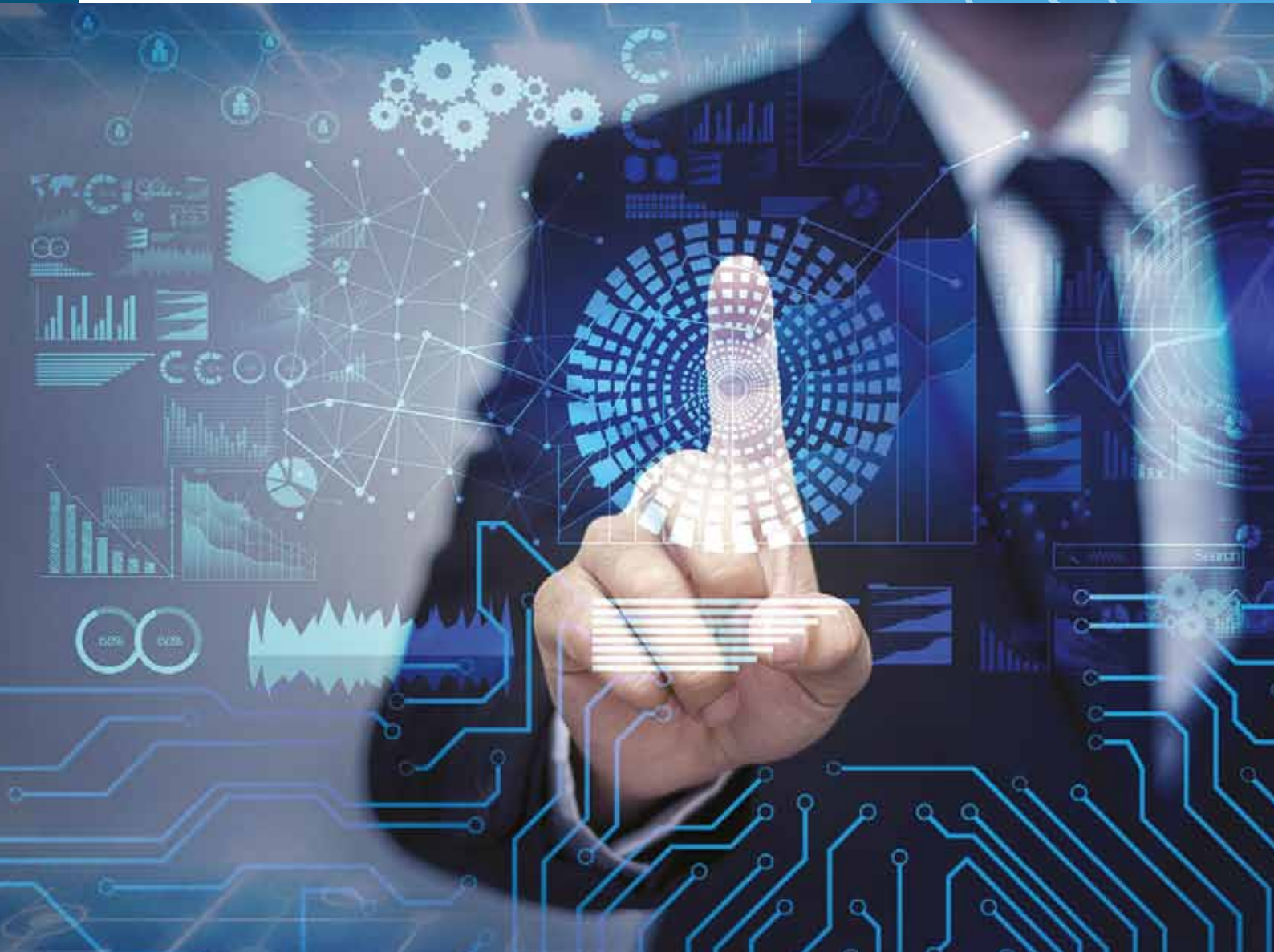


Undergraduate Studies

# Information and Communication Technology



UNIVERSITI TUNKU ABDUL RAHMAN 1976  
Dimiliki sepenuhnya oleh Yayasan Pendidikan UTAR, Kuala Lumpur.



**Business Information Systems**  
**Communications and Networking**  
**Computer Engineering**  
**Computer Science**  
**Information Systems Engineering**  
**Software Engineering**



# Bachelor of Computer Science (Honours)

(R2/481/6/0128)03/22(A7930)

## Overview

Computers are becoming part of our lives, changing virtually everything from the objects around us to the ways in which we communicate, travel, work, and play. Computer Scientists shape the future by developing computational techniques, design systems, and develop solutions to build advanced civilization. Computer Science has now become a key enabler for discovery and innovation in many other fields, making it a highly relevant programme of study.

This programme aims to prepare graduates who are technically competent in design, development and implementation of computing systems. Students will be equipped with a suitable mathematical background and solid computing knowledge for them to excel in the areas of software engineering, artificial intelligence, and data analytics. Students will be trained to possess strong analytical and critical thinking to solve problems by applying knowledge, principles and skills in Computer Science.

## Career prospects

- Data Analyst/Engineer
- Programmer
- Software Developer
- Software Engineer
- Software Project Engineer
- System Analyst
- Web/Mobile Application Developer

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Kampar



# Bachelor of Information Systems (Honours) Business Information Systems

(R2/481/6/0772)03/22(A7931)

## Overview

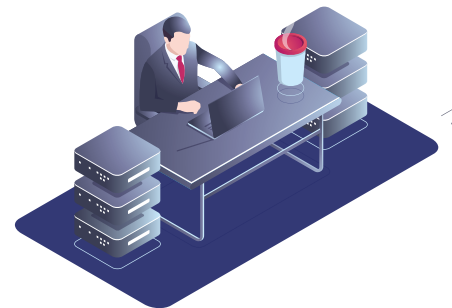
All enterprises and companies need useful strategic information to run their business operations, decision making, clientage, risk management, product marketing, business growth, and competing in the markets. Well designed, managed, and advanced information systems, and business applications are the prime necessity of the companies to generate such information. The people with combined technical and managerial abilities to design, develop and manage business information systems, and applications are extremely in high demand, and are an asset for these companies.

Business Information Systems programme prepares students through the blend of information technology and business practices for building a career in this area. This programme equips students with the cutting-edge technologies such as Business Analytics and Intelligence, Enterprise Resource Planning Systems (ERPs), SAP for Business Solutions, eBusiness, and Business Management and Leadership. The goal of the programme is to develop skills and competencies in students to prepare them for a professional career in ICT industries and business sector.

## Career prospects

- Business Intelligence Consultant
- Business Software Engineer
- Business System Analyst/Consultant
- Database Centre Manager
- IT Support Personnel
- Multimedia Applications Developer
- Project Manager
- System Auditor/Specialist
- Technology Evangelist
- Value-Chain Specialist

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Kampar



# Bachelor of Information Systems (Honours) Information Systems Engineering

(R2/481/6/0773)03/22(A7932)

## Overview

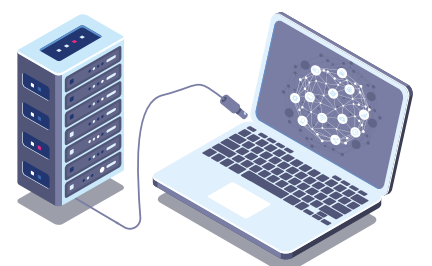
In the 21st century, data has become the most valuable assets of companies to operate and grow their businesses. Modern companies need sophisticated information systems that are able to collect, store, process, and manage huge volumes of data in order to generate information for solving real-world problems. In fact, the Information Systems (IS) sector is the fastest growing sector in the market.

Information Systems Engineering is a multi-disciplinary programme that incorporates the skills and knowledge in computing, management, and business to produce highly skilled information systems specialists. The programme covers theories, implementations, latest tools and technologies that are required to design, develop, test, and maintain complex information systems for real-world applications. With the trained skills, the graduates of this programme will be able to meet the high demand of fastest-growing information industries for the technically qualified workforce.

## Career prospects

- Database Administrator/Developer
- IT Solution Architect
- Project Engineer/Manager
- Software Engineer
- System Analyst/Consultant
- System Developer/Engineer
- QA Engineer
- Web/Mobile Applications Developer

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Kampar



# Bachelor of Information Technology (Honours) Computer Engineering

(R2/481/6/0420)05/24(A10192)

## Overview

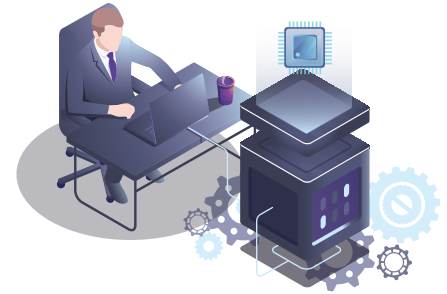
Embedded systems consist of “invisible” computer and related peripherals hidden inside a product, which exists in almost every aspect of our lives. We use embedded systems in washing machines, cars, factory automation machines, security alarm systems, smartphones, satellites and etc. Ubiquitous computing and Internet of Things (IoT) are a future trend that greatly enhances our life, due to the rapid advancement of embedded systems design technology.

This programme prepares students to excel in the discipline of embedded systems design and computing which shapes the future of information and communication technology. It emphasises the development of design skills and knowledge that integrates both hardware and software into a system with application in Digital Signal and Image Processing (as in camera and video), Intelligent System and Networking. This programme is to produce graduates with skills in using sophisticated software design tools for designing electronic circuits and systems.

## Career prospects

- Computer Engineer
- Digital Circuit and Analogue Design Engineer
- Embedded Control Engineer
- Firmware Engineer
- IC Design Engineer
- IT Support Engineer
- Maintenance and Project Engineer
- Product Engineer
- System Design Engineer
- System/Programme Development Engineer

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Kampar



# Bachelor of Information Technology (Honours) Communications and Networking

(R2/481/6/0485)11/25(A6629)

## Overview

The field of communications and networking has enabled us to live in a more “connected” the world through the use of the internet, smartphones, smart home appliances, social networking as well as other various communication devices and applications in our daily living such as study, work and entertainment.

The Communications and Networking programme aims to develop students to be competent in design, development and implementation of communications and networking systems. This programme emphasises the practical sessions that expose students with the current industrial and commercial networking standards and practices. It also introduces the latest network technologies and future trends such as Internet of Things, Wireless Security, 4G/5G Technology, Network Intelligence & Automation and etc. In addition, this programme will equip students for their professional networking certifications such as the Cisco Certified Network Associate (CCNA) and Huawei Certified ICT Associate (HCIA).

## Career prospects

- Communications System Developer
- IT Consultant
- IT Security Specialist
- Network Administrator/ Designer
- Network Engineer/Manager
- Network Security Architect

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Kampar



# Bachelor of Science (Honours) Software Engineering

(R2/481/6/0558)03/25(A10947)

## Overview

Software Engineering is a profession related to all aspects of the software life cycle, covering the design, implementation, modification and maintenance of software in a systematic and quantifiable fashion. Its relevance and application is increasing rapidly in a large variety of domains in business, science, entertainment and education today, where software applications that are deployed continue to evolve in complexity and functionality.

This programme provides intensive coverage of the various techniques, principles, and tools for the major areas of software design, software testing, software processes and requirements engineering. It is highly application centric with instructions to advanced programming techniques in a variety of software development languages and frameworks are provided to impart a strong practical flavour to the course, in which students are able to relate theoretical constructs to actual hands-on experience in software development. Students are also exposed to Artificial Intelligence, Data Mining and Cloud Computing technologies to cater for the demand in Big Data Technology.

## Career prospects

- Analyst Programmer
- Chief Technology Officer
- IT Consultant
- R&D Engineer
- Software Architect/Engineer
- Web/Mobile Applications Developer

**Duration of study:** 3 years  
**Medium of instruction:** English  
**Campus:** Sungai Long





UTAR is a Premier Digital Tech University

Premier Digital Tech Universities and Preferred Digital Tech Polytechnics (PDTIs) are Malaysia's leading digital tech-focused tertiary institutions. The PDTIs have a proven track record in producing high quality graduates for digital tech-based high value jobs, via cutting-edge research and education policies, strong industry linkages, and career development and placement services.

Borne out of a collaboration between MDEC, the Ministry of Education Malaysia and industry leaders, the PDTIs deliver end-to-end solutions to ensure that future graduates are propelled into becoming dynamic members of an innovation-driven and knowledge-powered Malaysia.

**For more information, please contact**

**Division of Programme Promotion**

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