

COMP 1610 Interactive Computing for Visual Communication (3,3,0)

Media convergence has transformed the computational machine into an unprecedented rich multimedia communication medium with ubiquitous connectively and interactive capability. This new medium presents endless possibilities with applications full of dynamic contents and rich visual user interface experience. Expertise in both computer science and visual communication are needed in order to fulfil the application demands. This course aims to address these demands and prepare the students with all-around trainings and skills to master the challenges. Unlike traditional courses which are merely designed for one specific discipline of students, this course offers a unique platform for students without and prerequisites in mathematics, computer programming or visual design to acquire and establish the knowledge necessarily for the challenges. This course introduce high-level programming concepts and approaches visual design on the new medium using approachable and intuitive computational visual building block environment such as Processing developed by MIT.

COMP 2010 Structured Systems Analysis and Design (3,3,0)

Prerequisite: COMP 1160 Database Management and COMP 1180 Structured Programming

In this course, students will learn some methodological approaches to the development of properly designed and documented information systems using the structured approach. This course is incorporated with COMP 2031-2 Group Project to let students learn how to work as a team for developing software systems.

COMP 2020 Object Oriented Systems Analysis and Design (3,2,1)

Prerequisite: COMP 1150 Object-Oriented Programming and COMP 1160 Database Management

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 COMP 2031-2 Group Project to let students learn how to work as a team.

COMP 2031 Group Project (1,1,2)

COMP 2032 Group Project (2,0,2)
Co-requisite: COMP 2010 Structured Systems Analysis and Design

The aim of the group project is to (1) develop students' ability to apply a methodological approach to the development of systems, by thorough analysis, good systems design and comprehensive documentation; (2) simulate a real-life working environment in the classroom, so that students gain experience of working as team members participating in systems development; and (3) improve the students' presentation and communication skills.

COMP 2040 Applied Information Systems Laboratory I (1,0,3)

Prerequisite: COMP 1180 Structured Programming
This laboratory provides practical hands-on experience on network and server administration, server-side web programming, and CASE tool.

COMP 2050 Applied Information Systems Laboratory II (1,0,3)

Prerequisite: COMP 1180 Structured Programming
This laboratory provides practical hands-on experience on state-of-the-art software including various system and networking tools, multimedia tools, and modelling tools.

COMP 2220 Software Engineering (3,2,1)

Prerequisite: COMP 1210 Data Structures and Algorithms and MATH 1130 Discrete Structures

This course discusses principles and practical aspects of software development.

COMP 2230 Design and Analysis of Algorithms (3,3,0)

Prerequisite: COMP 1210 Data Structures and Algorithms and MATH 1130 Discrete Structures

This course builds on the study of the analysis and implementation of algorithms and data structures from COMP 1210. The goal is to introduce a number of important algorithms that are interesting both from a practical and theoretical point of view. Algorithm design paradigms such as divide-and-conquer and dynamic programming will be discussed, and algorithms for e.g. sorting, searching and graph problems will be developed.

COMP 2320 Operating Systems (3,3,1)

Introduces the fundamentals of operating systems design and implementation. Topics include an overview of the components of an operating system, mutual exclusion and synchronization, deadlock and starvation, implementation of processes and threads, resources scheduling algorithms, memory management, and file systems.

COMP 2330 Data Communications and Networking (3,3,1)

Prerequisite: COMP 1170 Introduction to Structured Programming or COMP 1180 Structured Programming

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

COMP 2550 Internship (0,0,0)

Prerequisite: Year II standing in BSc (Hons) in Computing Studies (Information Systems) 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 2600 Software Development Workshop II (0,2,2)

Prerequisite: COMP 1180 Structured Programming, COMP 1160 Database Management and COMP 2330 Data Communications and Networking

This workshop introduces the state-of-the-art technologies in Internet and Web applications. Practical hands-on experience on various system tools, networking tools, web programming, and modelling tools will be provided.

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

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 3050 Distributed Computing Systems (3,3,0)

Prerequisite: COMP 2330 Data Communications and Networking

This course introduces the needs, key concepts, and techniques underlying the design and engineering of distributed computing systems. The discussion will be emphasis on communications, synchronization and concurrency control, process management, distributed file services, and case studies. Also included is an introduction to clustering computing and parallel algorithms.

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