**COMP 4075 Web Intelligence Concepts and Applications (3,3,0)**

Prerequisite: COMP 2007 Object Oriented Programming, COMP 3015 Data Communication and Networking, MATH 2005 Probability and Statistics for Computer Science

This course introduces the fundamental concepts as well as practical applications of contemporary Artificial Intelligence (e.g. incorporating knowledge discovery and data mining, intelligent agents, and social network intelligence) and advanced Information Technology (e.g. involving wireless networks, ubiquitous devices, social networks, and data/knowledge grids) in the context of Web empowered systems, environments, and activities. In addition, it discusses the techniques and issues central to the development of Web Intelligence (WI) computing systems.

**COMP 4076 Selected Topics in Digital Media and Mobile Technology (3,2,1)**

Prerequisite: The prerequisite depends on the selected topics. The prerequisite and the selected topics will be announced before the semester starts.

Students will learn some state-of-the-art topics in digital media or mobile technology.

**COMP 4077 Selected Topics in Enterprise Systems and Business Intelligence (3,3,0)**

Prerequisite: The prerequisite depends on the specific topics covered. The prerequisite and the chosen topics will be announced before the semester starts.

Students will learn state-of-the-art topics in enterprise systems and business intelligence. Emphasis will be placed on the current issues, methodologies and/or practice. After completing this course, students will understand some current topics in and methodologies of enterprise systems and business intelligence.

**COMP 4085 Selected Topics in Intelligent Informatics (3,3,0)**

Prerequisite: The prerequisite depends on the specific topics covered. The prerequisite and the chosen topics will be announced before the semester starts.

This course deals with the selected topics in intelligent informatics. Students will learn some state-of-the-art topics in intelligent informatics, through which students are able to solve the problems in some selected domains, such as machine learning, planning, self-organization, evolutionary computing, data mining, Web intelligence, intelligent agents, brain informatics, and parallel and distributed information processing.

**COMP 4086 Selected Topics in Theoretical Computer Science (3,3,0)**

Prerequisite: COMP 3005 Design and Analysis of Algorithms

This course provides an in-depth study on a selected topic of theoretical computer science. The topic to be covered may vary from semester to semester, and is to be determined by the instructor. The topic could be a specific area of algorithmic problems (e.g. graph algorithms, combinatorial optimization), or a particular algorithm design paradigm (e.g. randomized algorithms, parallel algorithms).

**COMP 4087 Selected Topics in Web Technology and Data Engineering (3,3,0)**

Prerequisite: The prerequisite depends on the specific topics covered. The prerequisite and the chosen topics will be announced before the semester starts.

Students will learn state-of-the-art topics in Web technology and data engineering. Emphasis will be placed on the current issues, methodologies and/or practice. After completing this course, students will understand some current topics in and methodologies of Internet and large scale systems.

**COMP 4095 Information Systems Management and Professional Practices (3,2,1)**

Prerequisite: Year IV standing in Computing and Information Systems

The course deals with the management of information systems and technology as it is being practised in organizations today to produce value for businesses. It also examines important professional issues in contemporary practice to help students become effective participants in a team of professional information systems practitioners.

**COMP 4096 Business Intelligence and Decision Support (3,2,1)**

Prerequisite: COMP 2016 Database Management

Students will learn the methodologies and concepts of business intelligence, including the characteristics, architectures, and development of data warehouses and data marts. After completing the course, the students will understand the features and applications of Online Analytic Processing (OLAP), and identify the different types of OLAP. Emphasis will be placed on the understanding of enabling technologies and their applications to improve business operations and decision making.

**COMP 4097 Mobile Computing (3,2,2)**

Prerequisite: COMP 3015 Data Communications and Networking

This course introduces the basic concepts and principles in mobile computing. This includes the major techniques involved, and networks and systems issues for the design and implementation of mobile computing systems and applications. This course also provides an opportunity for students to understand the key components and technologies involved and to gain hands-on experiences in building mobile applications.

**COMP 4105 Web Search Principles and Technology (3,2,1)**

Prerequisite: COMP 2007 Object Oriented Programming

This course provides a comprehensive examination of different popular search systems for diverse types of data such as text, image, video and audio information. Students will be introduced to the powerful features in these systems, as well as the technology underpinning them. Students will learn how large information repositories are efficiently organized, managed and searched, and the principles of Web search engines and information retrieval.

**COMP 4888-9 Final Year Project I & II (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)**

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.