for modeling, specifying and integrating within-enterprise and B2B business processes. Business processes related to customer relationship management, enterprise resource planning, supply chain management, etc. will be covered. Students gain a heightened awareness of emerging technologies and trends in e-business.

COMP 4888-9 Final Year Project (3,0,9)
Prerequisite: Year IV standing in Computing and Information Systems
Students will carry out a piece of highly independent work, which could be a system development project or an academic research project, under the supervision of a faculty member. A project report and an oral presentation/demonstration are required upon successful completion of the project. Other deliverables for research projects may be a research paper or research prototype.

COMP 4898-9 Final Year Project (3,0,9)
Prerequisite: Year IV standing in Computer Science
Students will engage in a highly independent problem solving activity under the supervision of a faculty member. Students are expected to gain practical experiences of applying software systems principles and techniques acquired from the Programme to the solution of a real-life problem. The project demands careful planning and creative applications of underlying theories and enabling technologies. A final report and an oral presentation are required upon successful completion of the project.

COMP 7010 Advanced Topics in Computer Science and Information Systems (3,3,0) (E)
Prerequisite: BSc in Computer Science or equivalent
This course studies in-depth the theories and issues in some specialized areas of computer science and information systems that are of current interest.

COMP 7030 Advanced Theory and Methodology for Information Systems Development (3,2,1)
Prerequisite: Research postgraduate student standing
To extend students' knowledge of informaton systems and development methodology through the study of advanced theories and methodologies, and to examine the critical issues of current IS research, so as to provide a student an integrative perspective of information systems and development.
At the end of the study of this course, students should be able to develop new solutions and models for an information system. They should also have an appreciation of methodological pluralism (that there is not one but many methods and that the 'correct' method is contingent on the problem being studied).

COMP 7040 Advanced Pattern Recognition (3,2,1)
Prerequisite: BSc in Computer Science or equivalent
This course gives students some advanced topics in the areas of pattern recognition, computer vision and image processing.

COMP 7050 Advanced Topics in Distributed Computing (3,2,1)
Prerequisite: Postgraduate standing
This course offers a study of the design and implementation issues of distributed computing systems. It revisits the designs and approaches used by traditional centralized systems and proposes relevant solutions based on the distributed computing environment. The topics for discussion include distributed computing in communications, process management, synchronization, consistency and replication, fault tolerance, file systems and case studies.

COMP 7060 Advanced Topics in Intelligent Systems (3,3,0)
Prerequisite: Research postgraduate student standing
This course deals with the advanced topics in intelligent systems. Through a systematic training, students will be able to conduct independent intelligent systems research and develop theoretical or practical solutions in some selected domains, such as learning, planning, self-organization, soft-computing, adaptive computation, evolutionary computation, and intelligent agents.

COMP 7070 Advanced Topics in Machine Learning (3,2,1)
Prerequisite: Postgraduate standing
This is an advanced course that will not only focus on the recent literature on the applications of machine learning to problems from a range of different areas, including image/signal processing, robotics, information retrieval and data mining, but also let students learn the state-of-the-art learning theories and techniques based on statistics, neural networks and information theory.

COMP 7080 Postgraduate Seminar (1,0,0) (E)
Students are exposed to the current IT research, development and practice via seminars, IT forum and presentations given by academic scholars, IT professionals and research students. After completing this course, students will: (1) learn the frontier knowledge of IT research and development; (2) broaden their mind; (3) understand the current IT practice; and (4) share their experience with academic scholars and IT professionals.

COMP 7090 Ubiquitous Computing (3,2,2)
Prerequisite: Postgraduate standing
This course discusses the concepts of ubiquitous/pervasive computing. This includes location-based services provided by the ubiquitous environment, positioning techniques for localization, and networks and systems issues for the design and implementation of ubiquitous/pervasive computing systems and applications. Students need to understand the key components, devices and technologies involved and recognize research issues in ubiquitous computing. This course also provides an opportunity for students to gain hands-on experiences in building applications that realize the usefulness of ubiquitous computing.

COMP 7100 Computer Graphics and Animation (3,2,2)
Prerequisite: Research postgraduate student standing
Students will learn (1) the mathematical foundation and algorithms for creating computer graphics including transformation, rendering, and (2) the algorithms for animation. Students will also gain practical experience on these topics by using graphics application programming interface (API) and develop a graphics application prototype.

COMP 7110 Analytic Methods for Computer Science Research (3,3,0)
Prerequisite: Research postgraduate student standing
This course studies the various analytic methods and provides the mathematical knowledge and skills necessary for computer science students to approach the study of advanced topics in the discipline of computer science at the graduate level.

COMP 7320 Professional Methodologies for Information Systems (3,2,1) (E)
Prerequisite: Postgraduate student standing
This course provides students with an integrative perspective of information systems and development by introducing different kinds of information systems and describing the underlying methodologies for such development. Topics include, but not limited to: model of information system, integrated view of different methodologies, methodology framework, soft systems methodology, and object-oriented methodologies. Through this course, students will be able to develop new models and solutions for an information system

COMP 7330 Information Systems Security and Audting (3,3,0) (E)
Prerequisite: Postgraduate student standing
This course aims to introduce students to the fundamental concepts and techniques in computer and network security, and giving students an overview of information security and auditing, and to expose students to the latest trend of computer attack and defense. Other advanced topics on information security such as mobile computing security, security and privacy of cloud

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