UTP
UNIVERSITI TEKNOLOGI PETRONAS

MSc in Electronic Systems Engineering

JPT/BPP(R3/523/7/0098)10/27
JPT/BPP(N-DL/523/7/0311)04/24

Electronics to power Industry 4.0

The electronics and semiconductor industries build tightly integrated hardware and software systems to power artificial intelligence, autonomous robotic systems and wearables. These technologies are poised to reshape the 21st century economy and deliver the promise of a technology-enabled smart world. Electronics system engineers are at the heart of this technological revolution as the skilled artisans who create and build new architectures and infrastructures of nimble and flexible electronic systems - the talents who will be in high demand to unleash the potential of breakthrough technologies.

Our MSc in Electronics Systems Engineering is designed to meet the capability gap and talent shortage that presently hinders our transformation to embrace Industry 4.0. Co-designed with principal engineers from multinational chipmakers and leading firms in the oil & gas industry, our programme prepares students to pursue R&D-based innovation through UTP-exclusive courses in electronics design, sensor development and systems integration. UTP will train you to implement Industry 4.0 and master core technologies critical to industry advancement.

Be a part of the talent pipeline for electronic systems engineers!
Gain your competitive edge through UTP's cutting edge and industry-linked content.

Join a leading feeder university for the advanced electronics industry!

Connect with the latest industry thinking and trends in technology.

Develop a practical perspective of technology challenges and opportunities in industry.

Learn to leverage real industry data and findings from frontier research to provide cutting edge technology solutions.

Who is the programme for?

Our programme is tailored for junior to mid-career engineering professionals to upgrade themselves in the latest technological developments to bridge the high technology gap and implement Industry 4.0 solutions. We are aligned with kel local and international semiconductor industry players particularly around Malaysia's vibrant industrial hubs in Penang, Perak, Kuala Lumpur, Melaka and Johor. We will train you in advanced electronics sysyem design and development to power products and services that will lay the infrastructure for automation and execution of Industry 4.0

3 reasons to join MSc in Electronic Systems Engineering at UTP!

1

Leverage our vast industry network and stand out as first-rate graduates.

Step up your career with our modular programme that is jointly developed with principal engineers from leading companies in the electronic systems engineering industry.

2

Maximize your industry exposure and future-proof your career.

Boost your industry preparedness and gain real insights from case studies based on real challenges faced by our industry collaborators. Grow your technical expertise through industry-specific projects enabled by our industry partners.

3

Sign up for our Open Distance Learning (ODL) programme

With a flexible blend of online and in-person classes, working professionals can opt for the best mode of learning to accommodate their busy schedules.

The industry is our classroom

1	**Programme jointly developed with engineering architects from multinational chipmakers and custodian engineers from major oil and gas firms.**
2	**Regular engagements with technology leaders and industry experts.**
3	**Industry-derived and industry supported assignments and research projects.**

Boost your career and leverage our vast network of industry partners

Benefit from our deep-tech collaborations with the industry. In addition to PETRONAS, we work closely with a wide range of local public-listed automation solutions tech companies and multinational chipmakers for curriculum development and internship placements.

Course Structure

Candidates are required to complete total of 41 credit hours. The programme's curriculum structure is as follows:

Category	Module	Credit Hour
Core	Advanced Mathematics for Systems Analysis & Design	3
	Advanced Embedded Systems	3
	Modern Communication & Network System	3
	VLSI Systems Desig	3
	Advanced Digital Systems Design	3
Specialisation Electives (Choose 1 specialisation elective)	**Specialisation Elective A**	
	Instrumentation Engineering Design & Safety	3
	Advanced Process Control	3
	Metering Systems Technology	3
	Specialisation Elective B	
	Sensors & Systems	3
	Intelligent Systems	3
	Image Processing & Computer Vision	3
	Specialisation Elective C	
	Advanced Analog IC Design	3
	System Verification & Test Methodologies	3
	Low Power VLSI Systems	3
University Requirement	Data Analytics	3
	Project Management	2
National Requirements	Research & Design Project	2
Project	R&D Project 1	3
	R&D Project 2	7
TOTAL		41

Mode of study

Conventional

ODL

Minimum **12 months**
Maximum **36 months**

On-demand tailored weekend programme

Busy working? Fret not. We have 2 options for you:
a. On demand tailored weekend programme (Conventional mode)
b. Fully online programme (ODL mode)

Medium of Instruction

English

Intake

January/May/September

Entry requirements

Academic

1	Bachelor's Degree in a relevant field from a recognised university with a minimum CGPA of 2.50 or its equivalent.
2	2 Bachelor's Degree in a relevant field from a recognised university with a minimum CGPA of 2.00 - 2.49 or its equivalent will require 5 years of working experience and internal rigorous assessment.
3	Bachelor's Degree from different discipline, must undergo pre-requisite courses in Engineering or Engineering Technology.
4	Apply with your working experience. Candidate who satisfy APEL A requirements are eligile to enrol. Scan the QR code to learn more.

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English language proficiency

International students are required to be proficient in written and spoken English with aminimum TOEFL score of 500 OR a minimum IELTS score of 5.0 or its equivalent.

Exemptions may be provided for candidates who are native English speakers or degree holders with English as the medium of instruction.

Graduation requirements

To graduate with an MSc in Electronic Systems Engineering degree, candidate is required to:

1	Obtain a minimum cumulative grade point average (CGPA) of 3.00
2	Satisfy all the requirements approved by UTP Senate
3	Fulfill the required credit hours and pass Research Methodology course

Tuition fees

Malaysian			International	
Conventional	ODL		Conventional	ODL
RM29,550	RM23,700		RM38,600	RM30,800
RM400		Resource (every semester)	RM400	
RM500		Registration	RM1,400	
RM500		Commitment	RM800	
-		Personal bond	RM3,000	

Rankings & ratings

2019 SETARA HIGHLY COMPETITIVE MATURE UNIVERSITY

(6 STAR) MyRA® MALAYSIA RESEARCH ASSESSMENT

RANKED 60 THE WORLD UNIVERSITY RANKINGS 2022 TOP 60 EMERGING ECONOMIES

THE World University Rankings 2023 TOP 500

RANKED 79 THE World University Rankings Young 2023 TOP 80

RANKED 63 THE World University Rankings 2023 Asia

For programme enquiry:

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SCAN ME

For admission enquiry:

Admission Line :
Local candidates : +605 368 8064
International candidates : +605 368 8364
Universiti Teknologi PETRONAS, 32610 Seri Iskandar, Perak Darul Ridzuan, Malaysia

For further details on the application, visit www.utp.edu.my

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** As at 19 October 2023*