Bachelor of Information Systems (Hons) Information Systems Engineering (IA)

Programme Aims

The aim of Bachelor of Information Systems (Hons) Information Systems Engineering is to equip graduates with good technical skills and knowledge to systematically engineer (i.e., plan, analyse, design and develop) information systems using appropriate methodologies and techniques. In addition, the graduates will be exposed with knowledge on the management and maintenance of information systems in organisations.

Programme Objectives

This programme prepares graduates to:

1. have strong analytical and critical thinking skills to solve problems by applying knowledge, principles and skills in various aspects of Information Systems Engineering
2. understand systems requirements and have the ability to plan, design and manage information systems, with the relevant technology and knowledge to enhance organisational performance
3. possess good technical knowledge especially in the system design and application development that allows for technology adaptation and adoption
4. become good problem-solvers and innovative thinkers who are able to apply information technology knowledge in the computer world
5. possess awareness and skills for lifelong learning, research and career development
6. possess communication, team, leadership and interpersonal skills, and awareness of the social, ethical and legal responsibilities when carrying out information systems tasks and activities
7. have entrepreneurial skill and a broad business and real world perspective

Programme Learning Outcomes

Upon the completion of the programme, the students will be able to:

1. compose, analyse and specify user and systems requirements in terms of computing and systems related resources for the development and integration of software, hardware and firmware application systems
2. plan, design and build prototype and functional application software and systems using acceptable and standard methods and tools; such as for analysis and design, choice of language, communication and database systems, and compiler-debugger tools
3. test, assess conformance to specifications, implement and commission functional software and application systems
4. identify, evaluate and select suitable technologies and approaches to use or adopt in the development of useful systems
5. model and simulate algorithmic and procedural designs, and to appraise feasibility of applications and systems design
6. document all aspects of systems development and operations; to present case or report on development; and to critique relevant information and papers
7. organise, lead and manage projects on development of various forms of business computer application systems as well as to develop technopreneurship skills
8. undertake independent study of business and systems operations, information systems development techniques, methods and approaches to resolve problems; and use emerging and existing technologies, applications and systems towards the fulfilment of personal, skills and professional development
9. apply skills and principles of lifelong learning in academic, research and career development
10. apply effective soft skills of communication, teamwork and leadership with peers, clients, superiors and society at large