

COMP 3006 Software Engineering (3,2,1) (E)

Prerequisite: COMP 2015 Data Structures and Algorithms, MATH 1205 Discrete Mathematics

This course discusses principles and practical aspects of software development.

COMP 3007 Systems Analysis and Design (3,3,0) (E)

Prerequisite: COMP 2016 Database Management and COMP 2007 Object Oriented Programming

In this course, students will learn some methodological approaches to the development of properly designed and documented information systems. The object oriented approach will be covered. This course is incorporated with COMP3008-9 Information Systems Development Project to let students practise the development of information systems.

COMP 3008 Information Systems Development Project I (1,1,2)**COMP 3009 Information Systems Development Project II (1,1,2)**

Prerequisite: COMP 2007 Object Oriented Programming, COMP 2016 Database Management

Co-requisite For COMP 3008: COMP 3007 Systems Analysis and Design

This course provides a chance to students to apply a methodological approach to the development of information systems. Students will work as a team and go through phases in system development life cycle, and implement solutions to the identified problems. They will also practise the presentation and communication skills in team management, report submission and project demonstration.

COMP 3015 Data Communications and Networking (3,3,1) (E)

Prerequisite: COMP 2007 Object Oriented Programming

Students will learn the principles of data communications, computer networks and network programming.

COMP 3016 Internship (1,0,0)

Prerequisite: Year III standing or the consent of the Department Through internship work, students are expected to acquire the following kinds of experience: (1) application of academic and professional information technology/information system knowledge to real-world problems; (2) interaction with clients and/or technical workers; and (3) the stringent requirements in the work environment. This experience prepares students for employment as professional practitioners upon graduation. Students are required to work for at least six weeks full time or equivalent.

COMP 3026 Digital Media Computing (3,2,2)

Prerequisite: COMP 2015 Data Structures and Algorithms, MATH 2005 Probability and Statistics for Computer Science, MATH 1005 Calculus

This course introduces basic properties of different types of digital media, namely audio, image and video in multimedia systems. As data compression is the most important enabling technology that makes modern multimedia systems possible, data compression algorithms and the international standards of these digital media will be discussed.

COMP 3027 Enterprise Information Systems (3,2,1)

Prerequisite: Year III or above standing in Computer Science or Computing and Information Systems

The course provides an advanced introduction to enterprise information systems and equips students with practical skills in the use of one type enterprise information systems.

COMP 3035 Health Information Technology (3,3,0) (E)

Prerequisite: Year III or above standing in Computer Science, and Computing and Information Systems

This course is designed to better equip computer science students for building their career in healthcare sector. After completion

of this course, students will learn the structures, operations and workflow in healthcare organizations. Students are able to describe the data involved and data standards in the healthcare industry. Moreover, students can explain how IT can support and improve the healthcare systems.

COMP 3040 Internet and the World Wide Web (3,2,1) (E)

Prerequisite: COMP 2330 Data Communications and Networking

Students will learn the principles of the Internet and the World Wide Web, study some real-world Internet systems and applications, and learn some current topics.

COMP 3045 Advanced Algorithm Design, Analysis and Implementation (3,2,2) (E)

Prerequisite: COMP 2007 Object Oriented Programming, COMP 2015 Data Structures and Algorithms

This course aims to help students develop advanced algorithm design and analysis skills as well as problem solving techniques for implementing solutions for a variety of challenging problems. The course has two major components: (1) theory of computation: automata, language theory, and computational complexity; and (2) problem solving: programming for a variety of algorithms for real challenging problems.

COMP 3050 Distributed and Cloud Computing (3,3,0) (E)

Prerequisite: COMP 2330 Data Communications and Networking

This course introduces the techniques underlying the design and engineering of distributed systems and cloud computing systems. Topics include distributed system models, computer clusters, virtualization, datacenters, design of cloud computing platforms, and service-oriented architectures. Students will also acquire hands-on experience in cloud programming.

COMP 3060 Digital Media Computing (3,2,2)

Prerequisite: COMP 1210 Data Structures and Algorithms and MATH 1140 Computational Mathematics

This course introduces basic properties of different types of digital media, namely audio, image and video in multimedia systems. As data compression is the most important enabling technology that makes modern multimedia systems possible, data compression algorithms and the international standards of these digital media will be discussed.

COMP 3070 Digital Media Computing and Communications (3,2,1) (E)

Students will learn the properties of digital media, the principles of digital media compression, the principles of digital media communication, and the protocols and methods for transporting digital media through the Internet.

COMP 3080 Interactive Computer Graphics (3,2,2) (E)

Prerequisite: COMP 1210 Data Structures and Algorithms and MATH 1140 Computational Mathematics

Students will learn (i) the mathematical foundation and algorithms for creating computer graphics including transformation, rendering, and (ii) the algorithms for enabling Human-Object interaction in virtual environment. Students will also gain practical experience on these topics by using graphics application programming interface (API) and develop a graphics application prototype.

COMP 3090 Social Computing and Web Intelligence (3,3,0) (E)

Prerequisite: COMP 1180 Structured Programming

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