TARC
TUNKU ABDUL RAHMAN
UNIVERSITY COLLEGE

BEYOND EDUCATION

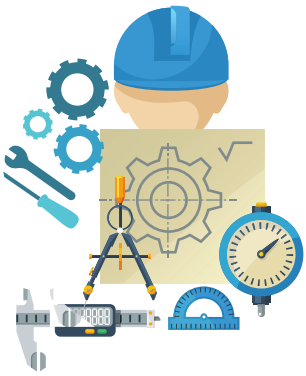
FACULTY OF ENGINEERING AND TECHNOLOGY

2021

*"**Engineering** new worlds and possibilities."*

TAR UC is now a SETARA 5-Star University College

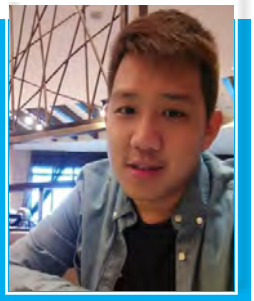
KOLEJ UNIVERSITI TUNKU ABDUL RAHMAN DKU023(W)
Wholly owned by the TARC Education Foundation Co. Reg. No.: 201301003979 (1033820-M)



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 Bachelor of Engineering programmes accredited by the Engineering Accreditation Council, Board of Engineers Malaysia.

With over 48 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



"First of all, a big thanks to TAR UC for giving me a lot of opportunities throughout my five years in TAR UC. Thank you for the TAR UC Merit Scholarship, the guidance from lecturers, the opportunities to participate in competitions and also for the nomination to be one of the IEM Gold Award Best Engineering candidates. TAR UC also provided me with a chance to be involved in an industry collaborative project which led me to be employed by the same company.

Many people have asked me this question: "How did you attain such accomplishments in TAR UC?" I would say attitude is the key to success both in studies and in life. Always remember - Make your inexperience an asset, not a liability. Inexperience is not an excuse for not trying because it is an opportunity for you to try and learn."

LIM JAY MING

Bachelor of Engineering (Honours) Mechatronic - TAR UC
Year Graduated : 2017

ACHIEVEMENTS/TESTIMONIES

1. Merit Scholar, 2013-2017
2. Book Prize winner, 2016/17
3. IEM Gold Award Best Engineering, 2016

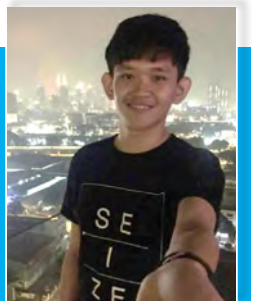
"TAR UC provides an excellent learning environment and yet affordable tertiary education for me to obtain the essential knowledge in the field I am pursuing. The lecturers and course mates are very helpful in giving guidance, learning experience, and cooperation in completing every task assigned. The experience and knowledge obtained have equipped me well for the future, especially in my career. While studying in TAR UC, "just be brave and just do it" because such chances are hard to come by."

CHAN JUN QIANG

Bachelor of Electrical and Electronics Engineering with Honours - TAR UC
Year Graduated : 2020

ACHIEVEMENTS/TESTIMONIES

1. President's List, 2017
2. Dean's List, 2018 & 2019
3. 3rd place in IEEE FYP Competition (Dielectrics and Electrical Insulation), 2019



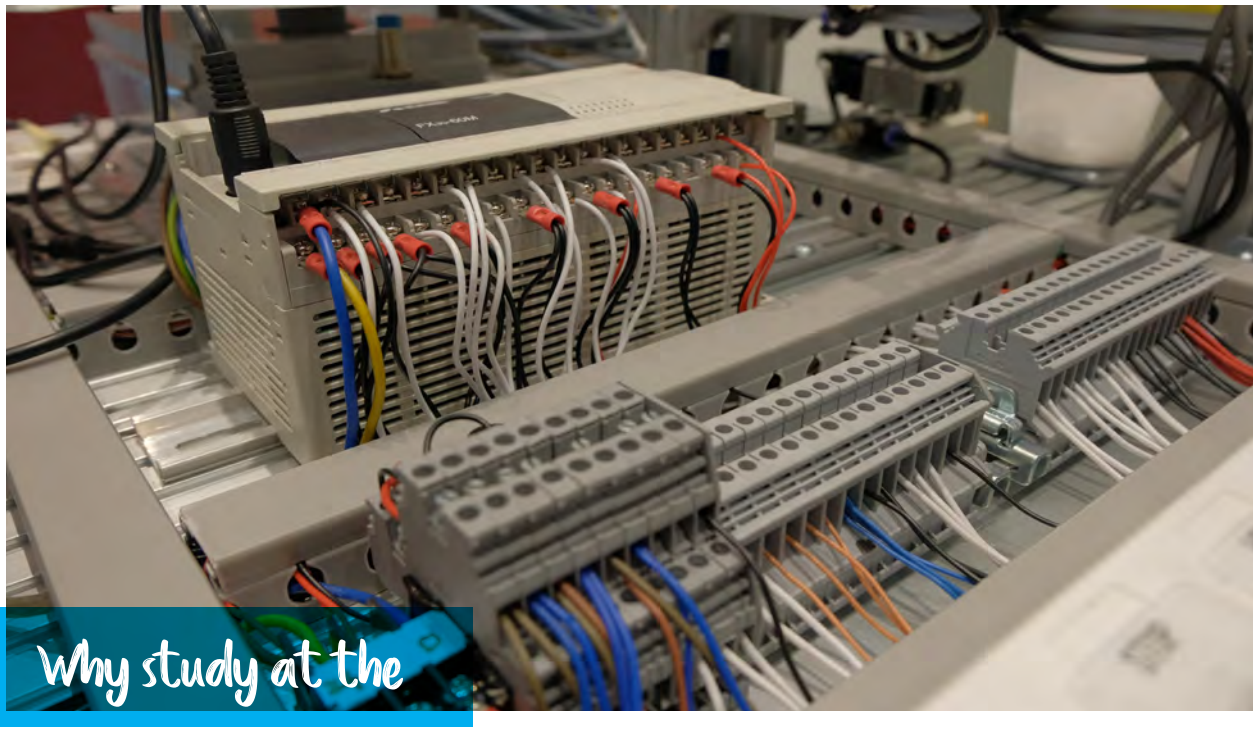
"TAR UC is definitely my first choice to pursue my tertiary education. I managed to complete my Bachelor's Degree without worrying over financial matters as TAR UC offered me Merit Scholarship. The subjects taught in TAR UC are closely related to industry needs which help the students to secure jobs even before they graduate. Besides having good technical knowledge, TAR UC also equips the students with soft skills. With the support from TAR UC lecturers, I managed to complete my Degree in Mechanical Engineering (Hons) with a First Class Honours and also received a Gold Medal Award from IEM (The Institution of Engineers Malaysia) for my Final Year Project."

ONG KEVIN

Bachelor of Mechanical Engineering with Honours - TAR UC
Year Graduated : 2020

ACHIEVEMENTS/TESTIMONIES

1. Merit Scholarship Holder, 2016 & 2019
2. Book Prize winner, 2016 & 2019
3. President Award, 2019
4. IEM Gold Medal Award, 2019

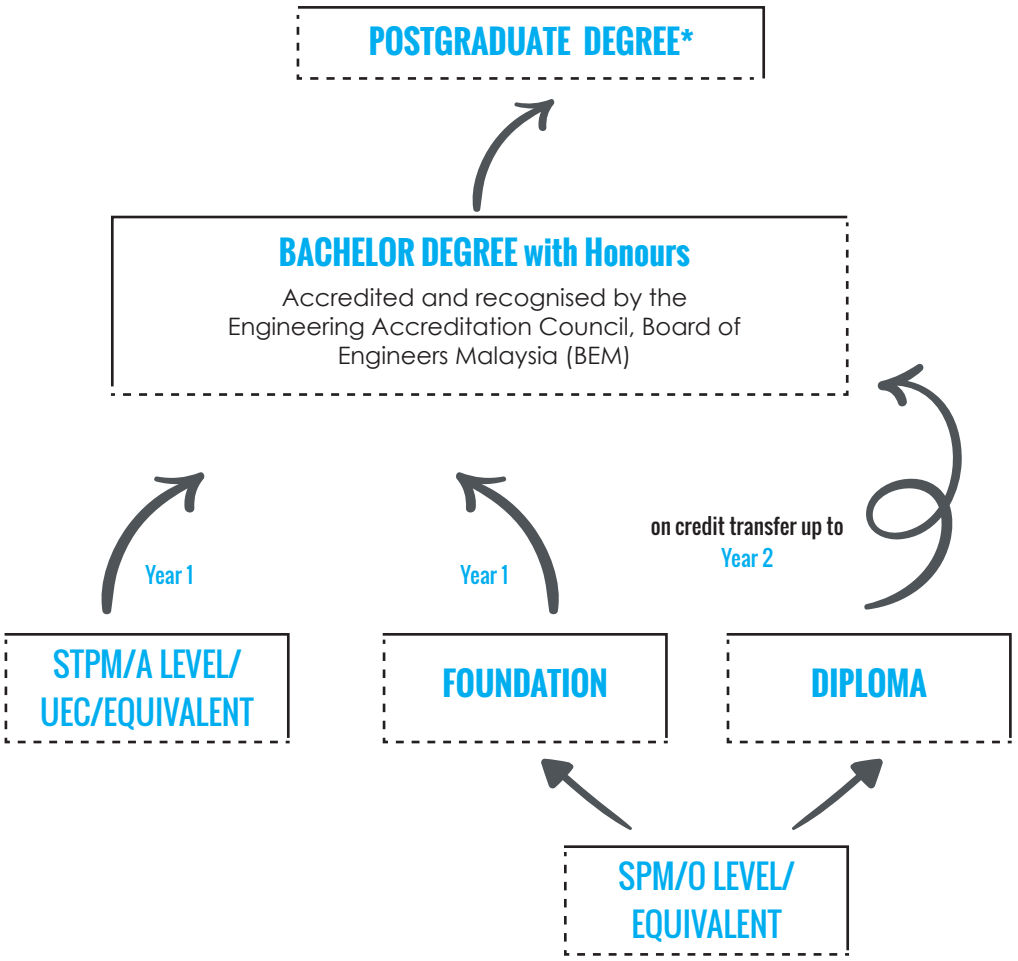


Why study at the

FACULTY OF ENGINEERING AND TECHNOLOGY

1. Work on real world **industry-funded projects** and receive **mentorship** from experienced academic staff and practising engineers.
2. **Professionally accredited** engineering programmes by the **Board of Engineers Malaysia** and **globally recognised** through Malaysia's signatory membership with the Washington Accord.
3. **Strong industrial links** and **exposure** with engineering site visits, guest lectures, and curriculum design with input from industry advisors and successful alumni.
4. Graduates are **highly sought after** by engineering firms and students may take advantage of career fairs and onsite interviews to **secure employment upon graduation.**
5. Opportunities to participate in **national** and **international competitions** that **challenges** the application of in depth engineering knowledge, practical skills, teamwork and leadership skills.
6. **Passionate** and **highly qualified academic staff** dedicated to inculcate the significance and key values of research in line with industry driven technological growth.
7. Engineering education excellence with a strong emphasis on **innovative teaching** and **student centric learning experience.**

GENERAL PROGRESSION ROUTE



**** The Faculty of Engineering and Technology offers the following postgraduate programme:***

- ***Master of Engineering Science***

(N/520/7/0111)(04/25)(MQA/PA9396)

2021 INTAKES

JANUARY

	Commencement Date:
• *Foundation*	• *18/01/2021*
• *Selected Bachelor Degree/ Diploma programmes only*	• *18/01/2021*

MAY/JUNE

	Commencement Date:
• *Foundation*	• *17/05/2021*
• *Diploma*	• *17/06/2021*
• *Bachelor Degree*	• *17/06/2021*

SEPTEMBER

	Commencement Date:
• *Foundation*	• *13/09/2021*

NOVEMBER

	Commencement Date:
• *Selected Bachelor Degree/ Diploma programmes only*	• *01/11/2021*

PROGRAMMES OFFERED

Foundation (1 Year) → Bachelor Degree (4 Years)

Foundation in Engineering **KL/PG**	Bachelor of Electrical and Electronics Engineering with Honours **KL**
	Bachelor of Telecommunication Engineering with Honours **KL**
	Bachelor of Mechanical Engineering with Honours **KL**
	Bachelor of Mechatronics Engineering with Honours **KL**

Diploma (2.5 Years) → (on credit transfer up to Year 2) Bachelor Degree (4 Years)

Diploma of Electronic Engineering **KL/PG**	Bachelor of Electrical and Electronics Engineering with Honours **KL**
	Bachelor of Telecommunication Engineering with Honours **KL**
Diploma of Mechanical Engineering **KL**	Bachelor of Mechanical Engineering with Honours **KL**
Diploma of Mechatronic Engineering **KL**	Bachelor of Mechatronics Engineering with Honours **KL**

■ **KL** - Kuala Lumpur Main Campus ■ **PG** - Penang Branch 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, Bachelor of Mechatronics Engineering with Honours, and Bachelor of Telecommunication Engineering with Honours) have received accreditation from Engineering Accreditation Council, Board of Engineers Malaysia (BEM) since 2016.

An accredited Bachelor's Degree enable graduate 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).

Graduates:
Bachelor of Electrical and Electronics Engineering with Honours
Bachelor of Mechanical Engineering with Honours
Bachelor of Mechatronics Engineering with Honours
Bachelor of Telecommunication Engineering with Honours

↓

Register as **Graduate Engineer** with Board of Engineers Malaysia (BEM)

↓

√ Obtained 3 years practical experience.
(Please visit http://bem.org.my/web/guest/professional-engineer for further details on the practical experience requirement and alternative routes)

√ Passed a Professional Assessment Examination conducted by the Board of Engineers Malaysia (BEM).

↓

Register as **Professional Engineer** with Board of Engineers Malaysia (BEM)

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 - 2.5 years

- **KL** (R/521/4/0061)(08/23)(AA0045)

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 & electronic products and services.

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)

■ **KL** - Kuala Lumpur Main Campus

TELECOMMUNICATION ENGINEERING

Telecommunication Engineering is a rapidly developing field as a result of modern time's reliance on the Internet, mobile phones, broadband, and wireless network. The communications engineering programme aims to develop engineers who will work at the cutting edge of the communications industry with emphasis on technologies for mobile and broadband communication to fulfil global demand. The Bachelor of Telecommunication Engineering with Honours programme develops engineers who design, implement, and manage transmission systems for a wide range of telecommunications application such as networking security, signal processing, high frequency circuits, mobile communication, web technologies, wireless and satellite communication systems.

Career Prospects

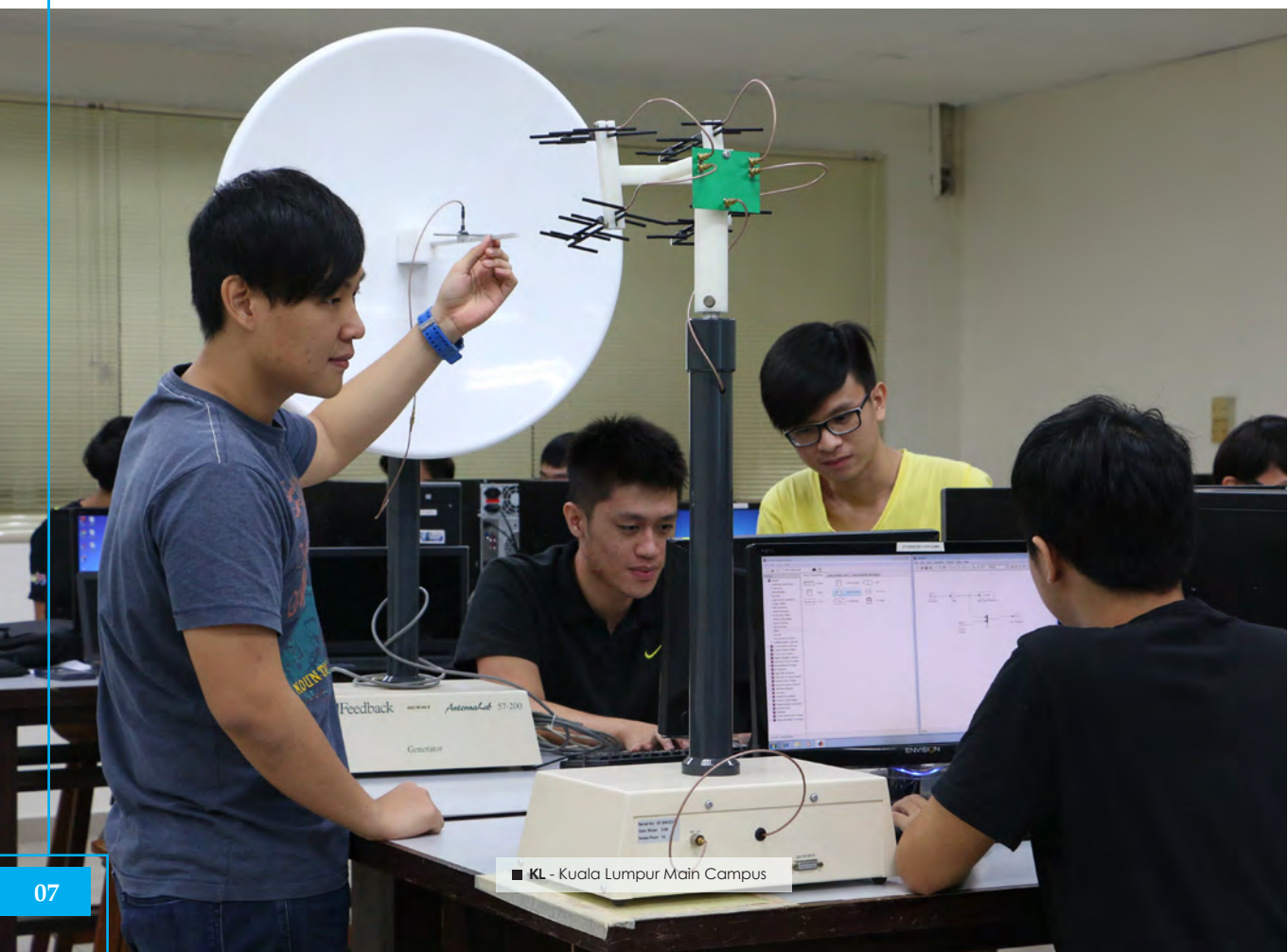
Graduates will find career opportunities in a wide range of sectors, including communications, media & entertainment, aerospace, power, instrumentation & control, software engineering/IT/computing, consumer & industrial electronics/microelectronics, hardware manufacturing, public utilities, scientific, medical and educational institutions, amongst others.

Job scopes may include developing solutions to problems using new or existing technologies, mobile radio network engineering, RF test/product engineering, radio technology development, application & product design, research & development, test & verification, inspection and maintenance, marketing, sales & service, management/supervision of engineering projects & operations, setting up networks & equipment, systems installation & testing, and project consultancy, amongst others.

Level & Campus

Bachelor of Telecommunication Engineering with Honours - 4 years

- **KL** (R/523/6/0160)(10/25)(MQA/FA3886)



■ **KL** - Kuala Lumpur Main Campus

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, 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 - 2.5 years

- **KL** (R/523/4/0139)(08/23)(AA0047)

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 or Telecommunication 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 - 2.5 years

- **KL** (R/523/4/0138)(08/23)(AA0044)
- **PG** (R/523/4/0126)(05/23)(AA0150)

■ **KL** - Kuala Lumpur Main Campus ■ **PG** - Penang Branch Campus

BACHELOR DEGREE
ENTRY REQUIREMENTS

	STPM	A Level	UEC	Other IHL	TAR UC
Bachelor of Electrical and Electronics Engineering with Honours **Bachelor of Telecommunication Engineering with Honours** **Bachelor of Mechanical Engineering with Honours** **Bachelor of Mechatronics Engineering with Honours**	Grade C in Physics and one Mathematics subject	Grade D in Physics and Mathematics	5 Grade B in the relevant subjects which must include Physics and one Mathematics subject	Relevant Foundation/ Diploma accredited by MQA	▪ Foundation in Engineering OR ▪ Relevant Diploma
	AND **SPM** Credit/**O Level** Grade C/**UEC** Grade B in English Language and Bahasa Melayu/Malay Language				

Note:
a) TAR UC Diploma will be accepted on credit transfer into Bachelor Degree programmes.
b) Equivalent qualifications/qualifications from other Institution of Higher Learning (IHL) will be considered on a case-by-case basis.
c) Information is correct at the point of printing. Subject to the Ministry of Education latest requirements.

DIPLOMA
ENTRY REQUIREMENTS

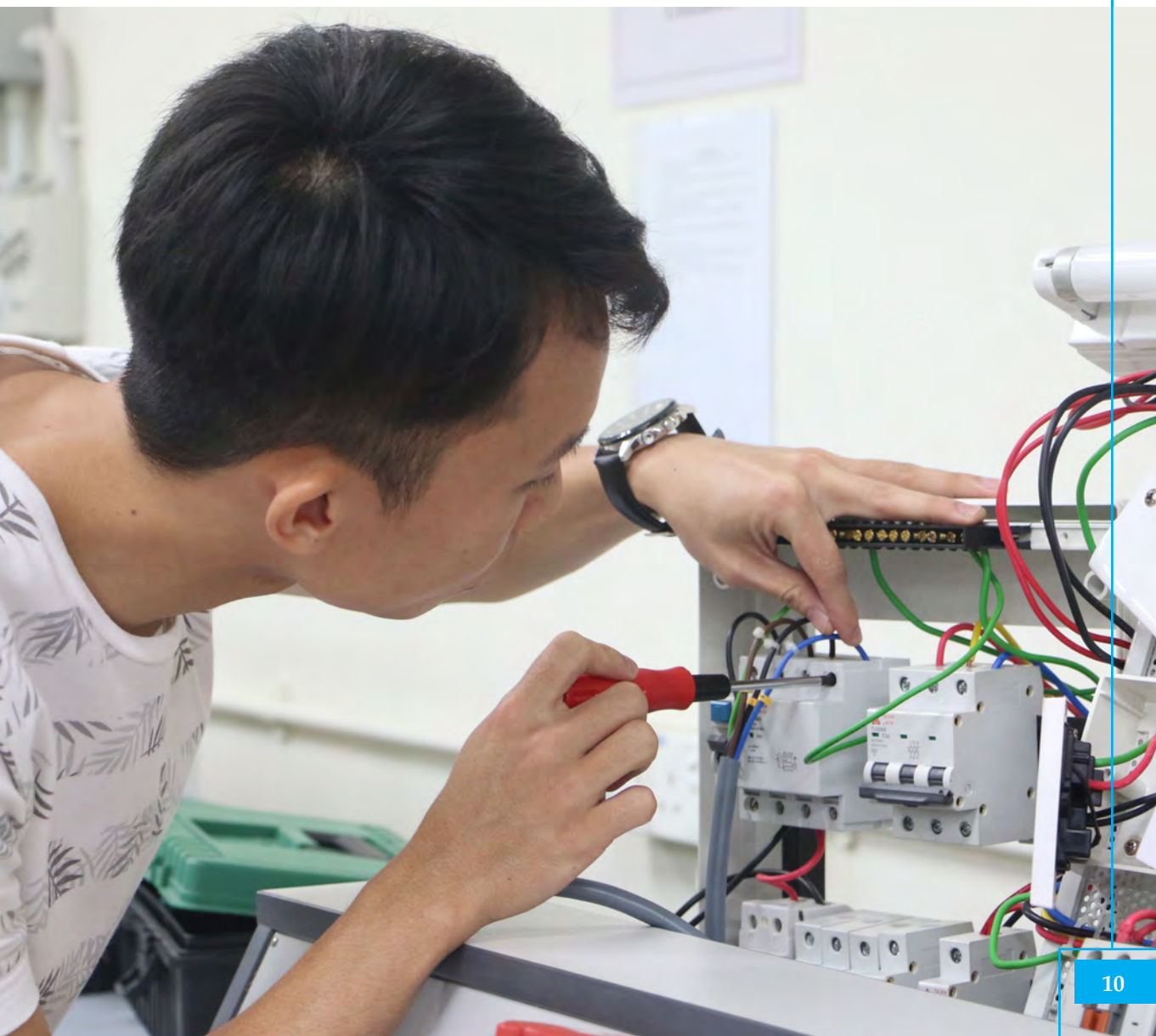
	SPM	O Level	UEC	Certificate
Diploma of Electronic Engineering **Diploma of Mechanical Engineering** **Diploma of Mechatronic Engineering**	4 Credits in the relevant subjects	4 Grade C in the relevant subjects	4 Grade B in the relevant subjects	▪ Relevant Certificate accredited by MQA OR ▪ Relevant Skilled/ Technical/ Vocational Certificate recognised by the Malaysian Government
	Compulsory subjects: (i) **SPM** Credit/**O Level** Grade C in Mathematics/**UEC** Grade B in Advanced Mathematics (I) (ii) **SPM** Credit/**O Level** Grade C/**UEC** Grade B in Physics/ Chemistry/Biology (iii) **SPM** Credit/**O Level** Grade C/**UEC** Grade B in English Language and Bahasa Melayu/Malay Language (iv) **SPM** Pass in Additional Mathematics AND Physics OR **O Level** Grade E (Pass) in Mathematics-Additional AND Physics OR **UEC** Grade C in Advanced Mathematics (II) AND Physics			

Note:
a) SPM holders from Year 2013 onwards must have at least a pass in Sejarah.
b) Equivalent qualifications/qualifications from other Institution of Higher Learning (IHL) will be considered on a case-by-case basis.
c) Information is correct at the point of printing. Subject to the Ministry of Education latest requirements.

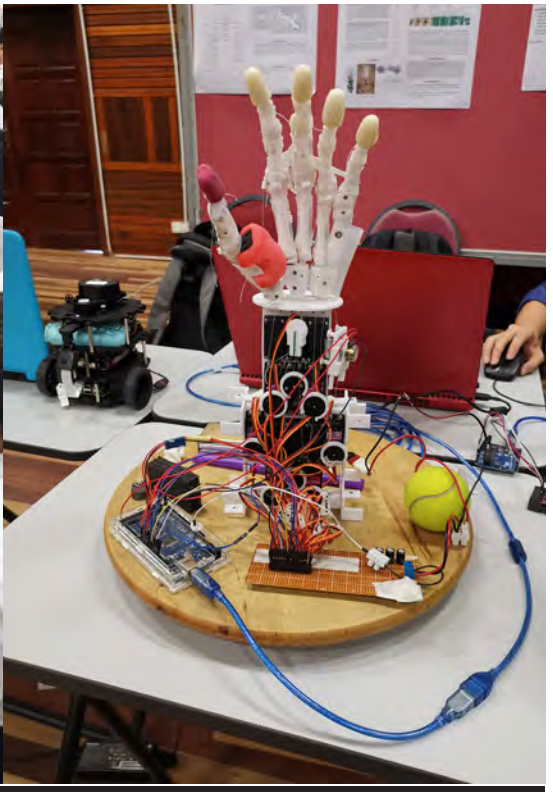
FOUNDATION
ENTRY REQUIREMENTS

BACHELOR DEGREE	FOUNDATION	ENTRY REQUIREMENTS		
		SPM	O LEVEL	UEC
Bachelor of Electrical and Electronics Engineering with Honours **Bachelor of Mechanical Engineering with Honours** **Bachelor of Mechatronics Engineering with Honours** **Bachelor of Telecommunication Engineering with Honours**	Foundation in Engineering	5 Credits in the relevant subjects which must include,	5 Grade C in the relevant subjects which must include,	4 Grade B in the relevant subjects which must include,
		SPM Credit in Mathematics AND Additional Mathematics/**O Level** Grade C in Mathematics AND Mathematics-Additional/**UEC** Grade B in Advanced Mathematics (I or II) AND Grade C in Advanced Mathematics II **AND** **SPM** Credit/**O Level** Grade C/**UEC** Grade B in Physics, English Language and Bahasa Melayu/Malay Language **AND** **SPM** Pass/**O Level** Grade E (Pass)/ **UEC** Grade C in Chemistry		

Note:
a) SPM holders from Year 2013 onwards must have at least a pass in Sejarah.
b) Equivalent qualifications other than the above will be considered on a case-by-case basis.
c) Information is correct at the point of printing. Subject to the Ministry of Education latest requirements.



STUDENT ACTIVITY



ProDEx 2020

Project Design Exhibition (ProDEx) is an annual exhibition which serves as a platform to showcase students' projects. The projects are also judged by a panel which consist of experts from TAR UC as well as from industries. The judging criteria are based on the viability of the project and its practicality in solving various industry challenges.

STUDENT ACTIVITIES

Industry Visit to TNB Putrajaya Power Station (7 January 2020)

This educational visit is to expose students to the construction of a power plant and actual view of the internal structure of the gas turbine power plant. The visit enables students to learn about the generation and distribution of the electricity, role of TNB, function of the instruments in power plant, safety issues and concerns at a power plant.

Industry Visit to Top Glove Berhad (13 August 2019)

This visit to Top Glove exposes students to first-hand information on how gloves are manufactured. The factory produces nitrile disposable glove for medical purposes. It provides the students the opportunity to understand real industry processes and practices.

Industry Visit to MAC Piping Materials Sdn Bhd (17 December 2019)

The visit to MAC Piping Materials exposes students to the production of stainless steel butt weld pipe fittings. They learn about the manufacturing process, plant layout, batch manufacturing system, inventory, logistic systems and QC check.

STUDENT ACHIEVEMENTS

ABB Intervarsity Innovation Challenge 2018

A team of 3 Bachelor of Electrical and Electronics Engineering with Honours students (Tan Wen Qian, Tan Yong Pin, and Yap Chui Xuen) won the awards at The Intervarsity Innovation Challenge (IIC 2018).

2019 IEEE Malaysia Final Year Project Competition

Chan Jun Qiang (left), a Bachelor of Electrical and Electronics Engineering with Honours student won the 3rd place in 2019 IEEE Malaysia Final Year Project Competition.

All Rounded Drone Competition (A.R.D.C) 2018

A team of 4 Bachelor of Mechatronics Engineering with Honours students (Yem Jie, Ong Wei Shin, Yee Mun Jun, and Jordan Chew) won the Champion at All Rounded Drone Competition (A.R.D.C) 2018.

MERIT SCHOLARSHIP

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

Entry Qualification	Criteria	Waiver of Tuition Fee
STPM / A Level	3As	100%
Unified Examination Certificate (UEC)	8As	
*TAR UC Diploma / *TAR UC Foundation / Matriculation	CGPA ≥ 3.8500	
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	50%
Unified Examination Certificate (UEC)	7As	
*TAR UC Diploma / *TAR UC Foundation / Matriculation	CGPA ≥ 3.7500	
South Australian Matriculation (SAM)/ Western Australian Certificate of Education (WACE)/ Higher School Certificate (HSC)	≥ ATAR 90	
Canadian Pre-University (CPU)	≥ 90%**	
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*
Automatically offered upon admission. Terms & Conditions apply

www.tarc.edu.my

For further information, please contact:

Assistant Registrar
FACULTY OF ENGINEERING AND TECHNOLOGY
Telephone: (6) 03 4145 0100/23 ext. 3235, 3424
Email: foet@tarc.edu.my
011-1082 5613

KUALA LUMPUR MAIN CAMPUS
Jalan Genting Kelang, Setapak,
53300 Kuala Lumpur, Malaysia.
P.O. Box 10979, 50932 Kuala Lumpur, Malaysia.
Telephone: (6) 03 4145 0100/23
Fax: (6) 03 4142 3166
E-mail: info@tarc.edu.my

PENANG BRANCH CAMPUS
77, Lorong Lembah Permai Tiga,
11200 Tanjong Bungah, Penang, Malaysia.
Telephone: (6) 04 899 5230
Fax: (6) 04 899 8219
E-mail: penang@tarc.edu.my
011-1082 5618

PERAK BRANCH CAMPUS
Jalan Kolej, Taman Bandar Baru,
31900 Kampar, Perak, Malaysia.
Telephone: (6) 05 466 0388, 466 8012/3
Fax: (6) 05 466 0390
E-mail: perak@tarc.edu.my
011-1075 8513

JOHOR BRANCH CAMPUS
Jalan Segamat/Labis,
85000 Segamat, Johor, Malaysia.
Telephone: (6) 07 927 0801/3
Fax: (6) 07 927 0802
E-mail: johor@tarc.edu.my
011-1082 5624

PAHANG BRANCH
Jalan IM 9/2, Indera Mahkota 9,
25200 Kuantan, Pahang, Malaysia.
Telephone: (6) 09 573 8171/2/3
Fax: (6) 09 573 8100
E-mail: pahang@tarc.edu.my
011-1082 5631

SABAH BRANCH
No. 1, Jalan Alamesra, Alamesra,
88450 Kota Kinabalu, Sabah, Malaysia.
Telephone: (6) 088 348080
Fax: (6) 088 348070
E-mail: sabah@tarc.edu.my
011-1082 5619

Follow us on

Premier Digital Tech Institution™ | Asia Pacific CSR Awards | MSC Malaysia Status Company