





TK 7885 .A1 .F54 2018

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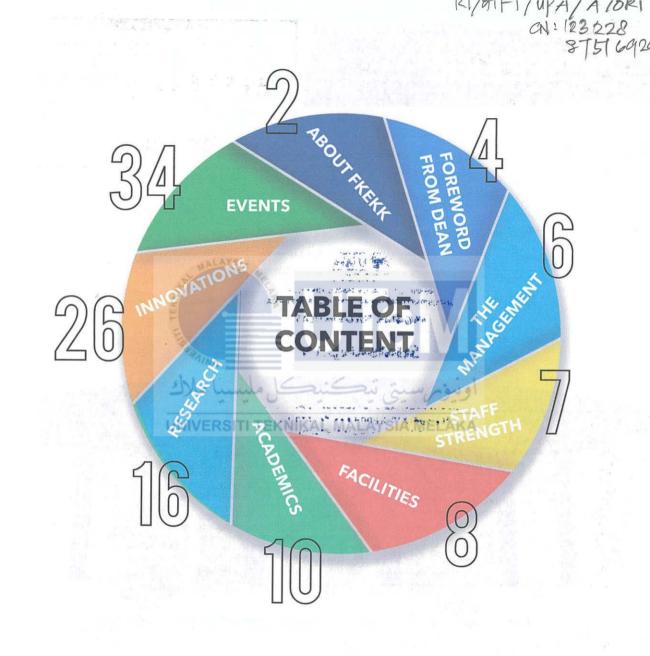






TK7885.A1 .F54 2018







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In the year 2000, Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) was launched and became the 14th public university in Malaysia. Fakulti Kejuruteraan Elektronik dan Kejuruteraan Komputer (FKEKK) was among the various faculties officially established on 22th June 2001. The faculty started its operation at the temporary premises in Taman Tasik Utama in Ayer Keroh, Melaka. On 22th December 2004, FKEKK created its own history by being the first faculty to move its operation to the main campus in Durian Tunggal, Melaka. FKEKK was able to provide the most conducive environment for effective learning as the result of this move, in terms of modern buildings and its latest state-of-art equipment and facilities. In early February 2007, the rebranding of KUTKM to Universiti Teknikal Malaysia Melaka (UTeM) took place and from then on, UTeM had played significant role in producing competent and capable graduates recognized globally and highly sought after by both international and national companies.







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All Praise to Allah, the Almighty, the Most Gracious and the Most Merciful.

My warmest greetings and gratitude to all of you out there for your continuous support to FKEKK. The initiative of faculty's bulletin is for it to become a medium for students, staff and visitors to get to know about FKEKK's background, forte and recent activities. The year of 2018 and 2019 have become exciting years with FKEKK's staff and students' achievements in education, innovations and research. FKEKK is committed to provide an environment in which students and staff can together pursue their educational and research goals.

My best wishes to all of you and I am delighted to present you our FKEKK Insider 2018/2019. I wish all of you success in your future endeavour.

Thank you. Wabillahitaufik walhidayah wassalammualaikum wrt.wbt.

#fkekkhappyplacetowork #fkekkgreatplacetostudy

"EXCELLENCE THROUGH COMPETENCY"

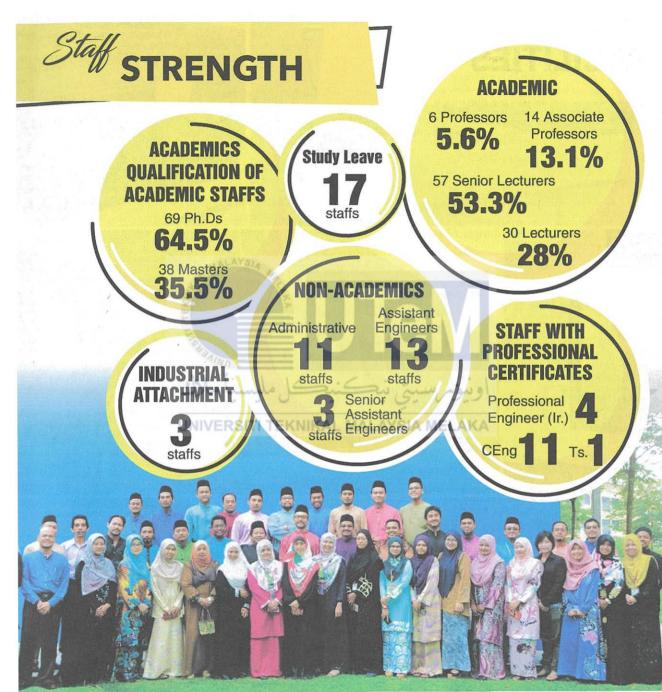
PROFESOR MADYA DR. MOHD SHAKIR BIN MD. SAAT

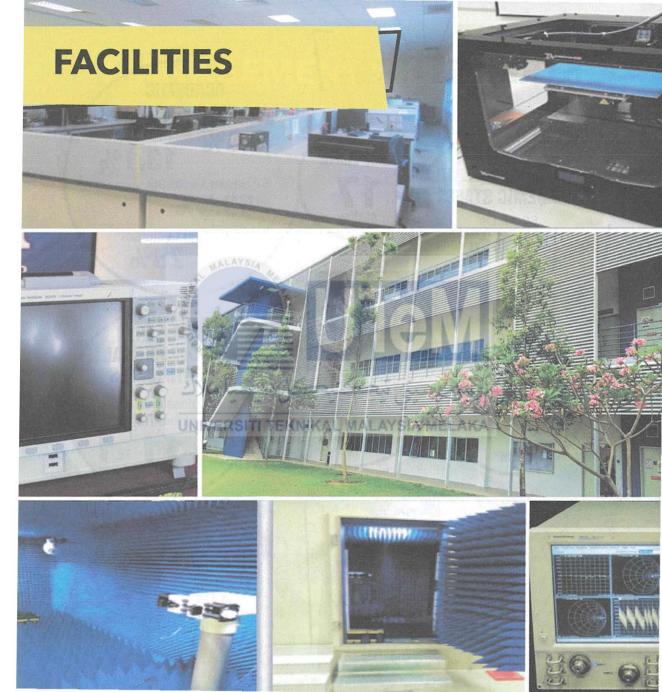
Dean,

Faculty of Electronics and Computer Engineering Universiti Teknikal Malaysia Melaka









TEACHING AND LEARNING LABORATORIES

- Digital Lab
 Microprocessor Lab
 Electronic Communication Lab

 Microwave Lab
 Industrial Electronics Lab

 Fundamental Electronics Lab 1
 Fundamental Electronics Lab 2

 Electrical Technology Lab
 Computer Engineering Lab
 PSM & Fabrication Lab
 - PSM & Fabrication Lab
 - Automation Lab

UNIVERS

RESEARCH LABORATORIES

- Research Lab I
- Research Lab II
- Research Lab III
- Research Lab IV
- Research Lab V
- Postgraduate Lab 1
- Postgraduate Lab 2

HIGH-END EQUIPMENT / HIGHLIGHT

Agilent PNA-X Network Analyzer / N54242A
 Price / Country of Origin: RM895,433 / USA)
 Location: Research Lab 1 – MRG
 • Anechoic Chamber / LOPU
 Price / Country of Origin: RM405000 / China
 - Location: Research Lab 1 - MRG
 • Designex 3D Printer / Poseidon X
 - Price / Country of Origin: RM19,825 /
 Malaysia
 - Location: Research Lab 1 - MRG
 • Impedance Analyser
 - Price : RM125,000

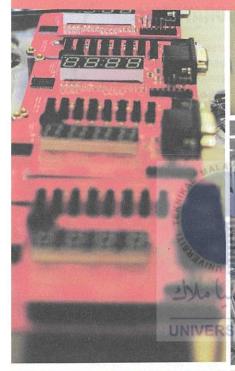
- LCR Meter
- Price : RM 150,000

HALL

MULTIPURPOSE

– Seminar Hall

ACADEMICS











ACADEMIC PROGRAMMES

POSTGRADUATE COURSES

• Research - Doctor of Philosophy (Ph.D) in Electronic Engineering - Doctor of Engineering (Deng) in Electronic Engineering - Master of Science in Electronic Engineering

UNDERGRADUATE COURSES

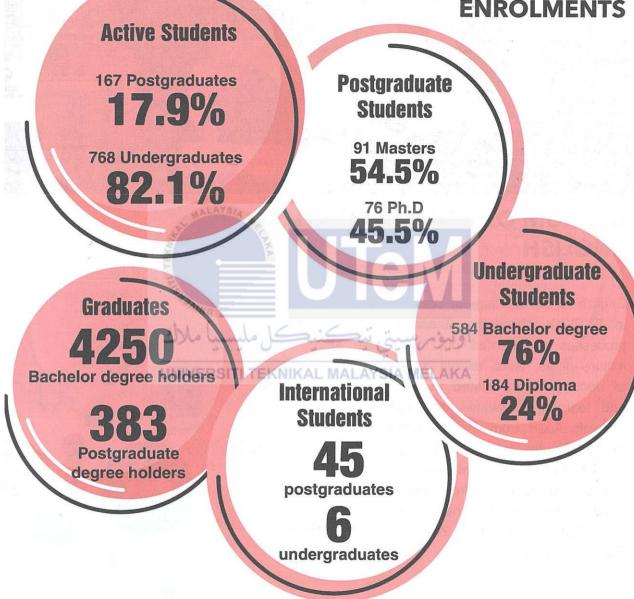
 Bachelor of Electronic Engineering with Honours
 Bachelor of Computer Engineering with Honours
 Diploma in Electronic Engineering

POSTGRADUATE COURSES Taught Course

- Master of Electronic Engineering (Telecommunication System)
- Master of Electronic Engineering (Computer Engineering)
- Master of Electronic Engineering (Electronic Engineering)
- Double Degree Master Degree
 Programme



STUDENTS ENROLMENTS





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MEDIUM OF COMMUNICATION: ENGLISH

English is the medium of communication and instructions in FKEKK's classroom. Teaching and learning processes are carried out in English. All lecture notes, tests, exams or any form of documentation related to teaching and learning is written in English as well. Apart from that members of the faculty are competent in English communication with diverse academic backgrounds from native English speaking countries such as the UK, Australia, New Zealand, Sweden, USA and others.









 Awarded 6 years of accreditation with effect from 2018 to 2023 by Engineering Accreditation Council Malaysia (EAC) Bachelor of Electronic Engineering with Honours Awarded accreditation with effect for 2019
 Bachelor of Electronic Engineering (Industrial Electronics) with Honours
 Bachelor of Electronic Engineering (Computer Engineering) with Honours
 Bachelor of Electronic Engineering (Telecommunication Electronics) with Honours
 Bachelor of Electronic Engineering (Wireless Communication) with Honours

 Awarded 5 years of accreditation by Malaysia Qualification Agency (MQA) - Postgraduates Programme







UNIVERSITI TEKNIKAL MALAYSIA MELAKA









RESEARCH GROUP UNDER CeTRI

 ASECS (Advanced Sensors & Embedded Control Systems)

Focus Area:
 Advanced sensors
 Control System
 Embedded Systems

• PERG (Photonics) Engineering Research Group)

 BBNET (Broadband & Network)

 Focus Area:
 Advanced Communication System
 Location based Navigation System
 Wireless Broadband Applications

 MRG (Microwave Research Group)

Focus Area:
 Antenna Design and
 Propagation
 Advanced Microwave Filter
 Design

 RF Switch Design, Metamaterial
 Energy Harvesting. MiNE (Micro & Nano Electronic)

Focus Area:
 Biomedical Design
 Power MOSFET and IGBT
 (Flagship with MIMOS)
 Micro-Electro-Mechanical
 Systems (MEMS)
 - Solar cell

 MLSP (Machine Learning & Signal Processing)

 Focus Area:
 Computer Vision & Image Processing
 Signal Processing & Artificial Intelligence
 Real Time Implementation of Algorithms Using FPGA & GPGPU

TOTAL GRANTS UNDER CeTRI

TOTAL (RM 1,143,170)

PJP(38%)

PPRN, FRGS, PRGS (62%)

Internal grants :

Short Term Grant (PJP)

🖬 Internal Grants 🛛 🛤 External Grants

External grants :

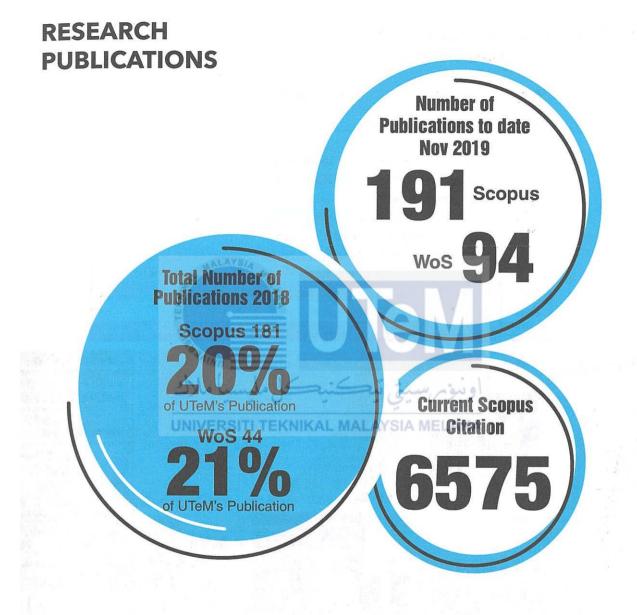
Public Private Research Network (PPRN)

RM 82,440

Fundamental Research Grant Scheme (FRGS)

RM 537,730

Prototype Research Development Grant Scheme (PRGS) RM 83,000



RESEARCH ACTIVITIES

Activities on Year 2018

Month	Activity Name
Jan	RG Myra Workshop
Feb	Journal Incentives
Mac	Visitor from R&D Infenion Technologies
No and the	Visit to Ericsson 5G Lab, WCC UTM
Jul	CoE-CeTRI Meeting
Aug	Visit from Keysight Technologies
5.3.	5G Technology Awareness Program
Sept	Visitor from BioEM-Unimap
- alter	National Workshop on Lightning Physics and Measurement
Nov	Knowledge sharing by Prof. Ulung Datuk Dr. Harith
Dec	ASECs 2018
	Technical Talk Prof Dr. Sakaki, Nagoya

KANNARAN CUTEM

SA

B Oror 2018 (Wedn

R Ogor Loss (ross) 1,00 pm -5.00 pm #ill/K Kuliah 17 (BK 17) FKEKK Mirowave Research Group (MRG) 1. Mr. Lee Ken Yong - Krysight Engineer

2. Prof. Dr. Zukalnain bin Mohd Yussof z. Prof. Dr. Zahriladha bin Zakaria 3. Dr. Imran bin Mobd Ibrahim 5. Dr. Noar Azwanbin Shairi 6. Dr. Mohd Riduan bin Ahmad 7. Dr. Reza Firsandaya Malik

Date

Time

Presenters





Jalin kerjasama dalam bidang komunikasi 5G

UTeM & UTM kongsi kepakaran

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20 FKEKK Insider 2018/2019





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. EMBEDDED CONTROL SYMPOILUM ASE S



journal

> Interdisciplinary rese in Advanced Photonics Engineering

> National & internation research grant applicatio proposal preparation > Strategies to boost H-in citations

> Publishing in ISI-ind

Prof. Ulung Datil Dr. Harith

Activities on Year 2019

Month	Activity Name
Jan	Technical Talk : From FET to Biosensor
	Research Talk : 5G Network Emulation Solutions
	Visit to INEE, Unimap
	Visit to SilTerra
Feb	Visitor from UTHM
Mac	Industry Visit to Mutiara Tech
	Visit from R&D Procter & Gamble (P&G) United Kingdom
April	Visit from R&D MIMOS
May	Visit from UiTM Student
June	Visit from IKED, SAPURA& TEKMARK
July	With Royal Highness of Sultan Terengganu - Malaysia
	International Seminar on Antratica (MISA)
	Visit from MSN













SOUTH KOREAN POLAR RESEARCH INSTITUTE (KOPRI) ASIA'S SCIENCE FELLOWSHIP SCHEME 2019

Dr. Mohd Riduan Ahmad, an FKEKK researcher has been awarded a prestige fellowship scheme by Korea Polar Research Institute (KOPRI) under the 2019 Asian Polar Science Fellowship Programme. KOPRI is a statutory and government-funded research institution, is a leading agency for Korea's national polar program for both the Arctic and the Antarctic. Dr. Riduan will be cooperating with KOPRI Senior Research Scientist, Dr. Sang-jong Park, to investigate "Characteristics of lightning flashes over Antarctic Peninsula". The research will be conducted at King Sejong station in Antarctic Peninsula to measure the background electrostatic field and locate the coordinates of lightning strikes. Dr. Riduan will spend 3 weeks at KOPRI facility in Incheon South Korea between July 6th and 28th to coordinate the travel and equipment logistics to King Sejong station during summer season between January and February 2020.

We set our standard high and we will keep it high



CONFERENCE : PRECON 2018

Categories Electronic Industries, Computer Engineering, Telecommunication.

Date

January 2018

Highlights

Venue

UTeM

EXX

A total of 69 papers were accepted at our Postgraduates Research Conference (PReCON) 2018. The conference is dedicated for postgraduate students with aims to encourage them in to be active in publications expose the students with research presentations.

INNOVATIONS

©ITEX'19

PERSION INNOVATION &

ESENTAT



30th INTERNATIONAL INVENTION AND INNOVATION EXHIBITION (ITEX) 2019





MOTO INNOCUP 2018

Achievement

Champion

Organizer

INTI International College Penang & Motorola Solutions

Team Members

Advisor Professor Dr. Zulkalnain bin Mohd Yussof

Members

Yew Poh Leng, Weng Shih Ying, Wong Yuin Shen, Cheong Jia Mun, Ibrahim Soliman Mohamed **Project Title**

Smart Vehicle Payment System Using Deep Learning

F Go



INNOVATE MALAYSIA DESIGN COMPETITION 2018

Achievement

Champion in Technology Tracks

(Silterra/CEDEC Track)

Venue

Magic Malaysian Global Innovation

& Cretivity Centerrs (MaGIC), Cyberjaya **Team Members**

Advisor Dr. Wong Yan Chiew

Members

Project Title

Design and Development of System-on-Chip for Smart Sign Language Translator Glove







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اويږدي سري تک تحک مليمي مارک UNIVERSITI TEXNY VSIA MELAKA



TANET KEIDADISAAN ELEKTEONIK SAN KEJBADTERAAN AUMOUTER



INOTEK 2018

Participants FYP postgraduate and undergraduate FKEKK Students (also open for UTeM and non-UTeM students)

Date

April 2018

Highlights

Venue FKEKK, UTeM

competition is an annual faculty event where the final year undergraduate and postgraduate student projects are presented. This competition is one of the best mediums for students to sharpen their creative skills and competitiveness. The ability in creating high innovation creations is aligned with the demands from Ministry of Education for producing a far sighted and creative students.



ST IOT LABORATORY LAUNCHED UTeM

Date

March 2018

UNIVE

Highlights

Venue

ST IOT Lab, FKEKK, UTeM

FKEKK actively cooperates with the industry to produce high quality graduates in line with industry needs. For information, FKEKK has launched the opening ceremony of the STMicroelectronics (ST IOT) laboratory which was officiated by UTeM Former Vice-Chancellor Prof Datuk Ts. Dr. Shahrin Bin Sahib @ Sahibudin.



ST IOT SCHOOL CHALLENGE COMPETITION UTeM 2018

Venue ST IOT Lab, FKEKK, UTEM Date Date 277 April 2019

Highlights

FKEKK has launched the ST IOT collaborations with STMicroelectronics (ST IOT) to produce high quality graduates in line with industry needs. We conducted a workshop for school student to feel and give them exposure in creating the project using ST IOT board. They are given a timeline to create the project according to their ideas and creativity. We also conducted the competition among those students to present their project. A number of judges from STMicroelectonics and FKEKK staff are appointed to evaluate their to evaluate their projects and the students' understanding.



KEYSIGHT-FKEKK PARTNERSHIP

Venue FKEKK, UTeM

Date

2

March 2019

UNIVER

Highlights

FKEKK actively cooperates with the industry to produce high quality graduates in line with industry needs. Hence, faculty had launched the smart partnership with industry with Keysight Technologies. Our faculty also received research equipment from Keysight Technologies and Tekmark Sdn. Bhd. This program was officiated by UTeM Deputy Vice-Chancellor Prof Dr. Zulkifillie Bin Ibrahim.







ARDUINO WORKSHOP WITH MOZAC SCHOOL

Date

March 2019

School

MOZAC

Sekolah Menengah

Sains Muzaffar

Shah, Melaka

Venue

Sekolah Menengah Sains Muzaffar Shah, Melaka

Highlights

The faculty also provides courses and workshops to school and out-of-school organizations. One of the recommended programs is an Arduino workshop that has been conducted for students at MOZAC School. This workshop was attended by form two students. Participants were taught to build programs by using Arduino microcontroller. Our faculty students were also involved as facilitators in assisting the workshop.





ARDUINO WORKSHOP WITH IMTIYAZ SCHOOL



Highlights

Arduino workshop was conducted for IMTIYAZ School students. They were given the opportunity to build the program by using Arduino microcontroller. Staff and students were involved as facilitators in assisting the workshop. Venue FKEKK, UTeM

School

School

ITIYAZ





PROMOTIONS 2018 - 2019

Year

2018-

2019

Venue **Melaka**

Highlights

Promotion is one of the most important aspects to be emphasized. The promotional committee is working hard in promoting all the programmes offered by FKEKK. Promotions are not only done in UTeM, but also were done outside the campus such as in schools, matriculation colleges and other programs organized by Minister of Higher Education.

TAUTAN KASIH RAMADAN 2019

May 2019

24 & 29

Date

Highlights

The CSR program has been implemented under community service committees to help the needy. Cash donation and essential groceries were given to orphans and single mothers during the lftar ceremony with faculty. Door to door for asnaf (poor and muallaf) also been done which covers the area of Jasin, Durian Tunggal, Bukit Katil and Ujong Pasir



Sayyidina Abu Bakar Mosque, UTeM, Jasin, Durian Tunggal, Bukit Katil and Ujong Pasir.













SENTUHAN KASIH FKEKK 2019



Highlights

Giving food coupons RM 3 to RM 6 (per pax) to asnaf and B40 students with the collaboration with student Café 1B. As far as 61% of students came and claimed the coupon and this initiative will continue to be implemented in the next following semester.

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Program

Sontahan Kasil

JKM FKFKK

NIK

Tarikh:

DAN OFK KK Program Sentuhan Kasih RM3.00 IKM. FKEKK













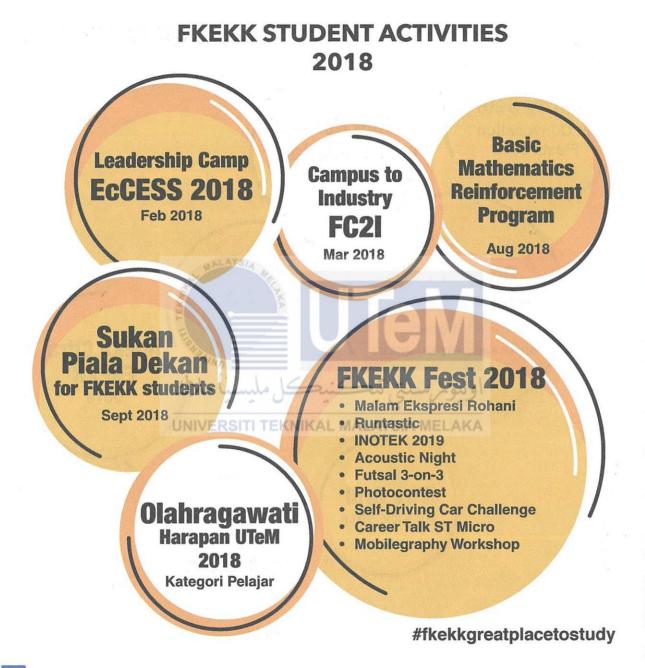






FKEKK CLUB ACTIVITIES





Pertandingan **University Robot Competition: Mencipta Video Pendek Kingdom of FKEKK 2018 Champions** 1 - 29 November 2018 11 - 13 October 2018 Participants: 7 students Program **Clean Up** Kecemerlangan FKEKK Al-Fateh Malaysia Program 17 & 18 Nov 2018 Autonomous 17 November 2018 Participants: **Vehicle Challenge** Participants: 50 students 2019 45 students **MAVEC 2019** National level **Short Course for** 15 December 2018 Participants: **Huawei** Certification **3 students** the Routing and 2018 Switching **TGL Grand** for FKEKK, FKE and FTMK Design students Challenge 5 - 11 November 2018 22 November 2018 Participants: 40 students **Participants:** 6 students

FKEKK STUDENT ACTIVITIES 2018

16

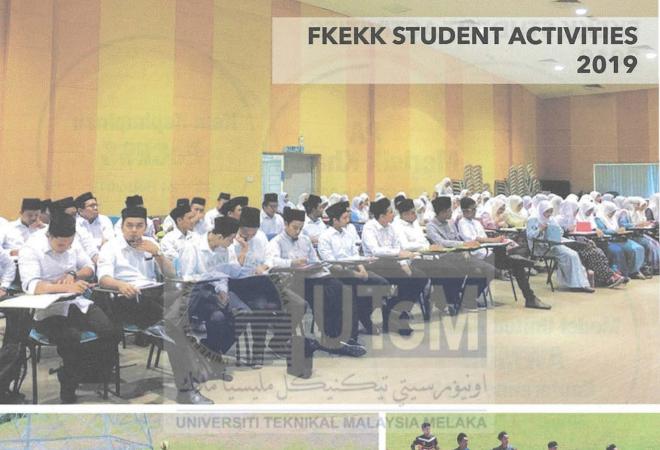


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UNIVERSITI TEKNIKAL MALAYSIA MELAKA



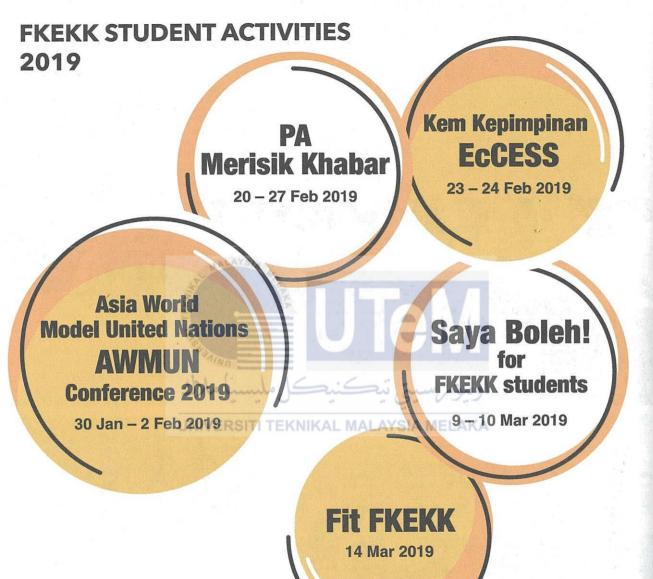
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#fkekkgreatplacetostudy

Speaker Corner

26 March - 14 May 2019

Malaysia Autonomous Vehicle Challenge 2019

11 - 14 April 2019

FKEKK Fest 2019 23 – 26 April 2019

- Buntastic at FKEKK Fest 2019
- Appreciation and Recognition Traditional Show (ARTS)

TEKNIKAL MALAYSIA NELAKI

- INOTEK 2019
- Dec-it
- Futsal 3-on-3
- Lights Out and Buskers
- Young Inventors Workshop
- Ddakji Hunter
- Trucco Class (Makeup class)
- PUBG Mobile
- Acoustic Night

Robot Contest ROBOCON Malaysia 2019

4 - 7 April 2019

CREDITS

Faculty Info @ FKEKK Committee

Advisor Prof. Madya Dr. Mohd Shakir Md Saat

Coordinator Dr. Norhidayah Mohamad Yatim

Committee Members

Dr. Muhammad Idzdihar Idris Dr. Muhammad Noorazlan Shah Zainudin Muhammad Raihaan Kamarudin Dr. Noor Shahida Mohd Kasim Dr. Zarina Mohd Noh

UTeM Press UNIVERSPn. Fatonah Salehuddinsta MELAKA Pn. Faradila Md Yusof Pn. Norhayati Yakob

Faculty Publication & Media Committee Dr. Sani Irwan Salim