Objective of Course of Study

This programme prepares graduates to be competent in the technologies driving the information technology. It covers computing, electronics, the design of digital systems, computer architectures and processors, integrated circuit (IC) design, embedded systems design, data communication and network, intelligent systems and digital signal processing.

Due to the fact that computer systems are rapidly developing fields, in order that the degree course remains current, latest devices and technologies will be introduced into the curriculum. An important part of this course is the use of sophisticated Electronic Design Automation (EDA) tools in the design of contemporary electronic circuits and computer based systems. Topic of high-level design of digital systems will be taught.

The aim of the programme is to produce creative and flexible computer engineers with the skills to design the next generation of computer systems. Graduates will be able to design a computer system from the processor level based on general-purpose programmable processor, semi-custom programmable processor or custom processor as well as from chip level based on programmable IC fabric, semi-custom IC fabric or custom IC fabric.

Programme Outcomes for Computer Engineering:

After completing this programme, the graduates will be able to:

- Apply knowledge of mathematics, computer science and electronics engineering to conceptualize, identify, discuss and explain computer engineering related problems
- Operate test and measurement equipment for electronic hardware prototyping and testing
- Utilize the computer technology (hardware and system software) and modern application software for the development and implementation work in signal and image processing, intelligent systems, and communications and networking
- Apply programming and algorithmic concepts and techniques to support the development and implementation work of computer systems and components
- Apply knowledge and design skills, and modern Electronic Design Automation (EDA) tools and design methodologies, towards the development and implementation of computer hardware systems and components, both at board and chip levels
• Carry out basic research and development work such as information and data gathering, analysis, formulation, design and evaluation of solution for computer engineering related problems
• Relate the importance of practical issues such as ethics, culture, social, technopreneurship, economics, human relation factors, and time-to-market, and apply these factors in engineering and computing practices
• Perform work independently and cooperate and contribute as a team
• Demonstrate interest in learning and sharing of knowledge and information
• Recognize the need for self-development and self-learning, and engage in lifelong learning for continuous improvement