

# FACULTY OF ENGINEERING & COMPUTING

Electronic Engineering Mechanical Engineering Mechatronics Software Engineering Computer Science (Intelligent Systems) Information Systems in Business management Information Technology Mobile Computing Networking & Security



# ABOUT FIRST CITY UNIVERSITY COLLEGE

First City University College has an excellent track record of producing highly employable graduates, entrepreneurs and award-winners. First City UC offers external recognition with its collaborative international partners, in addition to its own Honours Degree, Diploma and Foundation programmes.

In view of its expanding student population and in line with its aspiration to provide the best teaching and learning experience within a conducive campus, First City UC has added a new Student Affairs and Services Centre, lecture and seminar rooms, state-of-theart laboratories, studios and workshops, a spacious IT Centre and library, Centre for Postgraduate Studies, two indoor sports halls, a dance studio, a food court and 500 covered carparks in its recently completed new building under Phase 2 of its campus expansion programme. To address students' need for accommodation, First City UC has added a new 514 bed on-campus air-conditioned hostel with en-suite bathroom.

To meet the needs of industry for employable graduates, First City UC's programmes are:

- Accredited by the Malaysian Qualifications Agency (MQA) and relevant professional bodies such as the Board of Engineers, Malaysia (BEM).
- Relevant to the needs of industry, as they are specially crafted to enhance the employability of graduates.
- Delivered by a highly qualified team of dedicated lecturers who are equipped with a range of teaching and industry experience
- Complemented with state-of-the-art facilities such as e-learning portal, computer labs, library with e-library facilities and electronic databases.



# WHY STUDY ENGINEERING & COMPUTING PROGRAMMES AT FIRST CITY UC?



# **STATE-OF-THE-ART-FACILITIES**

The Faculty incorporates the use of advanced tools and softwares where students can experiment and develop their practical skills in Engineering and Computing in order to produce industry-ready graduates.



**Electrical Machine Power Manipulation** 



PCB Plotter



**CNC Machine** 



Lathe Machine



**Bending Moments Apparatus** 



Milling Machine

# **PROGRAMME PATHWAYS**



STPM / UEC / GCE A–Levels or Equivalent

\* Programmes offered by Faculty of Business, Hospitality & Communication Studies

# FOUNDATION IN ENGINEERING, SCIENCE & TECHNOLOGY

R2/010/3/0080(A9287)10/23

#### (1 year)

Entry into Year 1 of Engineering & Computing Degree programmes

# FOUNDATION IN BUSINESS ADMINISTRATION\*

R2/340/3/0175(A9286)10/23

(1 year)

# BACHELOR OF ELECTRONIC ENGINEERING WITH HONOURS

N/523/6/0273(MQA/PA7197)11/20

(4 years)

# BACHELOR OF

# MECHANICAL ENGINEERING WITH HONOURS

N/521/6/0176(MQA/PA9439)01/23

(4 years)

#### **BACHELOR OF**

SOFTWARE ENGINEERING (HONS)\*\* N/481/6/0690(MQA/PA6200)09/20

(3 years)

# BACHELOR OF COMPUTER SCIENCE (INTELLIGENT SYSTEMS) (HONS)\*\* N/481/6/0751(MQA/PA8101)03/21

(3 years)

# BACHELOR OF INFORMATION SYSTEMS (HONOURS) IN BUSINESS MANAGEMENT\*\* N/482/6/0122(MQA/PA8226)09/21

(3 years)

# BACHELOR OF INFORMATION TECHNOLOGY (MOBILE COMPUTING) (HONS) N/482/6/0140(MQA/PA8883)03/22

(3 years)

# BACHELOR OF INFORMATION TECHNOLOGY (NETWORKING AND SECURITY) (HONS)\*\* N/482/6/0139(MQA/PA8882)03/22

#### **MASTER OF**

SOFTWARE ENGINEERING N/481/7/0807(MQA/PA9799)05/23

(1 year) Full Time: 1 year Part Time: 2 years

#### **MASTER OF**

ENGINEERING MANAGEMENT N/345/7/1081(MQA/PA9798)08/23

(1 year) Full Time: 1 year <u>Part Time: 2</u> years

\*\*These programmes are validated and recognised by:



# FOUNDATION IN ENGINEERING, SCIENCE & TECHNOLOGY

R2/010/3/0080(A9287)10/23

This programme prepares students for two major degree pathways offered by the Faculty of Engineering and Computing, which are Engineering and Computing. Students will be equipped with elementary to intermediate level of knowledge on the respective pathway after the completion of this foundation programme.

# **DURATION**

1 year (3 semesters)

# **INTAKES**

January, April and July

# **ENTRY REQUIREMENTS**

SPM (Science stream): Minimum 5 credits (inclusive of Mathematics)UEC: Minimum 4Bs (inclusive of English)GCE O Level: Minimum 5 credits (inclusive of English)

Note:

Engineering degree: Additional credits required in Mathematics and Physics

Computer Science / Software Engineering degree: Additional credit required in Additional Mathematics

Information Technology / Information Systems degree: Additional credit required in Mathematics

For SPM and GCE O Level students, a pass in Malay Language, English and History is required.

# **LEARNING OUTCOME**

The programme encourages students to participate in problem-solving activities in order to develop their creative, intellectual and critical awareness. Students will be able to foster and develop ability to observe, select and interpret visual forms in a man-made or natural environment.



- SEMESTER 1
  - Analytical Mathematics
  - Communication and Study Skills
  - Computer Technology
  - Personal and Professional Development
  - Advance Office Software

# SEMESTER 2

- Calculus Mathematics
- Mechanics
- Instrumentation and Measurements
- Fundamental Electrical and Electronic Engineering

# **SEMESTER 3**

- Group Project
- Engineering Mathematics
- Applied Physics
- Materials Science

# 

# SEMESTER 1

- Analytical Mathematics
- Communication and Study Skills
- Computer Technology
- Personal and Professional Development
- Advance Office Software

# **SEMESTER 2**

- Calculus Mathematics
- Software Design Techniques
- Web Design
- Structured Programming

# SEMESTER 3

- Group Project
- Database
- Object-Oriented Programming
- Systems Analysis and Design



# DIPLOMA IN ELECTRONIC ENGINEERING

R/523/4/0133(A5493)04/19

Diploma in Electronic Engineering equips students with knowledge and skills to further study or work in the field of electronics. The programme focuses on electronic technical subjects such as fundamentals of circuits and electronic devices, IC (Integrated Circuit) Technology, signals and systems, and microcontroller programming and interfacing.

# **DURATION**

2 1/3 years (7 semesters)

# **INTAKES**

January, April, May and October

# **ENTRY REQUIREMENTS**

**SPM:** Minimum 3 Cs (inclusive of Mathematics & 1 Science subject) and at least a pass in Malay Language, History & English

**UEC:** Minimum 3 Bs (inclusive of Mathematics & 1 Science subject) and at least a pass in English

GCE O Level: Minimum 3 Cs (inclusive of Mathematics & 1 Science subject) and at least a pass in English

#### **MPU COMPULSORY SUBJECTS**

All Malaysian and International students are required to take 4 MPU compulsory subjects.

- Electronic Engineering Technician Maintenance Technician Assistant Project Engineer
- Assistant Process Engineer 
   Engineering Test Technician



- Materials Science
- Basic Circuit Theory
- Communication Skills
- Programming Language
- Digital Electronics I

#### SEMESTER 3 MODULE CONTENT

- Analogue Electronics I
- Engineering Mathematics

# SEMESTER 2 MODULE CONTENT

- Basic Electronics
- Algebra
- Calculus
- Microcontroller Principles

#### SEMESTER 4 MODULE CONTENT

- Computer Interfacing Techniques
- Microcontroller Programming and Interfacing
- Project Management

SEMESTER 5 MODULE CONTENT

- Analogue Electronics II
- Digital Electronics II
- Signals and Systems

# SEMESTER 7 MODULE CONTENT

- Basic Communication Systems
- Project

Industrial Training

**SEMESTER 6** 

**MODULE CONTENT** 

Electives\*:

- IC Technology
- Electronic Design Automation
- Advanced Analogue and Digital Electronics
- Electronic Circuit Modelling and Simulation

\*Choose any TWO modules from 4 elective modules in Semester 7



# DIPLOMA IN MECHATRONICS

R/523/4/0132(A5495)04/19

Diploma in Mechatronics is an introductory engineering programme that prepares students for real life working environment or Bachelor degree programme. Students will be exposed to mechanical and electronic technical subjects such as thermofluid dynamics, hydraulics and pneumatics, applied mechanics, and microcontroller principles.

# DURATION

2 1/3 years (7 semesters)

# **INTAKES**

January, April, May and October

# **ENTRY REQUIREMENTS**

SPM: Minimum 3 Cs (inclusive of Mathematics & 1 Science subject) and at least a pass in Malay Language, History & English
UEC: Minimum 3 Bs (inclusive of Mathematics & 1 Science subject) and at least a pass in Malay Language, History & English
GCE O Level: Minimum 3 Cs (inclusive of Mathematics & 1 Science subject) and at least a pass in English

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 4 MPU compulsory subjects

- Test Technician Research and Development Assistant Design Technician
- Technical Representative Engineering Site Technician Junior Engineer
- Production Technician



- Materials Science
- Basic Circuit Theory
- Communication Skills
- Programming Language
- Digital Electronics I

#### SEMESTER 3 MODULE CONTENT

- Analogue Electronics I
- Applied Mechanics I
- Engineering Mathematics

SEMESTER 2 MODULE CONTENT

- Basic Electronics
- Algebra
- Calculus
- Microcontroller Principles

#### SEMESTER 4 MODULE CONTENT

**SEMESTER 6** 

**MODULE CONTENT** 

• Industrial Training

- Computer Interfacing Techniques
- Manufacturing Process
- Project Management

- SEMESTER 5 MODULE CONTENT
- Thermofluid Dynamics
- Applied Mechanics II
- Engineering Design



• Project

Electives\*:

- Programmable Logic Controller
- Hydraulics and Pneumatics
- Computer Aided Design / Computer Aided Engineering
- Measurement and Industrial Control

\*Choose any TWO modules from 4 elective modules in Semester 7



# BACHELOR OF ELECTRONIC ENGINEERING WITHONOURS

This programme is an academic and industry driven programme with emphasis on excellence achievement in students' academic performance. It is aimed to produce graduates with vast and in-depth knowledge in the field of electronic engineering who are ready as industry work force, or further study at postgraduate levels.

# **DURATION**

4 years (8 semesters)

# **INTAKES**

January, May & September

# **ENTRY REQUIREMENTS**

**Foundation:** Pass the First City University College Foundation in Engineering, Science & Technology with at least CGPA 2.00 or

**STPM:** Pass the STPM with at least Grade C in 2 subjects including Mathematics and Physics or **A-Levels:** Pass the GCE A-Level with at least Grade D in 2 subjects including Mathematics and Physics or

**UEC:** Pass the Unified Examination Certificate (UEC) with minimum grade B in 5 subjects including Mathematics and Physics or

**International Baccalaureate:** Pass the International Baccalaureate with at least 24 points or **AUSMAT:** Pass the Australia Matriculation Programme (AUSMAT) with an average of 65% including Mathematics or

**SAM:** Pass the South Australian Matriculation (SAM) with a Tertiary Entrance Rank (TER) 70 and at least Grade B in 2 relevant subjects or

CPU: Pass the Canadian Pre-University (CPU) with an average of 70% in 6 relevant subjects

#### OR

Relevant Foundation from other Institutions of Higher Learning or Relevant Matriculation Certificate, Ministry of Education or Relevant Diploma from First City University College or other Institutions of Higher Learning with at least CGPA 2.00 or

Other equivalent qualification recognized by Malaysian Government

#### AND

At least SPM credit/O-Level Grade C/UEC Grade B in English language/MUET Band 3/IELTS Band 5.0/equivalent

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

- Integrated Circuit Design Engineers Software Engineers Telecommunications Engineers
- Embedded Systems / Firmware Engineers



- Engineering Practice and Communication Skills
- Engineering Mathematics I
- Circuit Analysis I
- Digital Electronics
- Computer Applications for Engineers

#### SEMESTER 3 MODULE CONTENT

- Engineering Mathematics III
- Analogue Integrated Circuits Applications
- Introduction to Communication Engineering
- Programming for Engineers
- Circuit Analysis II

# SEMESTER 2 MODULE CONTENT

- Engineering Mathematics II
- Electromagnetic Field Theory
- Electronic Devices and Circuits
- Introduction to Electrical Power Technology

SEMESTER 4 MODULE CONTENT

- Digital Communications
- Digital Circuits and Design
- Instrumentation and Measurement
- Microprocessor and Microcontroller Systems
- Engineering Drawing

SEMESTER 5 MODULE CONTENT

- Signals and Systems
- Analogue Systems Design
- Power Electronics
- Digital Systems Design
- Control Systems



SEMESTER 6 MODULE CONTENT

- Numerical Analysis and Statistics
- Embedded System Applications
- Technology and Society
- Computer Architecture and Organization
- Integrated Design Project

# **INDUSTRIAL TRAINING**

• Upon completion of Year 3, students are required to undergo 12 weeks of industrial training.



- Final Year Project
- Digital IC Design
- Digital Signal Processing
- Project Management

# Microwave Engineering # Communication Systems and Networks



- Final Year Project
- Mobile Communications
- Digital Control Systems

## Digital Image Processing ## Optical Communications

- \*\* Systems on Silicon
- \*\* Analogue Integrated Circuits Design

Choose ONE module for electives #, ## and \*\*

# **BACHELOR OF MECHANICAL ENGINEERING** WITH HONOURS

N/521/6/0176(MQA/PA9439)01/23

The First City UC Bachelor of Mechanical Engineering with Honours emphasizes in developing students with broad range of skills and knowledge to fulfill the requirements of a mechanical engineer. It ranges from materials, solid and fluid mechanics, thermodynamics, heat transfer, control, instrumentation, design, manufacturing and other specialize areas. It also emphasizes on strengthening students' analytical and problem solving skills. Many of the courses in this programme will include mini-projects and students will work in groups to produce a solution to a complex engineering problem.

# **DURATION**

4 years (8 semesters)

# **INTAKES**

January, May & September

#### ENTRY REQUIREMENTS

Foundation: Pass the First City University College Foundation in Engineering, Science & Technology with at least CGPA 2.00 or

STPM: Pass the STPM with at least Grade C in 2 subjects including Mathematics and Physics or

A-Levels: Pass the GCE A-Level with at least Grade D in 2 subjects including Mathematics and Physics or

UEC: Pass the Unified Examination Certificate (UEC) with minimum grade B in 5 subjects including Mathematics and Physics or

International Baccalaureate: Pass the International Baccalaureate with at least 24 points or

AUSMAT: Pass the Australia Matriculation Programme (AUSMAT) with an average of 65% including Mathematics or SAM: Pass the South Australian Matriculation (SAM) with a Tertiary Entrance Rank (TER) 70 and at least Grade B in 2 relevant subjects or

CPU: Pass the Canadian Pre-University (CPU) with an average of 70% in 6 relevant subjects

#### OR

Relevant Foundation from other Institutions of Higher Learning or Relevant Matriculation Certificate, Ministry of Education or

Relevant Diploma from First City University College or other Institutions of Higher Learning with at least CGPA 2.00 or

Other equivalent qualification recognized by Malaysian Government

#### 

At least SPM credit/O-Level Grade C/UEC Grade B in English language/MUET Band 3/IELTS Band 5.0/equivalent

# **MPU COMPULSORY SUBJECTS**

All Malaysian and International students are required to take 5 MPU compulsory subjects.

- Mechanical / Manufacturing Engineer 
   Design Engieer 
   Technical Support Engineer
- Project / Site Engineer Test Engineer Research Engineer

#### SEMESTER 1 MODULE CONTENT

- Engineering Mathematics I
- Engineering Statics
- Introduction to Electrical and Electronic Engineering
- Engineering Drawing

### SEMESTER 3 MODULE CONTENT

- Engineering Mathematic III
- C Programming Techniques
- Fluid Mechanics I
- Thermodynamics I
- Solid Mechanic I

# SEMESTER 2 MODULE CONTENT

- Engineering Mathematics II
- Engineering Materials I
- Engineering Dynamics
- Machine Drawing
- Engineering Practice and Communication Skills

SEMESTER 4 MODULE CONTENT

- Solid Mechanics II
- Thermodynamic II
- Fluid Mechanics II
- Introduction to Microprocessor
- Instrumentation and Measurement

- SEMESTER 5 MODULE CONTENT
  - Mechanical Engineering Design I
  - Heat Transfer
  - Engineering Material II
  - Manufacturing Processes
  - Engineering Economics
  - Integrated Design Project

#### SEMESTER 6 MODULE CONTENT

- Mechanical Engineering Design II
- Control Systems
- Numerical Analysis and Statistics
- Electrical Power and Machines
- Integrated Design Project

# **INDUSTRIAL TRAINING**

• Upon completion of Year 3, students are required to undergo 12 weeks of industrial training.

#### SEMESTER 7 MODULE CONTENT

- Final Year Project
- Operations and Quality Management
- Sustainable Energy Systems
- Mechanical Vibration
- Elective I



- Final Year Project
- Professional Practice
- Project management and Product Development
- Entrepreneurship
- Elective II



- Finite Element Method Hydraulics and Pneumatics Ergonomics
- Air Conditioning and Refrigertion Manufacturing Systems Engineering Tribology

# DIPLOMA IN INFORMATION TECHNOLOGY

R/481/4/0266(A4920)02/19

Diploma in Information Technology aims at providing a strong foundation in the Information Technology field. The contents of each module are constantly updated following the current trend in this area. Students will develop skills in developing different types of applications, from stand-alone multimedia applications to internet-based systems. The industrial training placement will also help in preparing students to face the real world challenges.

# **DURATION**

2 years (6 semesters)

# **INTAKES**

January, April, May and October

# **ENTRY REQUIREMENTS**

SPM: Minimum 3 Cs in any 3 subjects inclusive of Mathematics or any equivalent qualification
STPM: Minimum grade C in any subject or any equivalent qualification and a credit in
Mathematics at SPM level or its equivalent
UEC: Minimum 3 Bs inclusive of Mathematics or any equivalent qualification
GCE O Level: Minimum 3Cs including Mathematics or its equivalent

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 4 MPU compulsory subjects

- E-Commerce Database Administration Software Development System Support
- System Analyst Software Developer Database Administrator Web Programmer
- Multimedia Application Developer

#### SEMESTER 1 MODULE CONTENT

- English for Communication
- Mathematics for Computing
- Computer Applications
- Introduction to ICT
- Multimedia Technology

#### SEMESTER 3 MODULE CONTENT

- Operating Systems
- Information Systems
- E-Commerce

# SEMESTER 2 MODULE CONTENT

- Business Communication
- Database Management Systems
- Discrete Mathematics
- Introduction to Programming
- Basic Web Development

#### SEMESTER 4 MODULE CONTENT

- Systems Methodologies
- Human Computer Interaction
- Internet Technology
- \*\* Cyber Marketing
- \*\* Business Organisation
- \*\* Fundamentals of Mobile Computing

#### SEMESTER 5 MODULE CONTENT

- Final Project
- Visual Programming
- Advanced Web Development
- Data Communication and Networks
- \*\* Multimedia Development
- \*\* Object-Oriented Development with Java



• Industrial Training



\*\*Choose TWO elective modules in Semester 4 and ONE elective module in Semester 5

# DIPLOMA IN INFORMATION TECHNOLOGY (MOBILE COMPUTING)

This programme will equip students with the knowledge and skills to develop mobile applications. Modules will cover topics and crucial knowledge in mobile hardware (mobile devices/components), mobile software and mobile communications. Students will learn about related technologies such as cloud computing, and Internet of Things (IoT).

**DURATION** 

2 1/3 years (7 semesters)

INTAKES

January, April, May

# **ENTRY REQUIREMENTS**

SPM: Minimum 3 Cs in any 3 subjects inclusive of Mathematics or any equivalent qualification
STPM: Minimum grade C in any subject or any equivalent qualification and a credit in
Mathematics at SPM level or its equivalent
GCE O Level: Minimum 3 Cs including Mathematics or its equivalent
UEC: Minimum 3 Bs inclusive of Mathematics or any equivalent qualification

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 4 MPU compulsory subjects.

- Mobile Application Developer Android or IoS Mobile Developer
- Mobile Software Developer 
   Software/Application Developer

### SEMESTER 1 MODULE CONTENT

- Office Software Applications
- Introduction to ICT
- English for Communication
- Mathematics for Computing
- Multimedia Technology

#### SEMESTER 3 MODULE CONTENT

- Computer Networks
- Systems Analysis and Design
- Operating Systems

# SEMESTER 2 MODULE CONTENT

- Basic Web Development
- Business Communications
- Discrete Mathematics
- Introduction to Computer Programming

#### SEMESTER 4 MODULE CONTENT

- Mobile Commerce
- Fundamentals of Mobile Computing
- Interactive Design
- \*Internet Technology
- \*Systems Methodologies
- \*Visual Programming

#### SEMESTER 5 MODULE CONTENT

- Database Management Systems
- Mobile Security
- Object-oriented Development with Java
- Mobile Application Development
- Mobile Computing Project

#### SEMESTER 7 MODULE CONTENT

- Industrial Training
- \* Choose TWO elective modules in Semester 4 and 6

#### SEMESTER 6 MODULE CONTENT

- Mobile and Wireless Technology
- \*Business Organisation
- \*Multimedia Development
- \*Internet Marketing



# DIPLOMA IN INFORMATION SYSTEM (BUSINESS MANAGEMENT)

N/482/4/0138(MQA/PA8890)03/22

The Diploma in Information System (Business Management) bridges the gap between business and Information Technology. Business Information Systems (BIS) integrates Information Technology (IT) solutions and business activities. It relates to the processes, data, and the people that use various technologies to improve business operations and to facilitate better business decision-making. Today, BIS pervades almost all aspect of doing business, and it is about applying IT techniques, technologies and intelligence to enhance business operations.

The programme will equip students in understanding on how businesses work, and how to solve business problems creatively and effectively.

# DURATION

2 1/3 years (7 semesters)

# **INTAKES**

January, April, May

# ENTRY REQUIREMENTS

SPM: Minimum 3 Cs in any 3 subjects inclusive of Mathematics or any equivalent qualification
STPM: Minimum grade C in any subject or any equivalent qualification and a credit in
Mathematics at SPM level or its equivalent
GCE O Level: Minimum 3 Cs including Mathematics or its equivalent
UEC: Minimum 3 Bs inclusive of Mathematics or any equivalent qualification

# **MPU COMPULSORY SUBJECTS**

All Malaysian and International students are required to take 4 MPU compulsory subjects.

- Programmer Analyst Application Developer Business Application Developer
- Application Support Analyst
   Business Analyst
   Information Systems Specialist
- Junior IT Consultant Web Programmer Web/Mobile App Developer
- Assistant Webmasters 
   End User Support Staff

# SEMESTER 1 MODULE CONTENT

- Office Software Applications I
- Introduction to ICT
- English for Communication
- Multimedia Technology
- Introduction to Business

#### SEMESTER 3 MODULE CONTENT

- Office Software Applications II
- Information Systems
- Principles of Economics

# SEMESTER 2 MODULE CONTENT

- Basic Web Development
- Business Communications
- Mathematics for Computing
- Programming Language

#### SEMESTER 4 MODULE CONTENT

- Principles of Management
- E-Commerce
- Fundamentals of Big Data Analytics
- Interactive Design

#### SEMESTER 5 MODULE CONTENT

- Systems Methodologies
- Database Management Systems
- Project (IT in Business)
- Fundamentals of Finance
- Business Ethics

#### SEMESTER 7 MODULE CONTENT

• Industrial Training

\*Choose THREE elective modules in Semester 6

# SEMESTER 6 MODULE CONTENT

- Business Organisation
- \*Data Communication and Networks
- \*Advanced Web Development
- \*Discrete Mathematics
- \*Operating Systems
- \*Multimedia Development
- \*Internet Marketing
- \*Principles of Marketing
- \*Introduction to Human Resource Management



# BACHELOR OF SOFTWARE ENGINEERING (HONS)

N/481/6/0690(MQA/PA6200)09/20

Bachelor of Software Engineering (Hons) equips students with a strong foundation in software engineering using a combination of classroom and laboratory learning environment, with application of analysis and design techniques and software development tools.

The programme offers students the opportunity to develop strong problem-solving and communication skills, along with the development of skills for teamwork. Students will also be exposed to industry-relevant technologies for developing mobile applications, web applications, and software for embedded systems.

# **DURATION**

3 years (6 semesters)

# **INTAKES**

January, May & September

# **ENTRY REQUIREMENTS**

Foundation / Matriculation: Pass with minimum CGPA 2.0 + credit in Additional Mathematics at SPM level or its equivalent

**STPM:** Pass with a minimum Grade C (GP 2.0) in any 2 subjects + credit in Additional Mathematics at SPM level or its equivalent

UEC: Minimum 5 Bs (inclusive of English & Mathematics)

GCE A-Levels: Minimum 2Es & 5 credits in GCE O Level / SPM (inclusive of English & Mathematics)

#### OR

**Diploma:** In Computer Science / Software Engineering / Information Technology / Information Systems with a minimum CGPA 2.5 + credit in Additional Mathematics at SPM level or its equivalent. Candidates with CGPA below 2.50 but above 2.00 with a credit in Additional Mathematics at SPM level or its equivalent may be admitted subject to an internal assessment process;

#### OR

Any other Diploma in Science and Technolagy with a minimum CGPA of 2.50 may be admitted subject to an internal assessment process and a credit in Additional Mathematics at SPM level or its equivalent

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

- Software Engineering Database Administrator Systems Engineer / Analyst
- Web Designer 
   Network Integrator



### SEMESTER 1 MODULE CONTENT

- Basic Computing Principles
- Systems Analysis and Design
- Programming Methods
- Mathematics in Computing
- Database Systems
- Internet Design Principles

# SEMESTER 3 MODULE CONTENT

- Software Project Management I
- Generic Programming
- Visual Programming
- Software Testing and Quality Assurance
- Operating Systems
- Database Management Systems

# **INDUSTRIAL TRAINING**

# SEMESTER 2 MODULE CONTENT

- Computer Architecture
- Computer Ethics and Cyber Law
- Structured Programming
- Internet Programming & Applications
- Discrete Mathematics
- Software Requirements Engineering

#### SEMESTER 4 MODULE CONTENT

- Software Project Management II
- Object-oriented Programming
- Software Engineering Principles
- Data Structures and Algorithms
- Software Verification and Validation
- Computer Networks
- Upon completion of Year 2, students are required to undergo 12 weeks of industrial training.

# SEMESTER 5 MODULE CONTENT

- Project
- Human Computer Interaction
- Object-oriented Analysis and Design
- Research Methodology
- \*Large-Scale Computing
- \*Artificial Intelligence
- \*Mobile Platform Programming



- Project
- Project management
- Formal Methods
- Real-time Analysis and Design
- \*Natural Language Processing
- \*Cloud Computing
- \*Distributed Systems

\*Choose TWO elective modules in Semester 5 and Semester 6



# BACHELOR OF COMPUTER SCIENCE (INTELLIGENT SYSTEMS) (HONS)

N/481/6/0751(MQA/PA8101)03/21

The Bachelor of Computer Science (Intelligent Systems) (Hons) offers a programme that equips students with knowledge, skills and techniques that enable students to analyze, design and develop complex cognitive systems. With the fast evolvement of technology and the emergence of creative and innovative machine and software, the programme provides skills and knowledge to students to perceive the environment and react accordingly in an intelligent manner. With the trending technologies of cloud computing, big data analytics and Internet of Things, the programme will produce students with the ability to learn and to thereby adapt to complex and changing environments, requirements and users.

# **DURATION**

3 years (6 semesters)

INTAKES January, May & September

# ENTRY REQUIREMENTS

**FOUNDATION/MATRICULATION:** Pass with minimum CGPA 2.0 + credit in Additional Mathematics at SPM level or its equivalent.

**STPM:** Pass with a minimum Grade C (GP 2.0) in any 2 subjects + credit in Additional Mathematics at SPM level or its equivalent.

UEC: Minimum 5 Bs (inclusive of English & Mathematics)

GCE A-Levels: Minimum 2 Es & 5 credits in GCE O Level / SPM (inclusive of English & Mathematics)

OR

**DIPLOMA:** In Computer Science / Software Engineering / Information Technology / Information Systems with a minimum CGPA 2.5 + credit in Additional Mathematics at SPM level or its equivalent. Candidates with CGPA below 2.50 but above 2.00 with a credit in additional mathematics at SPM level or its equivalent may be admitted subject to an internal assessment process;

#### OR

Any other Diploma in science and technology with a minimum CGPA of 2.50 may be admitted subject to an internal assessment process and a credit in Additional Mathematics at SPM level or its equivalent.

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

# **CAREER OPPORTUNITY**

• Software Developer • Business Analyst • Mobile Application Developer • Information Analyst

Systems Engineer



#### SEMESTER 1 MODULE CONTENT

- Mathematics in Computing
- Basic Computing Principles
- Programming Methods
- System Analysis and Design
- Computer Ethics and Cyber Law
- Digital Electronics

#### SEMESTER 3 MODULE CONTENT

- Software Project Management I
- Business Intelligence
- Database Management Systems
- Generic Programming
- Operating Systems
- Visual Programming

#### SEMESTER 5 MODULE CONTENT

- Project
- Human Computer Interaction
- Artificial Intelligence
- Mobile Platform Programming
- \*Data Science and Big Data Analytics
- \*Large-Scale Computing
- \*3D Modelling



- Discrete Mathematics
- Introduction to Intelligent Systems
- Computer Architecture
- Database Systems
- Structured Programming

#### SEMESTER 4 MODULE CONTENT

- Software Project Management II
- Embedded Systems
- Computer Networks
- Multimedia Systems
- Object Oriented Programming
- Data Structures and Algorithms

#### SEMESTER 6 MODULE CONTENT

- Project
- IOT and Intelligent Systems Integration
- Machine Learning
- Real-Time Analysis and Design
- Natural Language Processing
- \*Cloud Computing
- \*Distributed Systems
- \*Rich Media Technology

\*Choose TWO elective modules in Semester 5 and Semester 6

# **INDUSTRIAL TRAINING**

• Upon completion of Year 3, students are required to undergo 12 weeks of industrial training.



# BACHELOR OF INFORMATION SYSTEMS (HONOURS) IN BUSINESS MANAGEMENT

N/482/6/0122(MQA/PA8226)09/21

This programme aims to prepare graduates who would possess fundamental knowledge, principles and skills including analysis, design, implementation and management in Business Information Systems, recognise the impact of computing on individuals, organisations and society, and examine the role of new and emerging technologies.

It is specially crafted to meet the demands of businesses to create value, and provide solutions to business problems, and use technology to innovate and create new business opportunities.

# **DURATION**

3 years (6 semesters)

Validated and recognised by:



INTAKES

assessment process;

January, May & September

# **ENTRY REQUIREMENTS**

**FOUNDATION/MATRICULATION:** Pass with minimum CGPA 2.0 + credit in Mathematics at SPM level or its equivalent.

**STPM:** Pass with a minimum Grade C (GP 2.0) in any 2 subjects + credit in Mathematics at SPM level or its equivalent.

UEC: Minimum 5 Bs (inclusive of English & Mathematics)

**GCE A-Levels:** Minimum 2 Es & 5 credits in GCE O Level / SPM (inclusive of English & Mathematics) OR **DIPLOMA:** In Computer Science / Software Engineering / Information Technology / Information Systems with a minimum CGPA 2.5 + credit in Mathematics at SPM level or its equivalent. Candidates with CGPA below 2.50 but above 2.00 with a credit in Mathematics at SPM level or its equivalent may be admitted subject to an internal

OR

Any other Diploma in Science and Technology or Business Studies with a minimum CGPA of 2.50 may be admitted subject to an internal assessment process and a credit in Mathematics at SPM level or its equivalent.

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

# **CAREER OPPORTUNITY**

Computer Systems Analyst 
 Business Analyst 
 IT Systems Developer / Analyst

• IT Network Management • Data Analyst

#### SEMESTER 1 MODULE CONTENT

- Basic Computing Principles
- Systems Analysis and Design
- Programming Methods
- Computer Ethics and Cyber Law
- Internet Design Principles

#### SEMESTER 3 MODULE CONTENT

- Software Project Management I
- Database Management Systems
- Business Intelligence
- Entrepreneurship and Enterprise Management
- Management Information System
- Managing People and Organisation

#### SEMESTER 5 MODULE CONTENT

- Project I
- Data Science and Big Data Analytics
- Mobile Platform Programming
- Supply Chain Management
- \*Risk Management
- \*Human Computer Interaction
- \*Large-Scale Computing



- Database Systems
- Structured Programming
- Internet Programming & Applications
- Principles of Management
- Principles of Marketing

# SEMESTER 4 MODULE CONTENT

- Software Project Management II
- E-Commerce Infrastructure and Technologies
- Multimedia Systems
- Business Research Methods
- Social Media Marketing

#### SEMESTER 6 MODULE CONTENT

- Project II
- Data Warehousing and Data Mining
- Enterprise Resource Planning
- Ethics in Business
- \*Organisational Development Management
- \*Cloud Computing
- \*Distributed Systems

\*Choose TWO elective modules in Semester 5 and Semester 6

# **INDUSTRIAL TRAINING**

• Upon completion of Year 3, students are required to undergo 12 weeks of industrial training.



# BACHELOR OF INFORMATION TECHNOLOGY (MOBILE COMPUTING) (HONS)

N/482/6/0140(MQA/PA8883)03/22

One of the areas that the UC will emphasize as part of mobile computing is Internet of Things (IoT) which is the next big thing in emerging technology of the future. The programme will create a platform to build, launch and manage IoT applications and solutions.

In the first year, students learn key knowledge and skills in Information Technology which covers programming fundamentals, platform technologies, information management and mobile computing. Later, they will move on to advanced topics on Programming and Technologies, while familiarizing themselves with the concept of business intelligence, which combines both the business world and the technical world using technologies, applications and practices.

# **DURATION**

3 years (6 semesters)

# **INTAKES**

January, May & September

# **ENTRY REQUIREMENTS**

FOUNDATION/MATRICULATION: Pass with minimum CGPA 2.0 + credit in Mathematics at SPM level or its equivalent.

STPM: Pass with a minimum Grade C (GP2.0) in any 2 subjects + credit in Mathematics at SPM level or its equivalent.

UEC: Minimum 5 Bs (inclusive of English & Mathematics). GCE A-LEVELS: Minimum 2 Es & 5 credits in GCE O Level / SPM (inclusive of English & Mathematics)

DIPLOMA: In computer Science / Software Engineering / Information Technology / Information Systems with a minimum CGPA 2.5 + credit in Mathematics at SPM level or its equivalent. Candidates with CGPA below 2.50 but above 2.00 with credit in Mathematics at SPM level or its equivalent may be admitted subject to an internal assessment process;

OR

Any other Diploma in Science and Technology with a minimum CGPA of 2.50 may be admitted subject to an internal assessment process and a credit in Mathematics at SPM level or its equivalent.

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

- Mobile Application Developer Android or iOS Mobile Software Developer
- Software Development Engineering (Mobile)
   Cross Platform Mobile Developer
- Software Engineer Mobile Developer

#### SEMESTER 1 MODULE CONTENT

- Basic Computing Principles
- Systems Analysis and Design
- Programming Methods
- Mathematics for Computing
- Computer Ethics and Cyber Law
- Web Design Principles

#### SEMESTER 3 MODULE CONTENT

- IT Project Management
- Computer Security
- Statistics
- Mobile Commerce
- Visual Programming
- Operating Systems

#### SEMESTER 5 MODULE CONTENT

- Mobile Computing Project I
- Wireless and Mobile Communications
- Mobile Platform Programming
- Human Computer Interaction
- \*Distributed Systems
- \*Artificial Intelligence
- \*Large-Scale Computing
- \*Mandarin Language (Basic)



- Computer Architecture
- Database Systems
- Internet Programming & Applications
- Discrete Mathematics
- Java GUI Application Development
- Fundamentals of Mobile Computing

#### SEMESTER 4 MODULE CONTENT

- Software Development
- Computer Networks
- Multimedia Design and Development
- Business Intelligence
- Data Structures and Algorithms
- Mobile Games Design and Development

#### SEMESTER 6 MODULE CONTENT

- Mobile Computing Project II
- Internet of Things in Mobile Computing
- iOS Programming
- Ethics in Business
- \*Research Methodology
- \*Data Warehousing and Data Mining
- \*Natural Language Processing
- \*Rich Media Technology
- \*Mandarin (Higher Basic)

\*Choose TWO elective modules in Semester 5 and Semester 6

# BACHELOR OF INFORMATION TECHNOLOGY (NETWORKING & SECURITY) (HONS)

N/482/6/0139(MQA/PA8882)03/22

IoT involves the increasing widespread of objects and entities which have the ability to share and transfer data over a network. As smart products increase rapidly, risks of attack also increases with the new connectivity. Through this programme, First City UC hopes to address the potential challenges in IoT especially in networking and security to make IoT secure.

The programme covers key body of knowledge which includes Information Assurance and Security, Information Management, Networking and Programming Fundamentals. Graduates who possess skills and knowledge in these areas are very much in demand. The Networking and Security major will equip students with knowledge and skills in network design, management, security and systems development and administration.

# **DURATION**

**INTAKES** 

3 years (6 semesters)

Validated and recognised by:



January, May & September

# **ENTRY REQUIREMENTS**

**FOUNDATION/MATRICULATION:** Pass with minimum CGPA 2.0 + credit in Mathematics at SPM level or its equivalent.

**STPM:** Pass with a minimum Grade C (GP2.0) in any 2 subjects + credit in Mathematics at SPM level or its equivalent.

UEC: Minimum 5 Bs (inclusive of English & Mathematics).

**GCE A-LEVELS:** Minimum 2 Es & 5 credits in GCE O Level / a credit in Mathematics in SPM (inclusive of English & Mathematics)

**DIPLOMA:** In computer Science / Software Engineering / Information Technology / Information Systems with a minimum CGPA 2.5 + credit in Mathematics at SPM level or its equivalent. Candidates with CGPA below 2.50 but above 2.00 with credit in Mathematics at SPM level or its equivalent may be admitted subject to an internal assessment process;

#### OR

Any other Diploma in Science and Technology with a minimum CGPA of 2.50 may be admitted subject to an internal assessment process and a credit in Mathematics at SPM level or its equivalent.

# MPU COMPULSORY SUBJECTS

All Malaysian and International students are required to take 5 MPU compulsory subjects.

- Network Engineer Network Administrator Network Technician Computer Security Engineer
- Computer Engineer Database Administrator Web Master Computer-Operations Researcher
- Computer Repair Specialist 
   System Analyst 
   Network Architect
- Network and Security Policy Manager Security Analyst



- Basic Computing Principles
- Systems Analysis and Design
- Programming Methods
- Computer Ethics and Cyber Law
- Web Design Principles
- Mathematics for Computing

#### SEMESTER 3 MODULE CONTENT

- IT Project Management
- Statistics
- Operating Systems
- Web Administration
- Computer Networks
- Introduction to Computer Forensics

SEMESTER 5 MODULE CONTENT

- Project 1
- Ethical Hacking
- Wireless and Mobile Communications
- Large-Scale Computing
- \*Research Methodology
- \*Artificial Intelligence
- \*Mobile Platform Programming
- \*Mandarin Language (Basic)



- Computer Architecture
- Database Systems
- Structured Programming
- Internet Programming & Applications
- Discrete Mathematics
- Fundamentals of Network Security

SEMESTER 4 MODULE CONTENT

- Software Development
- Object-oriented Programming
- Data Structures and Algorithms
- Wireless and Mobile Network Security
- Biometric Technology

SEMESTER 6 MODULE CONTENT

- Project 2
- Internet of Things for Mobile Computing
- Distributed Systems
- Cloud Computing
- \*Real-time Analysis and Design
- \*Natural Language Processing
- \*Rich Media Technology
- \*Mandarin (Higher Basic)

\*Choose TWO elective modules in Semester 5 and Semester 6

# **INDUSTRIAL TRAINING**

• Upon completion of Year 2, students are required to undergo 12 weeks of industrial training.



# MASTER OF Software Engineering

N/481/7/0807(MQA/PA9799)05/23

Software Engineering graduates at Master level will not only possess technological problem-solving skills but also skills of management, administration, planning as well as the ability to convert innovative research idea into a viable business.

The curriculum provides the essential areas of knowledge, skills and abilities that empower our graduate such as:

- Decision Making Research Methodology; Research Project
- Strategy and Innovation Entrepreneurship and Innovation; Strategic Marketing Management
- **Software Engineering** Agile Software Development; Formal Methods for Software Engineering; Requirements Analysis and Specification; Software Testing and Maintenance
- Task Situation Management Professional Practice; IT Project Management
- Technology and Architecture

Advanced Data Structure and Algorithm; Advanced Programming and Software Development; Big Data Technology; Automatic Speech Processing; Software Security; Cloud Computing Technology and Architecture; Software Architecture

# PROGRAMME OBJECTIVES

- To provide graduates with advanced knowledge and skills in software engineering
- To equip graduates with advanced theoretical principles and scientific methods to create effective solutions to problems and to evaluate them
- To train graduates to work on a project in which they propose, design, build, test, analyse, and deliver a computing solution to meet appropriate software engineering standards and realistic constraints
- To instill graduates with skills to seek knowledge through lifelong learning
- To equip graduates with the ability to supervise and carry out research under supervision
- To develop graduates' effective communication skills in both written and oral form
- To inculcate graduates with professional and ethical responsibilities as well as understanding the possible social, economic, cultural, legal and environmental impact of their computing solutions in the global context

# **DURATION**

Full-time (1 year or 3 Semesters); Part-time (2 years or 6 Semesters)

# **INTAKES**

January, May & September

# **ENTRY REQUIREMENTS**

- A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.75; OR
- A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.50 and not meeting CGPA of 2.75, can be accepted subject to internal assessment process; **OR**
- A Bachelor's Degree or its equivalent, with CGPA less than 2.50, with a minimum of 5 years working experience in a relevant field may be accepted.

For International students, TOEFL score of 500 OR IELTS score of 5.0 OR its equivalent.

# A FLEXI LEARNING SCHEDULE

The Master of Software Engineering is available to study on a Full-time or Part-time basis. Whichever pathway you choose, it will be adaptive to learner's time, engaging and rigorous.

# FULL TIME (1 YEAR)

#### SEMESTER 1 MODULE CONTENT

- Research Methodology
- IT Project Management
- Software Architecture
- Advanced Programming and Software Development
- Entrepreneurship and Innovation

#### SEMESTER 2 MODULE CONTENT

- Requirements Analysis and Specification
- Advanced Data Structure and Algorithm
- Professional Practice
- Software Testing and Maintenance
- Research Project 1

#### SEMESTER 3 MODULE CONTENT

- Research Project 2
- Formal Methods for Software Engineering
- \* Strategic Marketing Management
- \* Big Data Technology
- \* Automatic Speech Processing and Applications
- \* Software Security
- \* Cloud Computing Technology and Architecture
- \* Agile Software Development
- \*Choose TWO elective modules in Semester 3



# PART TIME (2 YEARS)

# SEMESTER 1 MODULE CONTENT

- Research Methodology
- IT Project Management

### SEMESTER 2 MODULE CONTENT

- Software Architecture
- Advanced Programming and Software Development
- Entrepreneurship and Innovation

# SEMESTER 3 MODULE CONTENT

- Requirements Analysis and Specification
- Advanced Data Structure and Algorithm

# SEMESTER 4 MODULE CONTENT

- Professional Practice
- Software Testing and Maintenance
- \* Strategic Marketing Management
- \* Big Data Technology
- \* Automatic Speech Processing and Applications

#### SEMESTER 5 MODULE CONTENT

- Research Project 1
- Formal Methods for Software Engineering
- \* Software Security
- \* Cloud Computing Technology and Architecture
- \* Agile Software Development
- \*Choose TWO elective modules in Semester 3 and Semester 5

SEMESTER 6 MODULE CONTENT

• Research Project 2

# MASTER OF ENGINEERING MANAGEMENT

N/345/7/1081MQA/PA9798)08/23

Engineering management is a career that brings together the technological problem-solving of engineering and the organizational, administrative, and planning abilities of management in order to oversee complex business environment from conception to completion. In this complex, competitive world of technology driven industry, skilled engineers who understand the essential principles of business and law have a tremendous competitive advantage.

The curriculum provides the essential areas of knowledge, skills and abilities that empower our graduate such as:

- Decision Making Decision Making and Problem Solving for Engineers; Research Methodology; Research Projects; Operations and Quality Management; Risk Management
- **Strategy and Innovation** Entrepreneurship and Innovation; Strategic Marketing Management
- People Management Organisation Behavior

• Administration and Control

Strategic Financial Analysis; Facilities Management; Industrial Safety, Health and Environment Management

- Task Situation Management Engineering Ethics; Engineering Project Management; Logistics Management
- Engineering & Technology Agile Software Development; Manufacturing Automation; Sustainable Energy and Power Management

# **PROGRAMME OBJECTIVES**

- Provide graduates with advanced knowledge and skills in engineering management
- Equip graduates with advanced theoretical principles and scientific methods to create effective solutions to problems and to evaluate them
- Train graduates to work on a project in which they propose a solution to meet appropriate engineering standards and realistic constraints
- Instill graduates with skills to seek knowledge through lifelong learning
- Equip graduates with the ability to supervise and carry out research under supervision
- Develop graduates' effective communication skills in both written and oral form
- Inculcate graduates with professional and ethical responsibilities as well as understanding the possible social, economic, cultural, legal and environmental impact of their engineering management solutions in the global context

# **DURATION**

Full-time (1 year or 3 Semesters); Part-time (2 years or 6 Semesters)

# **INTAKES**

January, May & September

# **ENTRY REQUIREMENTS**

- A recognized bachelor's degree in Engineering/ Engineering Technology or its equivalent, with a minimum CGPA of 2.50; **OR**
- A recognized bachelor's degree in Engineering/Engineering Technology or its equivalent, with CGPA above 2.0 but less than 2.50, with a minimum of 5 years working experience in a relevant field may be accepted;

For International students, TOEFL score of 500 OR IELTS score of 5.0 OR its equivalent.

# A FLEXI LEARNING SCHEDULE

The Master of Software Engineering is available to study on a Full-time or Part-time basis. Whichever pathway you choose, it will be adaptive to learner's time, engaging and rigorous.

# FULL TIME (1 YEAR)

#### SEMESTER 1 MODULE CONTENT

- Research Methodology
- Operations and Quality Management
- Engineering Project Management
- Strategic Marketing Management
- Strategic Financial Analysis

#### SEMESTER 2 MODULE CONTENT

- Agile Software Development
- Sustainable Energy and Power Management
- Industrial Safety, Health and Environment Management
- Facilities Management
- Research Project

#### SEMESTER 3 MODULE CONTENT

- Research Project
- Entrepreneurship and Innovation
- \* Risk Management
- \* Logistics Management
- \* Engineering Ethics
- \* Manufacturing Automation
- \* Organisation Behaviour
- \* Decision Making and Problem Solving for Engineers
- \*Choose TWO elective modules in Semester 3



# PART TIME (2 YEARS)

# SEMESTER 1

MODULE CONTENT

- Research Methodology
- Operations and Quality Management

#### SEMESTER 2 MODULE CONTENT

- Engineering Project Management
- Strategic Marketing Management
- Strategic Financial Analysis

#### SEMESTER 3 MODULE CONTENT

- Agile Software Development
- Sustainable Energy and Power Management



- Industrial Safety, Health and Environment Management
- Facilities Management

#### SEMESTER 5 MODULE CONTENT

- Research Project
- \* Risk Management
- \* Logistics Management
- \* Engineering Ethics
- \* Manufacturing Automation
- \* Organisation Behaviour
- \* Decision Making and Problem Solving for Engineers
- \*Choose TWO elective modules in Semester 3 and Semester 5

#### SEMESTER 6 MODULE CONTENT

- Research Project
- Entrepreneurship and Innovation



# **INNOVATION DAY BEST PROJECTS**

The annual Innovation Day was started in 2012, where final year students from the faculty showcase their best engineering and computing projects. It is looked forward to every year as it opens up opportunities for them to connect with the industry, and to demonstrate their skills and innovative projects to prospective employers.

Prizes are awarded to best projects from both Engineering and Computing courses. Winners are selected through a combination of professional assessment and voting process.

Year	Course	Project Name
2012	Engineering	Implementation of Fractal Dimension Analyzer of Frequency to Recognize Voice Frequency
	Computing	Mandarin Learning Tool on Smartphone
2013	Engineering	Intelligent Traffic Guidance System
	Computing	An Augmented Reality Mobile Classifieds (iOS)
2014	Engineering	Sign Language Learning Kit
	Computing	Mobile-based Distributed Diary System (iOS)
2015	Engineering	1st Prize: 3-Axis Accelerometer Based Motorised Wheelchair Motion Controller 2nd Prize: Automatic Sprinkler System for Air-Conditioner
	Computing	1 st Prize: Smart Baker with Speech Recognition 2nd Prize: Pre-Consultation Chatbot for Public Hospitals
2016	Engineering	1 st Prize: Autonomous Granting Visitation Permission Using Android-Based Smartphone Entering Offices in a Building 2nd Prize: Greenhouse Monitoring and Control System with IoT Connectivity
	Computing	1st Prize: Right-Brain Development Tool for Toddlers 2nd Prize: Intelligence Decision Support System for Depressed Individual
2017	Engineering	1st Prize: Automated Farming Eco-system Controller 2nd Prize: The Design of a HDL Based Configurable Booth Multiplier
	Computing	1 st Prize: AR Application using Fiducial Marker 2nd Prize: 3D-Stereoscopic Pre-Historic Animal Museum
2018	Engineering	1st Prize: Modelling and Simulation of (OWC): Vertical Links 2nd Prize: Design of A Climbing Robot
	Computing	1 st Prize: OOTD-Social Fashion Platform with Augmented Reality 2nd Prize: Indoor Positioning System using Wi-Fi Localization Technique

# **STUDENTS' PROJECTS**



Informative Parking System



Metal Detecting Robotic Vehicle



Image Processing by using Power Spectral Density (PSD) model (through Fast Fourier Transform algorithm) to extract out the fractal dimension



Automated Hydrofarm System



Solar Powered LED Street Lighting System with Auto Intensity Control



Automated Farming Eco-system Controller



# INDUSTRY PARTNERS / EMPLOYERS

First City UC has an excellent track record on graduate employability. Our graduates are employed across all sectors in various positions and have served in these organisations:

- Accenture
- AEX System Holdings Pty. Ltd, Australia
- Affin Bank
- Alliance Bank Malaysia Berhad
- Bursa Malaysia
- CabNet Systems (M) Sdn. Bhd.
- CIMB Bank
- Datasonic Smart Solutions Sdn. Bhd.
- DDMan Sdn. Bhd.
- Deloitte SEA Services Sdn. Bhd.
- Dimension Data (M) Sdn. Bhd.
- DMC Solution Groups
- eGenting Sdn. Bhd.
- Enfrasys Consulting Sdn. Bhd.
- Fujitsu (M) Sdn. Bhd.
- Gaia Technologies Sdn. Bhd.
- Huawei Technologies (M) Sdn. Bhd.

- IBM Malaysia Sdn. Bhd.
- Ingram Micro Malaysia Sdn. Bhd.
- Intel (M) Sdn. Bhd.
- IRIS Corporation Berhad
- I Transcend (M) Sdn. Bhd.
- Joandale Enterprise, Brunei
- JF Technology Berhad
- Lafarge Asia Sdn. Bhd.
- Longbow Technologies Sdn. Bhd.
- Pay-point (M) Sdn. Bhd.
- RHB Bank
- SDP Manufacturing Sdn. Bhd.
- Silverlake Group
- Standard Chartered
- TMAS Technologies Sdn. Bhd.
- Trinerva Technology Sdn. Bhd.
- Uetex Microelectronics Co. Ltd, China

# **AWARDS & RECOGNITION**



1st runner up of the Asia Pacific University Robotic Competition 2017 (APRoC 2017)



Students from the BSc (Hons) Software Engineering won First Prize Award and Merit Award at the E-Genting Bug Hunt 2017 Competition.



Students from the BSc (Hons) Software Engineering, Year 2 won First Prize Award and Merit Award at the E-Genting Bug Hunt 2016 Competition.



AppAsia Mobile Challenge 2015 winners. The challenge was organised in collaboration with AppAsia Bhd. as an initiative to promote mobile development initiatives and creativity among students.



First City UC signed an MoU with IBM Malaysia in 2016 to renew their collaboration in embedding IBM technologies into First City UC's ICT curriculum and equip its undergraduates with cognitive computing skills.



First City UC students emerged as Winners of The IBM Bluemix Appnovator Challenge 2014.



Winners at the 2018 Innovation Day. Best projects from both Engineering and Computing programmes are awarded prizes to boost students' creativity and innovation skills

# **SUCCESSFUL GRADUATES**



CHEN WENG KIN - President, Product Design and Development Consulting Company, China BEng (Hons) Electrical and Electronic Engineering

# DR. TAN YEOW KEE - Founder & CEO, Home Monitoring System

**BTEC HND in Computer Studies** 





CHRIS LEONG - Director of Strategy, A Fintech start-up BEng (Hons) Electronics & Computing

VINCE TAN - Co-Founding CEO, Digital Marketing Agency, Social Property BSc (Hons) Computer Studies





MICHAEL YONG - Chief Operating Officer, Security Systems Solution Company BEng (Hons) Electrical and Electronic Engineering

 GANESAN PERIAKARRUPPAN - Consulting Manager, Management Consulting Firm
 BEng (Hons) Electrical and Electronic Engineering





ENG LIAN XUN - Co-Founder, Software Specialist, Lava X BSc (Hons) Software Engineering

**KUSALA CHARITH SAMARASINGHE** - Business and Technology Consultant, License Plate Recognition Systems Solution Company, Australia

BSc (Hons) Software Engineering



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# **OUR UK PARTNER** TEESSIDE UNIVERSITY, UK

www.tees.ac.uk

Teesside University is located in the North East of England, UK. We offer an outstanding student and learning experience and have an established international reputation for academic excellence and for the global impact of our research.

For over 85 years, we have fostered creativity, enterprise and innovation, shaping the lives of students from over 100 countries worldwide.

We generate and apply knowledge that contributes to the economic, social and cultural success of students, partners and the communities we serve. Through education enriched by research, innovation, and engagement with business and the professions, we transform lives and economies.

We have been awarded Silver in the Teaching Excellence Framework (TEF) 2017, and we are listed in the Times Higher Education (THE) World University Rankings 2017-18.

We have recently invested over £270m in our award-winning campus, and have a further £300m of development planned.

- Over 85 years of teaching and learning we were officially opened in 1930 as Constantine Technical College to support Middlesbrough's booming engineering and shipping industries
- Teesside University is ranked 15th in the UK out of 126 universities in the university of the year category, in the The Whatuni Student Choice Awards 2018
- Teesside University is ranked in the 151-200 band of 250 global universities aged 50 years or under in the Times Higher Education Young University Rankings\*
- Teesside University is ranked joint 34th out of 116 UK universities for student experience (Times Higher Education student experience survey 2018)
- Teesside University is ranked number one of 120 world universities for overall average satisfaction (International Student Barometer 2017)\*
- Ranked joint 39th in the country for graduate prospects (The Times and Sunday Times Good University Guide 2018)
- Teesside University received a silver rating for the University in the Government's 2017 Teaching Excellence Framework.
- Listed in the Times Higher Education World University Rankings 2018
- Teesside University is ranked in the top 20 list of international animation schools (Animation Career Review 2018, 100 international animation schools included in the ranking)

\* Based on the views of 409 students.



# ENQUIRING MINDS ACQUIRE SUCCESS



# " Quality education. **1** Ideal Location."



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