



BEYOND EDUCATION

FACULTY OF ENGINEERING AND TECHNOLOGY

UNDERGRADUATE PROGRAMMES

TUNKU ABDUL RAHMAN UNIVERSITY OF MANAGEMENT AND TECHNOLOGY DU058(W) Wholly owned by the TARC Education Foundation (Reg. No.: 201301003979 (1033820-M)) The Faculty of Engineering and Technology (FOET) began as the School of Technology of Tunku Abdul Rahman College in 1972 with programmes that simultaneously prepared students to sit for internationally recognised professional examinations. With the upgrading of Tunku Abdul Rahman College to Tunku Abdul Rahman University College, the Faculty of Engineering and Built Environment was set up in 2013 offering both Bachelor and Diploma programmes. Due to rapid growth and academic restructuring, it was decided to split the Faculty in 2017 and the Faculty of Engineering and Technology was set up to focus on the existing range of professionally and internationally recognised programmes.



With over 50 years of experience in engineering education, the Faculty of Engineering and Technology is poised to grow from strength to strength, offering programmes that meet the quality standards of the engineering profession. We invite you to join us in the pursuit of academic excellence leading to great opportunities in your future. We are confident that you will find your time with us both enjoyable and rewarding. Our aim is to ENGINEER YOUR PATHWAY TO SUCCESS, equipping you with knowledge, skills and attributes to prepare you for a brighter future.

What Our Graduates Say



As a TAR UMT student, I had the privilege of experiencing a comprehensive and enriching educational journey, marked by practical learning that greatly impacted my personal and professional growth. Through handson projects, case studies, and industry collaborations, I gained vital realworld insights. These experiences heightened my understanding, problemsolving skills, and critical-thinking abilities. TAR UMT's career guidance and counselling services were instrumental in helping me identify my strengths, interests, and career goals, enabling me to make informed decisions for my future.

Bachelor of Electrical and Electronics Engineering with Honours - Graduated in 2023 Diploma of Electronic Engineering - Graduated in 2020 Book Prize Winner – Session 202301



CHONG WAI JUN ★★★★★

Studying at TAR UMT has truly been an exceptional journey. As a Mechatronics Engineering student, I've found the course structure to be extremely beneficial, laying a strong foundation for my future pursuits as an engineer. The lecturers exhibit profound expertise and genuine passion in their fields, always ready to offer guidance and support. TAR UMT has a complete array of engineering facilities, elevating my hands-on experiences as a STEM enthusiast and making learning an enjoyable and dynamic process. I'm deeply thankful to TAR UMT for fostering a conducive environment, shaping the person I am today!

Bachelor of Mechatronics Engineering with Honours - Graduated in 2023 Foundation in Engineering - Graduated in 2019 Book Prize Winner – Session 202301 Merit Scholarship Holder Frederic Barnes Waldron Best Student Award



I am grateful for the invaluable experience I gained as a student at TAR UMT, where I pursued my Mechanical Engineering degree. The programme's comprehensive curriculum and dedicated faculty of lecturers empowered me with a deep understanding of engineering principles. I would say TAR UMT's supportive environment cultivated both my technical skills and personal growth, setting a strong foundation for my future endeavours in the engineering field.

Bachelor of Mechanical Engineering with Honours - Graduated in 2023 Foundation in Engineering - Graduated in 2019 Merit Scholarship Holder SHIMANO Scholarship Recipient 2021

The Faculty of Engineering and Technology is ISO 9001:2015 Certified



CERTIFIED TO ISO 9001:2015 CERT. NO. : MY-QMS 02847

Work on real world industry-funded projects and receive mentorship from experienced academic staff and practising engineers.

Engineering education excellence with a strong emphasis on innovative teaching and student centric learning experience.

Passionate and highly qualified academic staff

dedicated to inculcate the significance and key values of research in line with industry driven technological growth.

Professionally accredited engineering programmes by the Engineering Accreditation Council, and the Engineering Technology Accreditation Council, Malaysia and globally recognised through Malaysia's signatory membership with the Washington and Dublin Accord.

Why study at the

FACULTY OF ENGINEERING AND TECHNOLOGY

> Opportunities to participate in **national** and **international competitions** that **challenges** the application of in depth engineering knowledge, practical skills, teamwork and leadership skills.

Strong industrial links and exposure

with engineering site visits, guest lectures, and curriculum design with input from industry advisors and successful alumni.

> Graduates are **highly sought after** by engineering firms and students may take advantage of career fairs and onsite interviews to **secure employment upon** graduation.





PROGRAMMES OFFERED

Foundation (1 Year)	→ Bachelor Degree (4 Years)
Foundation in Science (Track A) KL	Bachelor of Electrical and Electronics Engineering with Honours KL
	Bachelor of Mechanical Engineering with Honours KL
	Bachelor of Mechatronics Engineering with Honours KL
	 Bachelor of Electronics Engineering Technology with Honours PG



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PROGRAMMES OFFERED



KL - Kuala Lumpur Campus

ACCREDITATION FROM ENGINEERING ACCREDITATION COUNCIL, BOARD OF ENGINEERS MALAYSIA (BEM)

Bachelor's Degree programmes (Bachelor of Electrical and Electronics Engineering with Honours, Bachelor of Mechanical Engineering with Honours and Bachelor of Mechatronics Engineering with Honours) have received accreditation from Engineering Accreditation Council, Board of Engineers Malaysia (BEM) since 2016.

An accredited Bachelor's Degree enable graduates to be eligible for the registration as Graduate Engineer (Grad.Eng.) and followed by Professional Engineer (Ir/ P.Eng) with Board of Engineers Malaysia (BEM).

The Bachelor Degree programmes has been accorded a 6 - year accreditation for graduates of Year 2022 - 2027.



Professional and International Recognitions

The Engineering and Engineering Technician programmes in the Faculty of Engineering and Technology are professionally accredited by the Engineering Accreditation Council (EAC) and Engineering Technology Accreditation Council (ETAC), and therefore recognised internationally under the Washington and Dublin Accord, respectively. These recognitions facilitate mobility of engineering/ engineering technician graduates, allowing them to work in any signatory countries without extensive qualification assessments. This benefits both students and institutions by enhancing the global recognition of engineering programmes.

Graduates who are interested to pursue Professional Engineer with BEM may visit http://bem.org.my/web/guest/professional-engineer

MECHANICAL ENGINEERING

Mechanical engineering is the broadest among all engineering disciplines. Thus, most of the modern day inventions are due to knowledge and application of mechanical engineering. Ranging from simple machineries to supersonic jets and self-driving vehicles, mechanical engineers were always involved from the inception of an idea to the creation of market-ready product. Graduates trained under mechanical engineering will be equipped with the know-hows and skills to work in a wide spectrum of industries such as manufacturing, automotive, modern agriculture, bio-medical, building services and product design. They are well prepared to contribute to the modern world, fulfilling the needs of the Fourth Industrial Revolution (IR 4.0).

Career Prospects

Graduates with bachelor degree would find career opportunities as an engineer in various sectors, but not limited to mechanical, manufacturing, process and production, design and development, consultancy and also research and development (R&D). Employment opportunities as equipment or facilities engineer are on the rise nowadays, alongside quality assurance sector.

Graduates with diploma qualification are competent in working as assistant engineers or technicians in the above-mentioned fields and also in relevant sales or marketing sectors.

Level & Campus

Bachelor of Mechanical Engineering with Honours - 4 years

• KL (R/521/6/0063)(10/25)(MQA/FA3884)

- Diploma of Mechanical Engineering
- 2 years 6 months
- KL (R2/521/4/0061)(08/28)(AA0045)



MECHATRONICS ENGINEERING

Mechatronics is a multidisciplinary engineering branch incorporating Mechanical, Electronics, Control, Networking and Software systems. The synergy of these systems are widely used in multiple industries which typically include automation and system integration. Graduates are therefore involved in almost all levels of various sectors, namely: design, development, applications, automation, manufacturing and advanced research.

Career Prospects

Encompassing mechanical, electronics and control aspects, graduates who were trained under mechatronics engineering would find job opportunities in automation, robotics, instrumentation & control and systems engineering sectors. Having a solid fundamental knowledge, graduates are also able to venture into design, research and development, engineering services, autonomous system engineering and/or jobs that are in-line with the Fourth Industrial Revolution (IR 4.0).

Esteemed diploma level graduates are eligible to contribute as assistant engineers or technicians in the above-mentioned fields and also in relevant sales or marketing sectors.

Level & Campus

Bachelor of Mechatronics Engineering with Honours

- 4 years
- KL (R/523/6/0159)(10/25)(MQA/FA3885)

- Diploma of Mechatronic Engineering - 2 years 6 months
- KL (R2/0788/4/0139A)(08/28)(MQA/FA15898)



ELECTRICAL AND ELECTRONICS ENGINEERING

Electrical and Electronics (E&E) Engineering is probably the most useful degree for you to gain insight on how all the bizarre technologies improves our life - from smart wearable, smart appliances to smart power grid, smart transportation and many more. The advanced technologies that we are enjoying right now as well as that to be enjoyed in the future are driven the brightest E&E engineers and scientists with strong fundamental knowledge in electricity, electronics and electromagnetism. E&E Engineering programme enables you to explore technical knowledge in variety broad areas - power and high voltage engineering, signal processing, integrated circuits, communications, control & instrumentations, renewable energy, computer architecture and data engineering - and become a competent engineer well equipped to meet the challenges of Fourth Industrial Revolution (IR 4.0). Emphasis of the programme is on sustainable design, development and commercialization of a wide range of electrical & electr

Career Prospects

Graduates will find career opportunities in a wide range of sectors, including aerospace, communications, instrumentation & control, IT & computing, consumer & industrial electronics/ microelectronics, electrical & power generation machinery & equipment, manufacturing, transport networks, power generation, transmission & distribution, public utilities, building services, scientific, medical and educational institutions, amongst others.

Job scopes may include developing solutions to problems using new or existing technologies, product design, research & development, test & verification, inspection and maintenance, marketing, sales & service, management/supervision of engineering projects & operations, systems installation & testing, ensuring projects meet electrical safety regulations and consultancy, amongst others.

Level & Campus

Bachelor of Electrical and Electronics Engineering with Honours - 4 years

• KL (R/523/6/0158)(10/25)(MQA/FA3882)



ELECTRONICS ENGINEERING TECHNOLOGY

Electronics Engineering is one of the largest and fastest growing industries, especially in Penang – Malaysia's electronics manufacturing hub. This programme deals with the design, application, installation, manufacturing, operation or maintenance of electronics systems. Unlike conventional electronics engineering programme which emphasises on general theories and conceptual designs, the Bachelor of Electronics Engineering Technology with Honours programme covers a specialised discipline in application of electronic engineering, design and implementation, with a broad knowledge of curriculum in the area of industrial robotic, very-large-scale integration (VLSI) design system, microwave communication system, digital signal processing, microelectronics and etc.

Students are also given work placement opportunities with the industry partners includes Plexus Manufacturing Sdn Bhd, Jabil Circuit Sdn Bhd, ViTrox Corporation Berhad, UWC Berhad, VeecoTech Web & Ecommerce Sdn Bhd and Community Marketplace Technology Sdn Bhd throughout their studies, particularly during their semester breaks and internship. This programme produces highly sought-after talents for the industry as students will go through an enriching learning experience that is industrial-relevant.

Career Prospects

Graduates will find career opportunities that covers a broad spectrum in engineering field, including product development & manufacturing, aerospace, communications, instrumentation & control, IT & computing, consumer & industrial electronics, microelectronics etc.

Level & Campus

Bachelor of Electronics Engineering Technology with Honours - 4 years

• PG (N/0713/6/0002)(05/29)(MQA/PA15254)



ELECTRONIC ENGINEERING

Electronic technologies form the foundation of modern society, making possible the devices and systems that we rely upon in our daily life such as mobile communications, computer networks, medical equipment, video and audio systems and industrial control and automation. Electronics is a broad engineering field, giving students enormous flexibility and wide ranging career options. The Diploma of Electronic Engineering emphasises on design of digital and analogue systems with a focus on applying basic concepts and skills to real world situations and developing broad-based knowledge with a curriculum that includes electronic devices, communications, automation and control, software engineering and embedded systems. The Diploma programme is designed to bridge the gap for school leavers for a successful university study in Electrical and Electronics Engineering.

Career Prospects

Graduates will find flexible and wide ranging of career options in the industries of aerospace, telecommunications, instrumentation & control, computing, consumer and industrial electronics with job scopes that may include product design, development & testing, maintenance, marketing, and sales & services.

Level & Campus

Diploma of Electronic Engineering - 2 years 6 months

- KL (R2/523/4/0138)(08/28)(AA0044)
- PG (R2/523/4/0126)(05/28)(AA0150)



PRODUCT DEVELOPMENT TECHNOLOGY

Product Development is the process of conceptualising and designing products, either physical or digital, to provide end users with solutions that meet their needs. For the purpose of developing new products or improving an existing products, it is imperative that product development technologists identify company goals in conjunction with market opportunities, prior to applying well-defined principles and technologies in a creative way. Product development technologists also formulate manufacturing specifications and perform design analyses to ensure all products meet industry standards and guidelines for functionality. Graduates trained under product development technology programme are expected to be innovative, creative, and analytical with excellent working knowledge using 3D modelling software and other modern technology tools.

Career Prospects

Graduates of Diploma in Product Development Technology are Manufacturing and Industrial Technologists with broad technical, managerial and operational background within their profession. Graduates can build their career as an assistant engineer, technical associate, or technician in the field of product research and development, product design and marketing, product testing and quality assurance, product manufacturing and production, mechanical and machineries design, as well as automation and control. They are well prepared as a technoprenuer to fulfil the country's needs of the Fourth Industrial Revolution (IR 4.0). Graduates are also encouraged to further their study in the relevant Bachelor Degree Programme.

Level & Campus

Diploma in Product Development Technology - 2 years 4 months

• KL (N/521/4/0185)(04/26)(PA13347)

MANUFACTURING TECHNOLOGY

Manufacturing technology encompasses software-based systems, material forming equipment and processes, material removal tools and processes, tooling systems, automated systems and additive processes etc. It refers to any technology that shapes or influences the manufacturing processes. Manufacturing processes are defined as all the activities involved in translating raw materials into finished products through the use of labour, machinery, chemicals, formulation methods, or biological processes. This diploma aims to produce graduates with a sound foundation in manufacturing technology field. Graduates are equipped with the knowledge which are essential for their future employment.

Career Prospects

Diploma graduates may be employed in a wide variety of manufacturing industries such as iron & steels, petrochemicals, electronics, ceramics, polymers, composites, automotive and aerospace industries as assistant engineers, metallurgical technician, quality control technician, service technician, testing technician, production technician, sales & marketing executive. Diploma graduates also can pursue further study in the relevant Bachelor of Technology programme.

Level & Campus

Diploma in Manufacturing Technology - 2 years 4 months

• KL (N/0720/4/0001)(05/27)(MQA/PA14872)

BACHELOR DEGREE ENTRY REQUIREMENTS

Bachelor of	STPM	A Level	UEC	Other IHL	TAR UMT/TAR UC
Electrical and Electronics Engineering with Honours Bachelor of Mechanical Engineering with Honours	Grade C in Physics and Mathematics T/Further Mathematics	Grade D in Physics and Mathematics	5 Grade B in the relevant subjects which must include Physics and Advanced Mathematics (I or II)	Relevant Foundation/ Diploma accredited by MQA	 Foundation in Science (Track A) OR Relevant Diploma
Bachelor of Mechatronics Engineering with Honours	SPM	Pass/ O Level G in Engl	AND rade E (Pass)/ UE ish Language	:C Grade C	
Bachelor of Electronics Engineering Technology with Honours	STPM Grade C in Physics and one Mathematics subject	A Level Grade D in Physics and Mathematics	UEC 5 Grade B in the relevant subjects which must include Physics and one Mathematics subject	Other IHL Relevant Foundation/ Diploma accredited by MQA	 TAR UMT/TAR UC Foundation in Science (Track A) OR Relevant Diploma
	AND SPM Pass/O Level Grade E (Pass)/UEC Grade C in English Language				

Note:

a) Students without a credit in SPM Bahasa Melayu are required to pass Bahasa Kebangsaan A before the award of Bachelor Degree.

b) TAR UMT/TAR UC Diploma will be accepted on credit transfer into Bachelor Degree programmes.

c) Equivalent qualifications/qualifications from other Institution of Higher Learning (IHL) will be considered on a case-by-case basis.

d) Subject to the Ministry of Higher Education latest requirements.



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DIPLOMA **ENTRY REQUIREMENTS**

Diploma of	SPM	O Level	UEC	Certificate
Electronic Engineering Diploma of Mechanical	3 Credits in the relevant subjects	3 Grade C in the relevant subjects	3 Grade B in the relevant subjects	 Relevant Certificate accredited by MQA
Engineering	Compulsory subjec	OR		
Diploma of Mechatronic Engineering	 (i) SPM Credit/O Le B in one mather (ii) SPM Credit/O Le Chemistry or on (iii) SPM Pass/O Lev Language 	Relevant Skilled/ Technical/ Vocational Certificate accredited by MQA or recognised by the Malaysian Government		
Diploma	SPM	O Level	UEC	Certificate
in Product Development Technology	3 Credits in the relevant subjects	3 Grade C in the relevant subjects	3 Grade B in the relevant subjects	 Relevant Certificate accredited by
Diploma in Manufacturing Technology				MQA
i comology	 <u>Compulsory subjects:</u> (i) SPM Credit/O Level Grade C in Mathematics/UEC Grade B in one mathematics subject (ii) SPM Credit/O Level Grade C / UEC Grade B in one relevant science/technical/vocational subject (iii) SPM Pass/O Level Grade E (Pass) / UEC Grade C in English Language 			OR • Relevant Skilled/ Technical/ Vocational Certificate accredited by MQA or recognised by the Malaysian Government

Note:

a) SPM holders must have at least a pass in Bahasa Melayu and SPM holders from Year 2013 onwards must also have at least a pass in Sejarah.
b) Students without a credit in SPM Bahasa Melayu are required to pass Bahasa Kebangsaan A before the award of Diploma.
c) Equivalent qualifications/qualifications from other Institution of Higher Learning (IHL) will be considered on a case-by-case basis.

- d) Subject to the Ministry of Higher Education latest requirements.



FOUNDATION **ENTRY REQUIREMENTS**

	FOUNDATION	ENTRY REQUIREMENTS			
BACHELOR DEGREE		SPM	O LEVEL	UEC	
Bachelor of Electrical and Electronics Engineering with Honours	Foundation in Science (Track A)	5 Credits in the relevant subjects which	5 Grade C in the relevant subjects which	3 Grade B in the relevant subjects which must include.	
Bachelor of Mechanical Engineering with Honours		must include,	must include,		
Bachelor of Mechatronics Engineering with Honours		 SPM Credit/O Level Grade C/UEC Grade B in one mathematics subject and Physics AND SPM Pass/O Level Grade E (Pass)/UEC Grade C in English Language 			
Bachelor of Electronics Engineering Technology with Honours					

Note:
a) SPM holders must have at least a pass in Bahasa Melayu and SPM holders from Year 2013 onwards must also have at least a pass in Sejarah.
b) Equivalent qualifications other than the above will be considered on a case-by-case basis.

c) Subject to the Ministry of Higher Education latest requirements.



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STUDENT ACTIVITIES





Factory Visit to TNB Labs Sdn Bhd (13 July 2023) The factory visit to TNB Labs Sdn Bhd provided students with an opportunity to gain experience in high voltage applications within the industry. During the visit, students learned about the real-world application, operation, and testing of high voltage equipment.





Industrial Talk on Electrical Protection System: What you need to know? (6 April 2023)

The talk focused on the purpose of the protection system, introducing the main components within it and discussing methods to select a suitable relay for the breaker.

STUDENT ACTIVITIES





Factory Visit to Eastern Steel Sdn Bhd (22 May 2023)

The objectives of this event are to assist students in gaining a sound understanding on aspects related to the steel industry as well as providing an opportunity for active or interactive learning experiences outside the classroom environment. Students also attend the briefing on the Eastern Steel talents development programme.

SEMINAR

Plastic Industry Transformation: Aligning With Environmental, Social And Governance (ESG) Goals For A Better Future



Speaker:

Mr. Ben Teo Gee Lian

 2021 Top Outstanding Young Malaysian (TOYM)- Moral or/and Environmental Leadership
 2022 World Top Outstanding Young Person (TOYP) - Top
 20 Aoral or/and Environmental Leadership

IMM



Date: 24nd August 2023 (Thursday) Time: 1 pm-3 pm Venue: DK 1, TAR UMT

TUNKU ABDUL RAHMAN UNIVERSITY COLLEGE ENGINEERING ALUMNI ASSOCIATION SELANGOR Seminar on Plastic Industry Transformation: Aligning with Environmental, Social and Governance (ESG) Goals for A Better Future (24 August 2023)

Faculty of Engineering and Technology (FOET) co-organised a seminar titled 'Plastic Transformation: Industry Aligning with Environmental, Social and Governance (ESG) Goals for A Better Future' with TAR UMT Engineering Alumni Association (TEAA) and Institute of Materials Malaysia (IMM). By participating in this seminar, students gained a comprehensive understanding of the Environmental, Social and Governance (ESG) Goals in the plastic industry.

MERIT SCHOLARSHIP

Automatically offered upon admission



Diploma/Foundation Programmes

Entry Qualification	Criteria	Waiver of Tuition Fee
SPM O Level	Minimum 8A+/A Minimum 8As	100%
SPM O Level	8As* 7As	50%
SPM O Level	7As* 6As	25%
SPM	6As*	20% Foundation programmes only
SPM	5As*	15% Foundation programmes only

*SPM As : A+/A/A-

Bachelor Degree Programmes

	<u>.</u>	
Entry Qualification	Criteria	Waiver of Tuition Fee
STPM / A Level	3As	
Unified Examination Certificate (UEC)	8As	
TAR UMT/TAR UC Diploma*/ TAR UMT/TAR UC Foundation*/ Matriculation	CGPA ≥ 3.8500	100%
South Australian Matriculation (SAM)/ Western Australian Certificate of Education (WACE)/ Higher School Certificate (HSC)	≥ ATAR 95	
Canadian Pre-University (CPU)	≥ 95 %**	
STPM / A Level	2As	
Unified Examination Certificate (UEC)	7As	
TAR UMT/TAR UC Diploma*/ TAR UMT/TAR UC Foundation*/ Matriculation	CGPA ≥ 3.7500	50%
South Australian Matriculation (SAM)/ Western Australian Certificate of Education (WACE)/ Higher School Certificate (HSC)	≥ ATAR 90	
Canadian Pre-University (CPU)	≥ 90%**	
STPM*** / A Level***	1A	9597
Unified Examination Certificate (UEC)	6As	25%
Unified Examination Certificate (UEC)	5As	20%

Including A-

*Must have obtained straight passes in all courses (including co-curriculum courses for diploma) **For all subjects with a minimum of 6 subjects ***Effective June 2024 Intake

Only applicable for Malaysians pursuing full-time programmes. Terms & Conditions apply.

For further information, please contact:

Faculty of Engineering and Technology

Telephone: (6) 03 4145 0100/23 ext. 3235 , 3424 Email: foet@tarc.edu.my (6) 011-1082 5613 & 011-1059 7120

Kuala Lumpur Campus Jalan Genting Kelang, Setapak, 53300 Kuala Lumpur, Malaysia. Telephone: (6) 03 4145 0100/23 E-mail: info@tarc.edu.my

Perak Branch Jalan Kolej, Taman Bandar Baru, 31900 Kampar, Perak, Malaysia. Telephone: (6) 05 466 0388, 466 8012/3 E-mail: perak@tarc.edu.my Ø 011-1075 8513

Johor Branch Jalan Segamat/Labis, 85000 Segamat, Johor, Malaysia. Telephone: (6) 07 927 0801/3 E-mail: johor@tarc.edu.my i 011-1082 5624



www.tarc.edu.my









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FACULTY OF ENGINEERING AND TECHNOLOGY