



MANIPAL  
INTERNATIONAL UNIVERSITY

# SCHOOL OF & ENGINEERING & COMPUTING

Foundation  
Diploma  
Undergraduate

manipal international university

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# What about School of Engineering and Computing

A career in the engineering and computing brings with it countless opportunities and rewards, hence the popularity of engineering and computing amongst students around the world. Engineers and IT professionals form the backbone of any economy and are involved in all facets of technology including electronics, communication, machine learning, constructions, transportation, energy, new materials and a lot more. The School of Engineering and Computing at MIU focuses on developing professionals with technical competencies and entrepreneurial mindset. The faculty at MIU bring diverse and rich industrial and international experience. With the expertise of faculty combined with facilities including labs and workshops, the engineering program at MIU prepare graduates beyond competencies in engineering and computing. Budding engineers and computing professionals are groomed with an entrepreneur mindset able to apply their technical skills and knowledge in a way that creates economic values.. These skills allow our graduates to be industry-ready and be able to adapt within the industry.

## Courses Available

### Foundation

- Foundation in Science

### Diploma

- Diploma in Civil Engineering
- Diploma in Electronic Engineering (Computing)
- Diploma in Mechanical Engineering

### Bachelor's Degree

- Bachelor of Chemical Engineering with Honours
- Bachelor of Civil Engineering with Honours
- Bachelor of Computer Engineering with Honours
- Bachelor of Mechanical Engineering with Honours
- Bachelor of Computer Science (Hons)

### Master

- Master of Science in Engineering

### PhD

- Doctor of Philosophy in Engineering
- Doctor of Engineering in  
Advanced Industrial Technology



## Foundation in Science (R/010/3/0090) (11/22) (MQA/FA2106)

### Introduction / Overview of the course

Our 1-year Foundation in Science programme prepares you for undergraduate study in Engineering and Computing. Besides the fundamental training in science and mathematics, you will also be exposed to various developmental activities designed to improve their critical thinking and personal development.

### Course Info

Foundation intake: April / July / October

### Entry Requirements

Duration: 1 Year

Entry Level	Entry Requirements Approved by MOHE
SPM/O-LEVEL	Pass with 5 credits including Mathematics and 2 Science subjects; AND pass in English and Bahasa Malaysia
UEC	Pass with Grade B in Mathematics and 2 Science Subjects. Pass in English and Bahasa Malaysia
Others	Any other equivalent qualifications recognized by the Malaysian Government

### Program Structure/Course Outline

Semester 1	Semester 2
English 1	English 2
Physics 1	Computer Fundamentals
Calculus & Analysis 1	Calculus & Analysis 2
Creative Thinking	Chemistry 1
Statistics	Introduction to Engineering Graphics

Semester 3	
Calculus and Analysis 3	Introduction to Engineering and Science
Chemistry 2	Physics 2

## DIPLOMA

### Diploma in Mechanical Engineering (R/521/4/0085) (07/24) (MQA/FA4787)

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#### Introduction/Overview of the course

Mechanical Engineering is one of the oldest branches of engineering and is often referred to as the "mother" branch of engineering. This broad and diverse field has diverse applications in many industries and remains valid amidst recent advancement in electronics and information technology. This syllabus has been tailored to meet the demand in the industry. Additionally, you will also be prepared to progress to your degree programme in Mechanical Engineering.

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#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 2.8 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
SPM	Pass with minimum of 3 credits including Mathematics and 1 related subject (Science/Technical/Vocational); AND a pass in English
STPM/A-LEVEL	Pass STPM/A-Level/It's equivalent with a pass in Mathematics, English and 1 Science / Technical / Vocational subjects at SPM level
UEC	UEC with Grade B in THREE (3) subject, including Mathematics
Certificate	Pass Certificate in Engineering/Engineering Technology (Level 3 KKM) (recognized by Malaysian Government) or its equivalent with CGPA 2.00; or Pass Certificate (Level 3 KKM) Vocational and Technical/Skills (recognized by Malaysian Government with CGPA 2.00 AND a Credit in 1 subject at SPM Level AND ONE (1) year of relevant work experience or a minimum of ONE (1) semester of a bridging programme
Others	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure / Course Outline

Year 1	Semester 1	Semester 2	Semester 3 (Short)
	Mathematics 1	Mathematics 2	Creative and Critical Thinking 1
	Proficiency English 1	Engineering Statistics	Co-curriculum
	Physics	Workshop Technology	
	Chemistry	Engineering Drawing	
	Computer Programming	Elements of Mechanical Engineering	
	Science Lab	Elements of Electrical Engineering	
	Constitution and Community	Elements of Electrical Engineering Lab	
	Pengajian Malaysia/ Bahasa Melayu Komunikasi 1	Environmental Science  Constitution and Community	

Year 2	Semester 4	Semester 5
	Thermodynamics 1	Mechanics of Materials
	Mathematics 3	Manufacturing Process
	Basic Control Engineering	Project Management
	Computer Aided Mechanical Drawing	Fluid Mechanics
	Engineering Material	Design of Mechanical Element
	Engineering Dynamics	Thermodynamics 2
		Fluid and Thermodynamics Lab

Year 3	Semester 6	Semester 7	Semester 8
	Machine Shop	Industrial Training	Final Year Project  Mechanical Engineering Design Project

## DIPLOMA

### Diploma in Civil Engineering

(R/526/4/0062) (02/24) (MQA/FA4151)

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#### Introduction/Overview of the course

To imagine a world without buildings, roads, and bridges would be to imagine a world without Civil Engineer. In a growing economy such as Malaysia, the demand for graduates from this field is very high. This Diploma in Civil Engineering programme brings in an additional benefit of two months industry training before completion. Additionally, you will also be prepared to progress to your degree programme in Civil Engineering.

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#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 2.8 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
SPM	Pass with minimum of 3 credits including Mathematics and 1 related subject (Science/Technical/Vocational); AND a pass in English
STPM/A-LEVEL	Pass STPM/A-Level/It's equivalent with a pass in Mathematics, English and 1 Science / Technical / Vocational subjects at SPM level
UEC	UEC with Grade B in THREE (3) subject, including Mathematics
Certificate	Pass Certificate in Engineering/Engineering Technology (Level 3 KKM) (recognized by Malaysian Government) or its equivalent with CGPA 2.00; or Pass Certificate (Level 3 KKM) Vocational and Technical/Skills (recognized by Malaysian Government with CGPA 2.00 AND a Credit in 1 subject at SPM Level AND ONE (1) year of relevant work experience or a minimum of ONE (1) semester of a bridging programme.
Others	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure / Course Outline

Year 1	Semester 1	Semester 2	Semester 2 (Short )
	Mathematics 1	Mathematics 2	Creative and Critical Thinking
	Physics	Engineering Survey	Co-curriculum
	Proficiency English 1	Applied Mechanics	
	Science Lab	Civil Engineering Drawing	
	Computer Programming	Proficiency English 2	
	Chemistry	Survey Field Works	
Year 2	Constitution & Community	Pengajian Malaysia/ Bahasa Melayu Komunikasi 1	

Year 2	Semester 3	Semester 4	Semester 5
	Strength of Materials	Hydraulics	Steel Design
	Mathematics 3	Geotechnical Engineering	RC Design
	Highway and Traffic Engineering	Theory of Structures	Site Supervision and Practices
	Fluid Mechanics	Hydrology	Construction Practices
	Soil Mechanics and Engineering Geology	Environmental Engineering	Project
	Civil Engineering Materials	Laboratory 1	Laboratory 2
		Entrepreneurship	

Year 3	Semester 6
	Industrial Training



## DIPLOMA

### Diploma in Electronic Engineering (Computer) (R/523/4/0227) (12/24) (MQA/FA4946)

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#### Introduction/Overview of the course

In today's digital age, electronics and computing technologies are undeniably fundamental components driving advancement we are now witnessing. With this in mind, this programme has been tailor-made to include topics from Computer Science and Electronics Engineering that will prepare you well to meet the demand in the industry. It will also prepare you to progress towards an undergraduate degree in computer science, computer engineering or electronic engineering.

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#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 2.8 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
SPM	Pass with minimum of 3 credits including Mathematics and 1 related subject (Science/Technical/Vocational); AND a pass in English
STPM/A-LEVEL	Pass STPM/A-Level/It's equivalent with a pass in Mathematics, English and 1 Science / Technical / Vocational subjects at SPM level
UEC	UEC with Grade B in THREE (3) subject, including Mathematics
Certificate	Pass Certificate in Engineering / Engineering Technology (Level 3 KKM) (recognized by Malaysian Government) or its equivalent with CGPA 2.00; or Pass Certificate (Level 3 KKM) Vocational and Technical / Skills (recognized by Malaysian Government with CGPA 2.00 AND a Credit in 1 subject at SPM Level and ONE (1) year of relevant work experience or a minimum of ONE (1) semester of a bridging programme.
Others	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure / Course Outline

Year 1	Year 2	Year 3
Mathematics 1	Mathematics 3	Industrial Training
Physics	Object Oriented Programming	Renewable Energy Lab
Fundamentals of Computers	Communication Systems	Elective 1
Computer Programming	Communication Systems Lab	Elective 1 Lab
Computer Programming Lab	Electronic Circuits I	Final Year Project
Elements of Electrical Engineering	Electronic Circuits Lab 1	Renewable Energy and Energy Efficient Systems
Elements of Electrical Engineering Lab	Computer Networks Lab	Elective 2
	RDBMS	Elective 2 Lab
Proficiency English 1	Pengajian Malaysia 2 (Local)/Bahasa Melayu Komunikasi 1 (International)	
Mathematics 2		
Web programming	Entrepreneurship	
Web programming Lab	Digital Electronics Lab	
Data Structure	Electronic Circuits II	
Data Structure Lab	Electronic Circuits Lab 2	
Operating Systems	Computer Networks	
Electronic Devices and Circuit	Digital Electronics	
Electronic Devices and Circuit Lab	RDBMS Lab	
Constitution and Community	Microcontrollers	
Creative and Critical Thinking	Microcontrollers Lab	
Co-Curriculum	Group Project	
Proficiency English 2		

### Electives:

- Adv. Java Programming
- Adv. Java Programming Lab
- Mobile Applications with Android
- Mobile Application with Android Lab
- PLC and SCADA
- Programmable Logic Controller Lab
- Power Electronics
- Power Electronics Lab
- Signal and System
- Signal and Systems Lab

## BACHELOR

### Bachelor of Mechanical Engineering with Honours (R2/521/6/0012) (06/22) (MQA/FA0599)

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#### Introduction/Overview of the course

Mechanical Engineering is one of the four main branches of engineering. It is the oldest branch and is often referred to as the “mother” branch of engineering. Mechanical engineering combines principles in physics and mathematics with material science. Mechanical engineers are highly sought after in industrialised nations. Mechanical engineers are not only needed in factories as many would perceive. They are also required in the aerospace, automotive, construction, marine and railway industries just to name a few. If you love physics and mathematics; and are interested in designing, and making mechanical engineering systems, this programme is for you.

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#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 4 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
STPM	Pass with minimum of 2 Grade C including Mathematics and 1 Science subject
UEC	Pass with minimum of 5 Grade B including Mathematics and 1 Science Subject
A-LEVEL	2 Passes in Mathematics and 1 Science subject
Matriculation/ Foundation	Pass Matriculation/Foundation in relevant field (recognized by the Malaysian Government) with minimum CGPA 2.00
Diploma	Diploma in Engineering/Engineering Technology (recognized by the Malaysian Government) with CGPA 2.00; or Diploma in Vocational and Technical/Skills in related field (recognized by the Malaysian Government) with CGPA 2.00
Other	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure / Course Outline

Year 1	Semester 1	Semester 2
	Engineering Mathematics 1	Engineering Mathematics 2
	Computer Programming	Engineering Statistics
	Computer Programming Lab	Environmental Science
	Engineering Graphics	Electronic Devices & Circuits
	English for Professional Communication	Elements of Mechanical Engineering
	Self-Development and Leadership Building	Elements of Electrical Engineering
	Hubungan Etnik (Local)/ Bahasa Melayu	Introduction to Psychology
	Komunikasi 2 (International)	
Year 2	Semester 3	Semester 4
	Engineering Dynamics	Theory of Machines
	Thermodynamics 1	Mechanics of Materials
	Industrial Safety & Health	Mechanical Laboratory 1
	Engineering Mathematics 3	CAD/CAM
	Material Science & Metallurgy	Operations Research
	Entrepreneurship	Manufacturing Processes



Year 3	Semester 5	Semester 6
	Mechanical Design	Heat Transfer
	Mechanical Measurement	Product and System Design
	Mechanical Laboratory 2	Capstone Design 2
	Organizational Behaviour	Elements of Mechatronics
	Capstone Design 1	R&D Methodology
	Computer Aided Engineering	Project Management
	Thermodynamics 2	Engineers in Society
	Fluid Mechanics	

Year 4	Semester 7	Semester 8
	Control Engineering	Turbo Machines/
	Engineering Economics	Advance Manufacturing Techniques
	Robotics/Automobile Engineering	Composite Materials/
	Final Year Project 1	Finite Elements Method
	Mechanical Vibrations	Production & Operation Management
	Corrosion Engineering/ Quality Management	Technical Seminar
		Final Year Project 2

Semester 9 (Short)
Industrial Training
Pengajian Malaysia (Local)/TITAS (International)
Family Issues
Co-curriculum

## BACHELOR

### Bachelor of Civil Engineering with Honours (R2/526/6/0006) (06/28) (MQA/FA0597)

#### Introduction/Overview of the course

Civil Engineers are responsible for the design and construction of physical structures such as buildings, roads, tunnel, bridges, dams and more. Malaysia's world-class infrastructure is built on the expertise in civil engineering. As the country progresses towards a developed nation status, demand for such infrastructure will translate to job opportunities for civil engineers. If you wish to be a part of the nation's vision to be a developed nation and to contribute to its development, the Bachelor of Civil Engineering (Hons) is for you.

#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 4 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
STPM	Pass with minimum of 2 Grade C including Mathematics and 1 Science subject
UEC	Pass with minimum of 5 Grade B including Mathematics and 1 Science Subject
A-LEVEL	2 Passes in Mathematics and 1 Science subject
Matriculation /Foundation	Pass Matriculation/Foundation in relevant field (recognized by the Malaysian Government) with minimum CGPA 2.00
Diploma	Diploma in Engineering / Engineering Technology (recognized by the Malaysian Government) with CGPA 2.00; or Diploma in Vocational and Technical/Skills in related field (recognized by the Malaysian Government) with CGPA 2.00
Other	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure / Course Outline

Year 1	Semester 1	Semester 2	Semester 3(Short)
	Engineering Mathematics 1	Engineering Mathematics 2	TITAS (Local)/ Pengajian Malaysia 3 (International)
	Computer Programming	Surveying	
	Computer Programming Lab	Surveying Practice	
	Engineering Graphics	Civil Engineering Materials	
	Self-Development and Leadership Building	Building and Design & Drawing	
	English for Professional Communication	Fluids Mechanics	
	Introduction to Psychology	Static and Dynamic	
		Hubungan Etnik (Local)/ Bahasa Melayu Komunikasi (International)	

Year 2	Semester 4	Semester 5	Semester 6(Short)
	Engineering Mathematics 3	Structural Analysis 2	Family Issues
	Hydraulics	Traffic Engineering	Co-Curriculum
	Structural Analysis 1	Hydrology	
	Transportation Engineering	Soil Mechanics	
	Civil Engineering Lab 1	Environmental Engineering	
	Entrepreneurship	R&D Methodology	

Year 3	Semester 7	Semester 8	Semester 9 (Short)
	Highway Engineering (Engineering Elective 1)	Construction Management & Planning	Industrial Training
	Geotechnical Engineering	Structural Design 2	
	Structural Design 1	Structural Design & Drawing	
	Civil Engineering Lab 2	Engineering & Society	
	Introduction to Organizational Behaviour	Operational Research (Open Elective 1)	
		Technical Seminar	

Year 4	Semester 10	Semester 11
	Intergrated Design Project	Final Year Project 2
	Structural Design 3	FEM for Structural Analysis (Engineering Elective 3)
	Final Year Project 1	Advance Structural Design (Engineering Elective 4)
	Advance Foundation Design (Engineering Elective 2)	
	Numerical Methods for Engineering Analysis (Open Elective 2)	
	Database Management Systems (Open Elective 3)	

\* Selection of courses to be offered will be finalized by the school.

#### Engineering Electives:

- Advanced Structural Design
- Design of Hydraulic Structures
- Coastal Engineering
- Highway Engineering
- Environmental Impact Assessment
- Advance Foundation
- Solid & Hazardous Waste Management
- Finite Element Method for Structural Analysis

#### Open Electives:

- Operational Research
- Application of RS & GIS
- Numerical Methods for Engineering Analysis



## BACHELOR

### Bachelor of Chemical Engineering with Honours

(R2/524/6/0005) (06/28) (MQA/FA0596)

#### Introduction/Overview of the course

Chemical Engineers solve industrial challenges as well as create and improve products and processes using knowledge in chemical and biological processes. Chemical engineers are needed in petroleum, petrochemical, cosmetic, consumer goods and many other industries. They also play a very important role in waste management as well as technologies related to the environment and climate change. As the oil palm, petroleum and petrochemical industries continue to dominate in Malaysia, South-East Asia and Middle East regions, demand for chemical engineers in these and other regions is expected to remain. The importance of issues related to climate change and how it impacts the world would mean chemical engineers will remain relevant. The Bachelor of Chemical Engineering (Hons) is your programme of choice if the above listed industries, the environment, and climate change is something that interests you.

#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 4 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
STPM	Pass with minimum of 2 Grade C including Mathematics and 1 Science subject
UEC	Pass with minimum of 5 Grade B including Mathematics and 1 Science Subject
A-LEVEL	2 Passes in Mathematics and 1 Science subject
Matriculation /Foundation	Pass Matriculation/Foundation in relevant field (recognized by the Malaysian Government) with minimum CGPA 2.00
Diploma	Diploma in Engineering / Engineering Technology (recognized by the Malaysian Government) with CGPA 2.00; or Diploma in Vocational and Technical/Skills in related field (recognized by the Malaysian Government) with CGPA 2.00
Other	Any other equivalent qualifications recognized by the Malaysian Government

## Program Structure/Course Outline

Year 1	Semester 1	Semester 2
	Engineering Mathematics 1	Chemical Engineering Thermodynamics
	Computer Programming	Momentum Transfer
	Computer Programming Lab	Organic Chemistry
	Engineering Graphics	Engineering Mathematics 2
	English for Professional Communication	Hubungan Etnik
	Self-Development and Leadership Building	
Year 2	Semester 3	Semester 4
	Engineering Mathematics 3	Chemical Process Industries
	Mass and Energy Balance	Mass Transfer
	Process Heat Transfer	Computational Methods and Analysis in Chemical Engineering
	Chemical Engineering Lab 1	Environmental Engineering
	Database Management Systems	Chemical Engineering Lab II
	Entrepreneurship	Renewable Energy (Open Elective OR Elements of Electrical Engineering (Open Elective)
Year 3	Semester 5	Semester 6
	Chemical Reaction Engineering	Project Management
	Separation Processes	Plant and Equipment Design
	Process Control and Instrumentation	Safety and Loss Prevention
	Process Design, Optimization and Economics	Chemical Engineering Lab IV
	Chemical Engineering Lab III	Chemical Engineering Lab V
	Introduction to Organizational Behaviour	Engineer and Society
		R&D Methodology
		Industrial Training

Year 4	Semester 7	Semester 8
	Mechanical Design of Process Equipment	Design Project 2
	Advance Chemical Reaction Engineering	Final Year Project Part 2
	Design Project 1	Green and Sustainable Chemical Processes
	Final Year Project Part 1	Petroleum Refinery Engineering (Engineering Elective 2)
	Vegetable Oil Milling and Refining Processes (Engineering Elective 1)	
	Analytical Techniques and Instrumentation Lab	

Short Semester	
TITAS(Local)/ Bahasa Melayu Komunikasi 3 (International)	
Family Issues	<b>Electives</b>  Renewable Energy Elements of Electrical Engineering Vegetable Oil Milling and Refining Processes Petroleum Refinery Engineering
Co-curriculum	
Introduction to Psychology	

## BACHELOR

### Bachelor of Computer Engineering with Honours (R2/523/6/0046) (06/28) (MQA/FA0595)

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#### Introduction/Overview of the course

The importance of the electronics and information technology around the world is very well understood. From the alarm from our smartphone that wakes us up in the morning, to the devices we use at work, the entertainment systems in our mobile device or at home, the messages we send and receive every day, to the robot we activate to clean our floor when we go to bed; these are only possible with advances in the electronics and information technology. Here in Malaysia, the IT industry has been booming since the introduction of the Multimedia Super Corridor in the mid-90s with several of the worlds' major IT players having since established hubs in Malaysia. Computer Engineers are sought after to design, build, and manage IT systems as well as products of various other industries. The Bachelor of Computer Engineering (Hons) programme is for you if you are interested in designing and working with advance modern systems that is driving changes around the world.

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#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 4 Years

Entry level	Entry Requirements Approved by MOHE
International Students: Required minimum score of 5.0 for IELTS or 500 for TOEFL or its equivalent	
STPM	Pass with minimum of 2 Grade C including Mathematics and 1 Science subject
UEC	Pass with minimum of 5 Grade B including Mathematics and 1 Science Subject
A-LEVEL	2 Passes in Mathematics and 1 Science subject
Matriculation /Foundation	Pass Matriculation/Foundation in relevant field (recognized by the Malaysian Government) with minimum CGPA 2.00
Diploma	Diploma in Engineering / Engineering Technology (recognized by the Malaysian Government) with CGPA 2.00; or Diploma in Vocational and Technical/Skills in related field (recognized by the Malaysian Government) with CGPA 2.00
Other	Any other equivalent qualifications recognized by the Malaysian Government



## Program Structure / Course Outline

Year 1	Semester 1	Semester 2	Short Semester
	Engineering Mathematics 1	Elements of Electrical Engineering	Pengajian Malaysia (International)/TITAS (Local)
	English for Professional Communication	Internet and Web Programming	Family Issues
	Computer Programming	Internet and Web Programming Lab	Co-curriculum
	Computer Programming Lab	Fundamentals of Electrical and Electronics Lab	
	Engineering Graphics	Electronic Devices and Circuits	
	Self Development and Leadership Building	Electronic Circuit Lab	
	Hubungan Etnik (Local)/ Bahasa Melayu Komunikasi 2 (International)	Environmental Science	
		Engineering Mathematics 2	
		Introduction to Psychology	

Year 2	Semester 3	Semester 4
	Combinational and Sequential Circuits	Microprocessors and Microcontrollers
	Data Structures and Algorithms	Microprocessor Lab
	Data Structures and Algorithms Lab	Database Management Systems
	Object Oriented Programming	Database Management Systems Lab
	Object Oriented Programming Lab	Control Systems
	Engineering Mathematics 3	Computer Organizations & Architecture
	Entrepreneurship	Measurements & Instruments

Year 3	Semester 5	Semester 6	Short Semester
	Organizational Behaviour	Computer Networks	Industrial Training
	Intergrated Circuit Design	Computer Networks Lab	
	Artificial Intelligence	Serverside Programming	
	Electromagnetic Wave	Serverside Programming Lab	
	Communication Theory	Project Management	
	Software Engineering	Engineer & Society	
		Intergrated Design Project	

Year 4	Semester 7	Semester 8
	Digital Signal Processing	Operating Systems
	Digital Signal Processing Lab	Final Year Project 2
	Embedded Systems	Engineering Elective 2
	Embedded Systems Lab	
	Final Year Project 1	
	Engineering Elective 1	

#### Electives:

- Big Data
- Data Warehousing and Data Mining
- Real Time Systems
- Mobile Computing
- Image Processing
- Language Processors
- Data Analytics
- Cryptography and Network Security
- Internet of Things
- Formal Language and Automata Theory

## BACHELOR

### Bachelor of Computer Science (HONS) (R/481/6/0285) (04/23) (MQA/FA2303)

#### Introduction/Overview of the course

Bachelor of Computer Science (Hons) covers the domain of Computer Science and Software Engineering. The opportunity for graduates in computer science globally is tremendous as the demand for computer science graduates now outweighs supply. Other than preparing graduates for the general software industry, graduates from this programme will have a strong foundation in data science – a discipline where the demand for such graduate is expected to grow exponentially. If you are interested in working with the next new gadget or app the world is talking about, introduce new technology changing the world, this programme is for you.

#### Course Info

Degree Intake: March / August / October

#### Entry Requirements

Duration: 3 Years

Entry level	Entry Requirements Approved by MOHE
ENGLISH REQUIREMENT: IELTS 5.0 above; or TOEFL 410 above; or MUET Band 3; or	
* STPM	Pass with minimum Grade C in 2 subjects; AND a credit in Additional Mathematics at SPM or its equivalent
UEC	Pass with minimum of 5 Grade B including Mathematics
A-LEVEL	Pass 2 subjects; AND a credit in Additional Mathematics at SPM or its equivalent
* Matriculation /Foundation	Pass Matriculation/Foundation Studies (recognized by the Malaysian Government) with CGPA 2.00; AND a credit in Additional Mathematics at SPM or its equivalent
Diploma	A Diploma in Computer Science/Software Engineering/Information Technology/Information Systems or equivalent with a minimum CGPA of 2.50 and a 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 a rigorous internal assessment process; Any other Diploma in Science and Technology with a minimum CGPA of 2.50 may be admitted subject to a rigorous internal assessment process and a credit in Additional Mathematics at SPM level or its equivalent.
Others	Any other equivalent qualifications recognized by the Malaysian Government

\*Candidates without a credit in additional mathematics at SPM level or its equivalent may be admitted if the Diploma programme contains subjects in mathematics that are equivalent to Additional Mathematics at SPM level.

\*Candidate with a credit in computing related subject at SPM or STPM level or its equivalent may be given preferential consideration.

## Program Structure / Course Outline

Year 1	Semester 1	Semester 2	Semester 3 (Short)
	Probability and Statistics	Internet and Web Programming	Pengajian Malaysia (International) TITAS (Local)
	Computer Programming	Database Management Systems	
	Discrete Mathematics	Organizational Behaviour	Family Issues
	English for Professional Communication	Object Oriented Programming	Co-curriculum
	Self--Development and Leadership Buildings	Computer Organization and Architecture	
	Hubungan Etnik (Local)/ Bahasa Melayu Komunikasi 2 (International)	Introduction to Psychology	

Year 2	Semester 4	Semester 5	Semester 6
	Software Engineering	Introduction to Multimedia	Industrial Training
	Operating Systems	Elective 1	
	Data Structures	Elective 2	
	Computer Networks	Human Computer Interaction	
	Free Elective	Serverside Programming	
		Professional Computing Practices	



	Semester 7	Semester 8	
Year 3	Cryptography and Network Security	Final Year Project 2	<b>Electives</b>  Big Data Ontology and Semantic Web Data Warehousing & Data Mining Green ICT Computer Game Theory Natural Language Processing Mobile Computing Compiler Design IR 4.0 Operations Research Cloud Computing Bioinformatics  <b>Free Electives:</b>  E-commerce Management Information Systems
	Data Science Tools	Software Testing and Quality Assurance	
	Final Year Project 1	Machine Learning	
	Elective 3	Elective 4	
	Project Management	Entrepreneurship	
	Artificial Intelligence	Professional Learning	

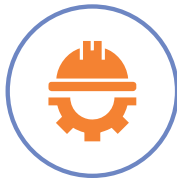
## Career Prospects in the World of Engineering and Computing



Chemical Engineers



Petroleum Engineers



Civil Engineers



Network Engineers



Robotic Engineers



Hydrologist



Mechanical Engineers



Design Analysts



Electronics Engineers

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### PATHWAYS

SPM or  
Equivalent

STPM/UEC/A-Level  
SAM/CPU or Equivalent  
or  
Foundation at MIU  
(1 Year)  
or  
Relevant Diploma

Honours Degree  
Programmes at MIU  
(3-4 Years)

## How to Apply

To apply for program offered at Manipal International University please follow any one of the below options as per your convenience

OPTION

01

### Visit Manipal International University

You are encouraged to visit our campus in Nilai, so that you have a chance to speak to our professional counsellors personally. You will have the opportunity to interact with our experienced faculty members and professors, get the best advice from the experts while enjoying hot coffee at our campus cafeteria. You will get answers to your questions, and the assistance to register for the program.

OPTION

02

### Get information online to register

You can also visit our website at [miu.edu.my](http://miu.edu.my) and submit an enquiry form. Our expert counsellors will reach out to you soon and take you through the admission process.

OPTION

03

### Call In

We provide a Malaysian Toll-free number for all who are interested to find out more about Manipal International University. Our friendly counsellors will be standing by and attend to your enquiries at all times.


Toll Free:  
1800 222 648  
(Mon – Fri, 9am – 6pm)

OPTION

04

### Email

You want to find out more about Manipal International University, just drop us an email at [enquiry@miu.edu.my](mailto:enquiry@miu.edu.my) and our counsellors will get back to you within 24 hours.



MANIPAL INTERNATIONAL UNIVERSITY (MIU) DU043(N)  
No. 1, Persiaran MIU,  
71800 Nilai, Negeri Sembilan, Malaysia

[www.miu.edu.my](http://www.miu.edu.my) | [enquiry@miu.edu.my](mailto:enquiry@miu.edu.my) | [@miu\\_malaysia](https://www.instagram.com/miu_malaysia) (Instagram)