

ENGINEERING STUDY OPTIONS AND CAREER OPPORTUNITIES

swinburne.edu.my/engineering



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SWINBURNE
UNIVERSITY OF
TECHNOLOGY

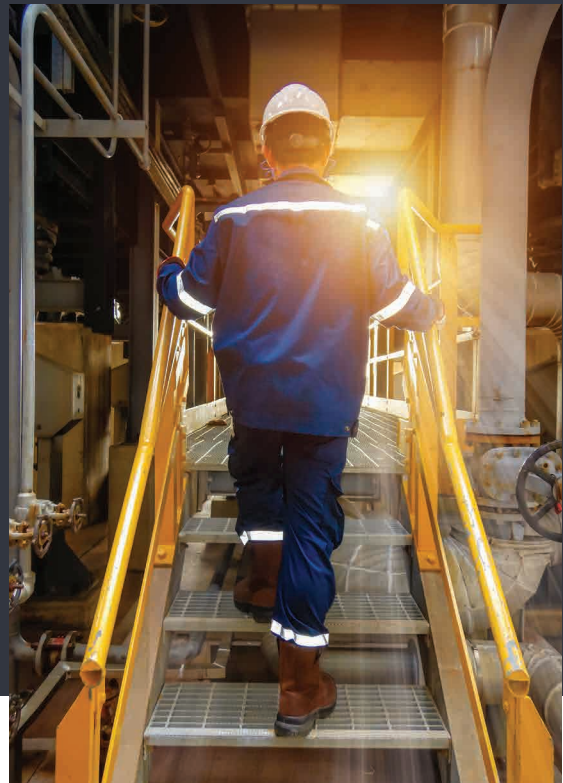
MALAYSIA • AUSTRALIA

WITH A DEGREE FROM SWINBURNE, YOU CAN GO ANYWHERE IN THE WORLD.

Malaysia. Australia. Our graduates are spread around the globe and work for some of the most dynamic organisations, from start-ups to not-for-profit to multinationals.

A degree from Swinburne means you'll have the prestige of a globally renowned university paired with the confidence that comes from genuine workplace experience.

When you graduate, you'll become one of thousands of Swinburne graduates around the world who are writing their own success stories.



**TOP
100
GLOBALLY**

For civil engineering
(2019 Academic Ranking of
World Universities)

**INDUSTRY
ENGAGED
LEARNING**

SHELL, Sarawak Energy,
X-Fab, Telekom Malaysia,
Cahaya Mata Sarawak

**INDUSTRY
EXPOSURES**

Engineers Malaysia (IEM),
Engineers Australia (EA)
Institution of Engineering &
Technology (IET) UK

**PROFESIONALLY
ACCREDITED**

Engineers Australia and
Board of Engineers Malaysia

WHAT'S RIGHT FOR ME: PATHWAY OPTIONS

At Swinburne University, you get options. You can start your journey in Foundation studies then progress to a degree; jump in to a standard four-year Engineering degree, or you can even start your study journey now and go on to postgraduate study – like a Masters or PhD – down the track.



QUALIFICATION	SWINBURNE FOUNDATION STUDIES (ENGINEERING)	ENGINEERING DEGREE WITH HONOURS	ENGINEERING DOUBLE DEGREE	MASTERS	DOCTOR OF PHILOSOPHY
Duration	1 year full-time	4 years full-time	5 years full-time	2 years	4 years
Entry requirements	Successful completion of SPM or equivalent and upon meeting the minimum entry requirements.	Successful completion of STPM, A Levels or Year 12 equivalents, and meets the minimum entry requirements and pre-requisite subjects.	Successful completion of STPM, A Levels or Year 12 equivalents, and meets the minimum entry requirements and pre-requisite subjects.	A recognized degree at a Credit level.	Four years or equivalent of tertiary studies in relevant discipline at a high level of achievement.

2020 INTAKES

Foundation - January, April, September, October

Diploma - April, September

Degree - March, September, October

SWINBURNE FOUNDATION STUDIES (ENGINEERING/SCIENCE)

Foundation Studies prepares you for direct entry to a bachelor's degree at Swinburne Sarawak or Swinburne Australia, as long as you meet the entry requirement and pre-requisites*. Courses are designed to help you develop skills in communication, information technology and mathematics, and undertake units in physics, chemistry, and mathematics for engineering.

*must meet entry requirements and pre-determined requisites

UNITS OF STUDY

Students must complete eight core and one elective.

Core units

- FCL10001 Academic and Communication Skills A
- FCL10003 Innovation and Change
- FCT10010 Information Technology
- FSE10024 Introductory Physical Science
- FSE10022 Engineering/Science Mathematics A
- FCL10002 Academic and Communication Skills B
- FSE10023 Engineering Maths B
- FSE10025 Physics

Electives

- FSE10021 Chemistry
- FST10014 Programming

DEGREES WITH HONOURS

Your Swinburne Sarawak Engineering degree have an integrated honours year where you'll have more opportunity to dive more deeply into your major area and develop your research skills.

DOUBLE DEGREE

Our double degrees help broaden your study experience while being highly respected by employers. Double degree adds one extra year to the standard four-year degree, so you get six years' worth of study in five!

WHAT'S IN A STANDARD ENGINEERING DEGREE?

Our Engineering degrees are made up of 32 units of study for a 4-year program. A unit is basically another name for subject and you'll usually take four per semester; eight per year. These units falls largely into one of three categories:

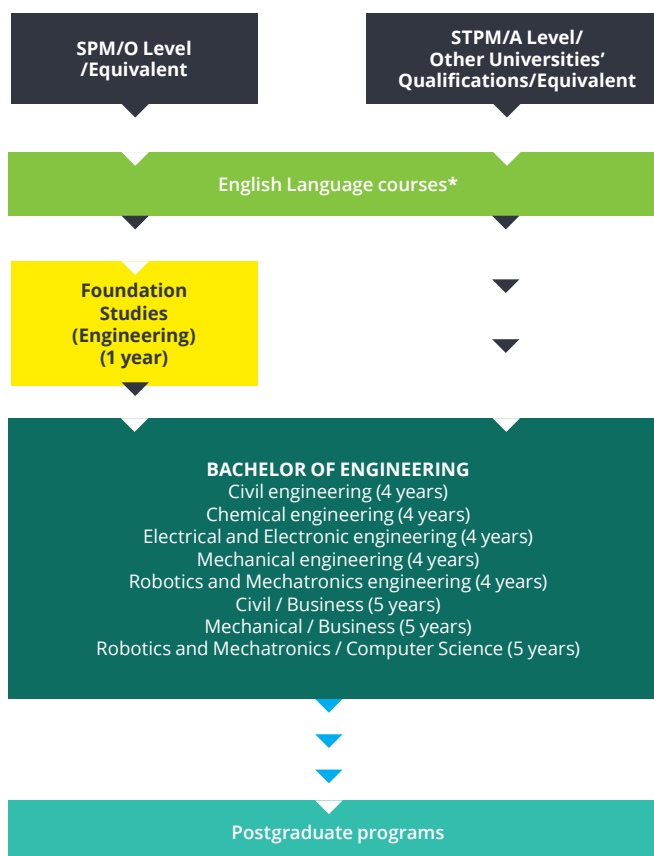
Core units – students will need to complete these units, regardless of his chosen major, in order to graduate

Major units – these units make up your specialisation. So pick a major you love!

Elective units – these are the remaining units from any areas of study.

- Taking all elective units from your course gives you a second major
- If you take elective units from another course, you'll have a co-major
- Taking four electives from one area earns you a minor
- Mix and match elective units based on your interest.

Your pathway options



- ▶ Course entry
- ▶ Pathway Opportunity

* If students does not meet the English Language entry requirement

ENGINEERING STUDY GUIDE

<p>"I WANT TO LEARN HOW TO EFFICIENTLY PRODUCE, DESIGN AND TRANSFORM ENERGY AND MATERIALS."</p>	<p>Study CHEMICAL ENGINEERING</p> <p>With a degree Bachelor of Engineering (Honours) (Chemical)</p>	<p>To learn about</p> <ul style="list-style-type: none"> Design 12 Manufacturing 6 Energy 7 Sustainability 5 Management 2 	<p>To become</p> <ul style="list-style-type: none"> Process Engineer Biochemical Engineer Pharmaceutical Engineer Environmental Engineer 	<p>Annual tuition fee</p> <p>M: RM30,480 I: RM40,000</p> <p>Duration: 4 years</p>
<p>"I WANT TO LEARN ABOUT DESIGNING, BUILDING AND MAINTAINING INFRASTRUCTURE"</p>	<p>Study CIVIL ENGINEERING</p> <p>With a degree Bachelor of Engineering (Honours)(Civil)</p>	<p>To learn about</p> <ul style="list-style-type: none"> Concrete, Steel and Soil 6 Built Environment 5 Roads and Foundations 4 Water and Supply 5 Design Projects 6 Digital Tools and GIS 6 	<p>To become</p> <ul style="list-style-type: none"> Structural Engineer Hydraulics Engineer Geotechnical Engineer Environmental Engineer Traffic Engineer Construction Manager Project Manager 	<p>Annual tuition fee</p> <p>M: RM31,592 I: RM40,000</p> <p>Duration: 4 years</p>
<p>"I WANT TO LEARN ABOUT ENGINEERING'S BEST PRACTICES AND ACQUIRE BUSINESS SKILLS"</p>	<p>Study CIVIL ENGINEERING/ BUSINESS</p> <p>With a degree Bachelor of Engineering (Honours)(Civil) / Bachelor of Business</p>	<p>To learn about</p> <ul style="list-style-type: none"> Concrete, Steel and Soil 6 Built Environment 5 Roads and Foundations 4 Water and Supply 5 Design Projects 6 Digital Tools and GIS 6 Finance / Business Management 4 Business Principles 4 	<p>To become</p> <p>Graduates may select paths from either Civil engineering or Business, or both.</p>	<p>Annual tuition fee</p> <p>M: RM29,400 I: RM38,736</p> <p>Duration: 5 years</p>
<p>"I WANT TO LEARN ABOUT CIRCUITS AND POWER GENERATION"</p>	<p>Study ELECTRICAL AND ELECTRONIC ENGINEERING</p> <p>With a degree Bachelor of Engineering (Honours) (Electrical and Electronic)</p>	<p>To learn about</p> <ul style="list-style-type: none"> Mechanical 2 Electrical 4 Electronics 10 Engineering Design / Software Management 8 Research 2 Elective 4 	<p>To become</p> <ul style="list-style-type: none"> Design Engineer Power Engineer Product Designer Project Planner / Manager Research and Development Engineer 	<p>Annual tuition fee</p> <p>M: RM31,592 I: RM40,000</p> <p>Duration: 4 years</p>

Tuition fee for 2020 only. All tuition fees are subject to an annual review and adjustment.
Note: M: Malaysian | I: International

“I WANT TO LEARN HOW THINGS WORK AND HOW TO MAKE THEM BETTER”

Study
MECHANICAL ENGINEERING

With a degree
Bachelor of Engineering (Honours) (Mechanical)

R/521/6/0098 (09/20) MQA/FA4325

To learn about

Management	2
Design	16
Manufacturing	3
Sustainability	3
Energy	4
Research	2
Innovation	1
Simulation	1

To become

- Design Engineer
- Mechanical Engineer
- Production Engineer
- Project Engineer
- Oil and Gas Engineer
- Refrigeration and Air Conditioning Specialist

Annual tuition fee
M: RM31,592
I: RM40,000

Duration:
4 years

“I WANT TO LEARN HOW THINGS WORK AND ACQUIRE BUSINESS SKILLS”

Study
MECHANICAL ENGINEERING / BUSINESS

With a degree
Bachelor of Engineering (Honours) (Mechanical) / Bachelor of Business

R/521/6/0140 MQA/FA4325

To learn about

Management	2
Design	16
Manufacturing	3
Sustainability	3
Energy	4
Research	2
Innovation	1
Simulation	1
Finance / Business Management	4
Business Principles	4

To become
Graduates may select paths from either Mechanical engineering or Business, or both.

Annual tuition fee
M: RM29,400
I: RM38,736

Duration:
5 years

“I WANT TO LEARN HOW TO IMPROVE EVERYDAY LIFE THROUGH AUTOMATION”

Study
ROBOTICS AND MECHATRONICS ENGINEERING

With a degree
Bachelor of Engineering (Honours) (Robotics and Mechatronics)

R2/523/6/0106 MQA/FA4326

To learn about

Mechanical	9
Electronics	8
Software	2
Engineering Design	7
Management	2
Minor	4

To become

- Robot System Engineer
- Control System Engineer
- Digital Systems and Automation Specialist
- Software Engineer
- Production Engineer
- Project Manager / Engineer

Annual tuition fee
M: RM31,592
I: RM40,000

Duration:
4 years

“I WANT TO ACQUIRE SKILLS IN TECHNICAL ENGINEERING FIELD AND SOFTWARE DEVELOPMENT”

Study
ROBOTICS AND MECHATRONICS ENGINEERING / COMPUTER SCIENCE

With a degree
Bachelor of Engineering (Honours) (Robotics and Mechatronics) / Bachelor of Computer Science

R/523/6/0283 MQA/FA4326

To learn about

Mechanical	9
Electronics	8
Engineering Design	7
Management	2
Computer Science	14

To become

- Robot System Engineer
- Control System Engineer
- Digital Systems and Automation Specialist
- Data Scientist
- AI Specialist
- IoT Specialist
- Software Engineer / Developer
- Production Engineer
- Project Manager / Engineer

Annual tuition fee
M: RM29,400
I: RM38,736

Duration:
5 years

Tuition fee for 2020 only. All tuition fees are subject to an annual review and adjustment.
Note: M: Malaysian | I: International

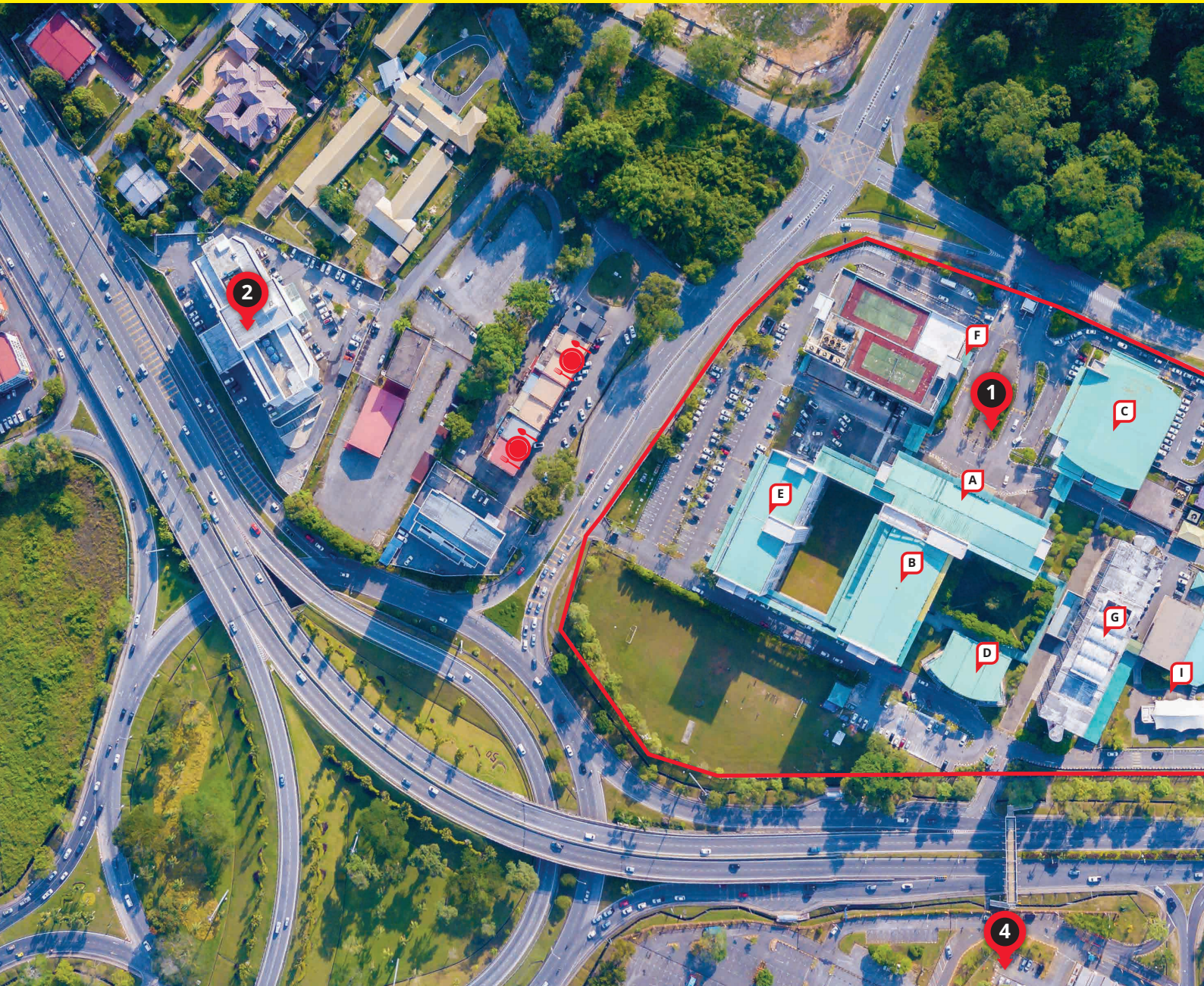
SCHOLARSHIPS AND BURSARIES

Scholarships are about providing opportunity, promoting equity and recognising excellence and achievement. That's why we've created various scholarships and bursaries that may help you meet your financial needs.

If you've excelled in your previous study, you could be awarded a scholarship or bursary. Generally, the better your grades, the higher the amount will be. And if you continue to do well in your studies, you may also be rewarded pathway scholarship for your next level of study.

SCHOLARSHIP	DESCRIPTION	VALUE
PRO CHANCELLOR'S ACADEMIC EXCELLENCE SCHOLARSHIP (FOUNDATION STUDIES)	This is a full scholarship for students enrolled into a Foundation program, up to the completion of the program.	Full scholarship
PRO CHANCELLOR'S ACADEMIC EXCELLENCE SCHOLARSHIP (UNDERGRADUATE STUDIES)	This is a full scholarship for students enrolled into an Undergraduate program.	Full scholarship
DEPUTY VICE-CHANCELLOR'S ACADEMIC EXCELLENCE AWARD (FOUNDATION STUDIES)	This scholarship is for students enrolled into Foundation studies.	Between RM2,000 to RM12,000
DEPUTY VICE-CHANCELLOR'S ACADEMIC EXCELLENCE AWARD (UNDERGRADUATE STUDIES)	This scholarship is for students enrolled into an Undergraduate program.	Between RM3,000 to RM10,000
ACADEMIC PROGRESSION SCHOLARSHIP	This scholarship is open to students who enrolled during the current year only.	RM5,000 per annum
UEC ACADEMIC GRANT	UEC graduates applying for a Bachelor's degree program at Swinburne Sarawak and who is qualified for the Deputy Vice-Chancellor's Academic Excellence Award will also be offered the UEC Academic Grant.	15% reduction of the 1 st year's tuition fee on top of the Deputy Vice Chancellor's Academic Excellence Scholarship
EMERGING TECHNOLOGY AWARD	Open to students who had successfully enrolled into one of the programs below: <ul style="list-style-type: none"> • Bachelor of Engineering (Chemical) (Honours) • Bachelor of Information and Communication Technology • Bachelor of Computer Science • Bachelor of Design • Bachelor of Design (Multimedia Design) • Bachelor of Science (Biotechnology). 	Up to 20% off the 1 st year's tuition fee
DEAN'S OUTSTANDING AWARD	This award is in recognition of your participation in co-curricular activities or sports events at the state and national level.	Up to RM5,000
BUMIPUTERA FINANCIAL SCHEME	This financial scheme is open to Sarawakian Bumiputera students who are newly enrolled into any Foundation or Undergraduate program of study at Swinburne Sarawak.	Zero payment while waiting for loan approval from relevant government bodies (Terms & Conditions apply)
SIBLING'S REBATE	Open to 2 nd and subsequent sibling of a current Swinburne student enrolled in a full-time award-bearing program of study.	10% rebate off 1 st year's tuition fee
DIPLOMA PATHWAY BURSARY	Open to students who have successfully completed a Swinburne Sarawak diploma program.	15% rebate off 1 st year's tuition fee
DIPLOMA PATHWAY SCHOLARSHIP	Open to students who had successfully completed a Diploma program from other institutions of higher learning.	10% off from the 1 st year's tuition fees
SWINBURNE SARAWAK TRANSITION GRANT	This grant is to help offset any costs incurred for when a student enrol into any program of study at Swinburne Sarawak.	RM4,000 (Malaysian) RM5,000 (International)
BP40 BURSARY SCHEME	This bursary scheme is offered by Yayasan Sarawak to students wishing to enrol into Swinburne Sarawak's program of studies.	Tuition fee rebates and a Yayasan Sarawak study loan

SWINBURNE AT A GLANCE



DOWNLOAD



Kuching VR
from Google Play or
Apple App store

A Chancellery Building

B Faculty of Business, Design & Arts

C Multipurpose Hall

D Lecture Theatre

E Faculty of Engineering, Computing & Science

F Multistorey Carpark

G Block G & Centre for Digital Futures

H Hostel

I Cafeteria

J Student Leisure Centre & Chillin' Crib

TOP 10

Jobstreet Preferred
Private Universities

KUCHING. MELBOURNE. OR BOTH.

An Australian education
at 1/3 the tuition fee. Or
transfer to Melbourne
after your 1st year

TOP 3%

Among World's Top
Universities
(QS World University
Rankings 2020)



Food &
Beverage
Outlets

1 Swinburne
University of
Technology
Sarawak Campus

2 Borneo
Medical Centre

3 Off-campus
Residence-
Victoria Hall

4 Immigration
Department @
Federal Offices
Complex

5 RHB
Bank Bhd

6 The Spring
Shopping
Mall

7 Kuching
District Police
Headquarters

8 Mosque-
Masjid Darul
Ittihaad

9 Hotel-
Citadines
Uplands
Kuching

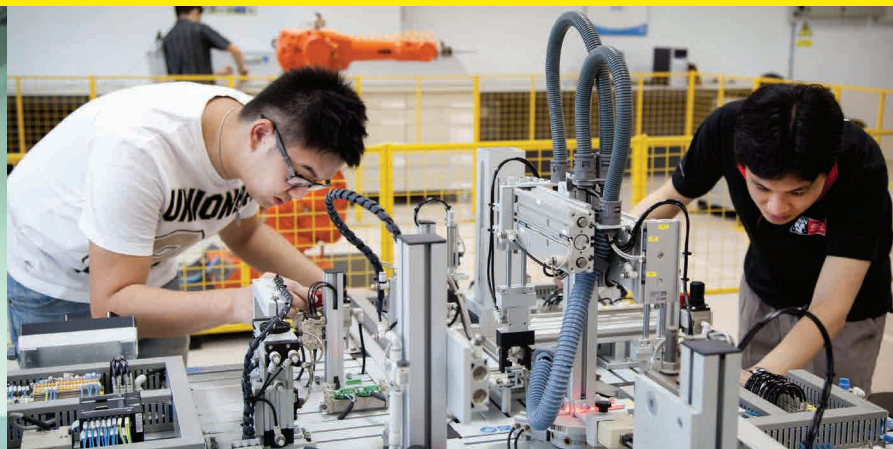
HOW MUCH DOES AN ENGINEER MAKE?

Some of the highest paying careers in the world are found in engineering. As one of the most lucrative and in demand career choices, engineering offers multiple disciplines and job types.

THE AVERAGE MONTHLY SALARY FOR AN ENGINEER WORKING IN MALAYSIA

Field	Entry (< 3 years)	Average (< 7 years)	Senior (> 10 years)
Chemical Engineer	RM4,500 – RM8,000	RM9,000 – RM11,500	RM13,500 – RM14,500
Electrical and Electronics Engineer	RM4,500 – RM6,000	RM5,000 – RM7,000	RM9,000 – RM10,200
Mechanical Engineer	RM6,000 – RM7,800	RM9,500 – RM11,000	RM10,500 – RM13,800
Civil Engineer	RM4,000 – RM6,800	RM7,500 – RM9,500	RM8,000 – RM11,500
Data Engineer / IT Engineer	RM6,000 – RM7,800	RM8,500 – RM10,500	RM10,500 – RM13,000
Oil and Gas Engineer	RM6,000 – RM8,000	RM9,000 – RM11,000	RM14,000 – RM16,500

Source: salaryexpert.com



Creating tomorrow's solutions begins with an understanding of technology, today.



CAMPUS

Swinburne University of Technology Sarawak Campus

Jalan Simpang Tiga
93350 Kuching,
Sarawak, Malaysia

FURTHER INFORMATION

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CRICOS Provider Code (Swinburne University of Technology): 00111D
DULN004(Q) • MQA/SA/0007 • Co. No. 199901022294 (497194-M)

The information contained in this course guide was correct at the time of publication, March 2020.
The university reserves the right to alter or amend the material contained in this guide.

For the most up-to-date course information please visit our website.

