery. In addition, advanced topics such as distributed databases and data warehouses will also be covered. The students will have a thorough understanding of RDBMS after taking this course.

COMP 7650 Data Mining and Knowledge Discovery (3,2,1) (E)
Prerequisite: Basic knowledge in probability and statistics, basic database concepts
This course aims to introduce fundamental issues of knowledge discovery and the common data mining techniques including statistical methods and machine learning methods. Furthermore, their potential applications to a variety of areas such as business, finance, medicine, and so forth, are shown via some case studies.

COMP 7680 Internet and World Wide Web (3,3,0) (E)
Students will learn the principles of the Internet and the World Wide Web and study some advanced/current topics. After