



**Fakulti Teknologi Kejuruteraan  
Kimia dan Proses**  
Faculty of Chemical and  
Process Engineering Technology

# RESOURCES

*Official newsletter of the Faculty of Chemical and Process  
Engineering Technology (FTKKP)*

## FROM THE DEAN'S DESK



In the name of Allah, the Most Gracious, the Most Merciful. Blessings and peace be upon Prophet Muhammad (SAW).

FTKKP proudly celebrates the achievements of our faculty, staff, and students over the past six months. Through impactful research, innovative projects, and meaningful international collaborations, FTKKP has continued to bring recognition and honor to the university. Our strategic partnerships with global universities and industry players have enriched student learning experiences and expanded opportunities for high-impact research and innovation.

These accomplishments reflect the dedication, resilience, and collaborative spirit of the FTKKP community. As we move forward, FTKKP remains committed to inspiring excellence, driving innovation, and contributing to a brighter future for society.

**Professor Ts. Dr. Sumaiya bt Zainal Abidin@Murad**  
Dean



## UMPSA RESEARCHER DEVELOPS GREEN SHALE SWELLING INHIBITOR FOR OIL AND GAS INDUSTRY

17 July - A lecturer from the Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), ChM. Ts. Dr. Siti Qurratu' Aini Mahat, has developed an environmentally friendly Green Shale Swelling Inhibitor to replace conventional potassium chloride (KCl) used in oil and gas drilling operations.

The eco-friendly polymer-potassium citrate formulation reduces shale swelling from 54% to 32% and can lower overall operational costs by up to 49%. The project achieved TRL 5 and won a Gold Medal and Special Award at CITREX 2025, supporting more sustainable drilling practices in the oil and gas industry.



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## UMPSA SHOWCASES INNOVATION AT WORLD EXPO OSAKA 2025

22 July - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) marks a proud milestone as Ts. Mohd Najib bin Razali from the Faculty of Chemical and Process Engineering Technology (FTKKP) represents the university at World Expo Osaka 2025.

His innovation, a Biodegradable and Halal Food Grade Grease, was selected by the Ministry of Higher Education (KPT) to be showcased at the Malaysia Pavilion, highlighting UMPSA's research impact on the global stage. The participation also strengthens UMPSA's industry collaboration and commercialisation efforts, supported by the Department of Research and Innovation (JPI).

## FTKKP DEVELOPS SAFE THORIUM PURIFICATION MODEL

18 August - Ts. Dr. Noorlisa Harun and her team from FTKKP, UMPSA, have developed a safe thorium purification model to manage radioactive waste from rare earth element processing in Malaysia. The model uses low-temperature decomposition ( $<240^{\circ}\text{C}$ ) to optimize thorium extraction while preventing insoluble thorium phosphate formation.

The research, supported by Lynas Rare Earth and involving FTKKP researchers and postgraduate Nurul Aniyah Mohamad Sobri, aims to guide pilot-scale processing before industrial application. The project won gold and the Ecotech Innovation Award at UMPSA's CITREX 2025 and is expected to enhance safe and efficient thorium management for Malaysia's rare earth industry.



## FTKKP RESEARCHERS RECOGNISED AMONG STANFORD-ELSEVIER TOP 2% SCIENTISTS 2025



The Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), proudly congratulates three of its researchers for being listed among the Stanford–Elsevier Top 2% Scientists 2025. This recognition reflects their outstanding global research impact and excellence, bringing pride to FTKKP and UMPSA.

## 3 UMPSA STAFF CONQUER GUNUNG TAHAN IN SUSTAINABILITY TREK EXPEDITION

9 October - Three UMPSA staff, led by FTKKP Senior Lecturer Dr. Rosmawati Naim, successfully reached the summit of Gunung Tahan, the highest peak in Peninsular Malaysia, during the Gunung Tahan Sustainability Trek Expedition 2025 from Merapoh to Kuala Tahan. Joined by 51 participants from various government agencies, the team assessed trail conditions and suggested improvements to facilities while experiencing the mountain's challenging terrain. The expedition, held from 1–9 October, was organised by the Pahang Recreation Council with royal endorsement from Sultan Pahang, Al-Sultan Abdullah Ri'ayatuddin Al-Mustafa Billah Shah.



# FTKKP RESEARCHERS SECURE INTERNATIONAL AND INDUSTRY GRANTS

**Tahniah** 

**DR. NORAZIAH BINTI ABU YAZID**

'DEVELOPMENT OF INDUSTRIALLY VIABLE ENZYMES IN PAKISTAN UTILISING AGRICULTURAL RESIDUE BIOMASS VIA SOLID-STATE FERMENTATION'

di atas kejayaan memperolehi  
GERAN ANTARABANGSA TAHUN 2025

daripada  
ALKA (PVT) LTD  
USD25,000



*Research and Innovation Department*

**Tahniah** 

**TS. DR. ABDUL HALIM BIN ABDUL RAZIK**

'KINETIC STUDY AND SIMULATION MODELLING OF PYROLYSIS PROCESS FROM LEGACY WASTE FOR RENEWABLE DIESEL PRODUCTION'

di atas kejayaan memperolehi  
GERAN INDUSTRI TAHUN 2025

daripada  
OZ SEVENTY FIVE HOLDINGS (M)  
BERHAD  
RM 25,000.00



*Research and Innovation Department*

**Tahniah** 

**DR. NOORMAZLINAH BINTI AHMAD**

'OPTIMIZATION OF PREBIOTIC-INFUSED ORGANIC FERTILIZER FOR PADDY PLANTATION TO PRODUCE PREMIUM GRADE PREBIOTIC RICE AT GANCHONG, PEKAN'

di atas kejayaan memperolehi  
GERAN INDUSTRI TAHUN 2025

daripada  
KONSORTIUM PADI DAN BERAS RAKYAT  
RM 20,000.00



*Research and Innovation Department*

**Tahniah** 

**PROFESOR MADYA TS. DR. SYARIFAH BINTI ABD RAHIM**

'VALIDATION AND OPTIMIZATION OF PLANT CAPACITY THROUGH MASS AND ENERGY BALANCE ANALYSIS PHASE I'

di atas kejayaan memperolehi  
GERAN INDUSTRI TAHUN 2025

daripada  
VENATOR ASIA SDN. BHD.  
RM 20,000.00



*Research and Innovation Department*

# DEBUT SUCCESS: SPE UMPSA SECURES 6<sup>th</sup> PLACE AT PETROBOWL APRQ 2025



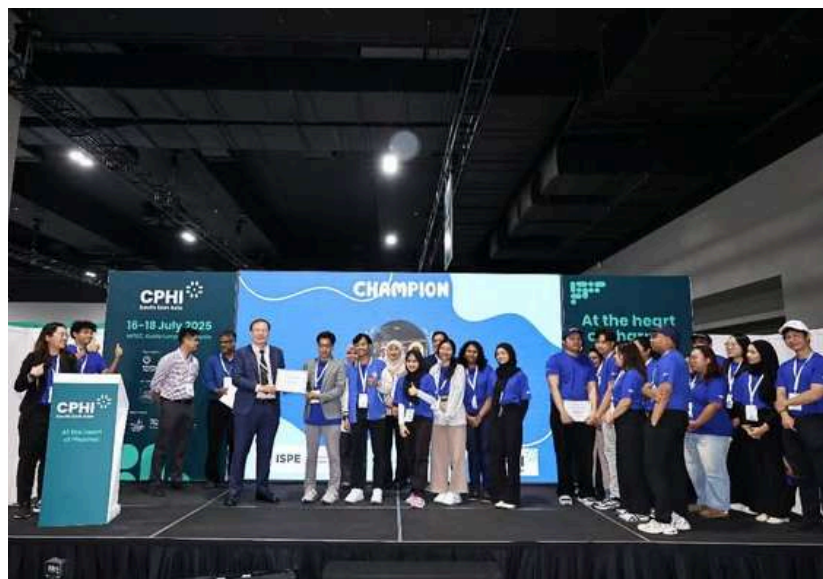
8 July - The Society of Petroleum Engineers (SPE) UMPSA Student Chapter made its debut at the PetroBowl Asia Pacific Regional Qualifier (APRQ) 2025, held at Universiti Teknologi Petronas (UTP). The event featured 16 universities from across the region. SPE PetroBowl is an annual quiz competition for student chapters, where teams compete by answering technical and non-technical questions related to the oil and gas industry. The top five teams from this round will represent the region at the Championship round during the SPE Annual Technical Conference & Exhibition (ATCE) in Houston this October. UMPSA was represented by five students from the Bachelor of Mechanical (Petroleum) Engineering Technology (BTO) and Master of Science programmes, led by coach and team advisor Ts. Dr. Norasyikin Ismail. Despite being first-time participants, the team achieved an impressive 6<sup>th</sup> place, showcasing strong technical knowledge and teamwork. Their success enhances UMPSA's presence in the regional SPE community and motivates greater participation in future competitions.



17 July - Students from the Bachelor of Manufacturing Engineering Technology (Pharmaceutical) with Honours (BTF), Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), achieved outstanding success at the inaugural ISPE Malaysia Hackathon 2025 held on 17–18 July at MITEC, Kuala Lumpur.

Thirteen UMPSA students participated and secured both 1<sup>st</sup> and 2<sup>nd</sup> place, competing against teams from institutions nationwide. The 1<sup>st</sup> place team will represent Malaysia at the ISPE Hackathon in Singapore on 27–28 August 2025, marking another proud milestone for UMPSA on the international stage.

## UMPSA STUDENTS SHINE AT ISPE MALAYSIA HACKATHON 2025



## EXCLUSIVE PODCAST SESSION WITH UMPSA OUTSTANDING ALUMNUS DR. LUQMAN MAHMUD

6 August - The UMPSA Alumni Relations Centre welcomed Dr. Luqman Mahmud, an alumnus of the Diploma in Chemical Engineering (Process Plant) 2016 from the Faculty of Chemical and Process Engineering Technology (FTKKP), who is currently a lecturer at Universiti Utara Malaysia (UUM). Dr. Luqman is recognised for his inspiring journey, including the development of an innovative anti-insect product and authorship of the book “Sembuh dari Peritnya Bekerja dengan Individu Toksik”. His achievements were further acknowledged when he received a Distinguished Research Award during his fast-track PhD studies at UiTM. An exclusive podcast recording session was held to share his experiences and insights with the UMPSA community. The visit concluded with a casual networking lunch with the Alumni Centre team, strengthening ties between UMPSA and its alumni.

## FTKKP STUDENT WONS BEST CADET AWARD

9 August - Congratulations to Leftenan Muda PASKAM Muhammad Amirul Hakim Bizun, a Bachelor of Oil and Gas Facility Maintenance Technology (Honours) student at the Faculty of Chemical and Process Engineering Technology (FTKKP), for receiving the Best Cadet Award in Field Training during his commissioning ceremony.



## TWO FTKKP STUDENTS AWARDED PARTNER SCHOLARSHIP FROM UNIVERSITY OF APPLIED SCIENCES MANNHEIM, GERMANY

25 August - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) extends its heartfelt congratulations to two students from the Faculty of Chemical and Process Engineering Technology (FTKKP), Ibrahim Ismail Ahmad and Gooi En Yi, on being selected as recipients of the Partner Scholarship from the Technical University of Applied Sciences Mannheim, Germany. Both students will participate in a credit-bearing outbound mobility programme from 1 September 2025 to 28 February 2026. The programme offers valuable opportunities to enhance academic knowledge, strengthen professional competencies, and gain international learning and cultural exposure.

This achievement reflects UMPSA's strong commitment to expanding strategic collaborations with international universities and to producing globally competitive graduates.



27 August - UMPSA students achieved outstanding success at the ISPE Singapore Hackathon 2025, held at Suntec Convention & Exhibition Centre, Singapore. A cross-border team including FTKKP students Khuzairi Faizal and Ponnaresi Kalithasan won first place and a grand prize of SGD1,000.

Ponnaresi Kalithasan was also named Most Valuable Participant (MVP), earning sponsorship to attend the ISPE Hackathon & Annual Conference in North Carolina, USA this October. Another UMPSA student, Nur Fatimah Mustafa, also demonstrated commendable commitment despite being in a different team. This achievement, supported by ISPE Malaysia, UMPSA, and industry partners, reflects UMPSA's strong student potential and commitment to excellence.

## UMPSA EXCELS AT ISPE SINGAPORE HACKATHON 2025



## PHD STUDENT FROM FTKKP AWARDED A NSTC INTERNATIONAL INTERNSHIP IN TAIWAN



1 September - Rabia Tasaduq Hussain, a PhD student from the Faculty of Chemical and Process Engineering Technology (FTKKP), has secured full sponsorship under the prestigious NSTC International Internship Pilot Program (IIPP). She will undertake a three-month internship at the Safety, Health, and Environmental Engineering Lab, National University of Science and Technology, Taiwan, from 1 September to 30 November 2025, under the supervision of Dr. Jun Haslinda Shariffuddin.

UMPSA congratulates Rabia and wishes her a successful and inspiring international experience.

# FTKKP STUDENTS RECEIVED CHANCELLOR AND VICE-CHANCELLOR AWARDS

The Faculty of Chemical and Process Engineering Technology (FTKKP) congratulates Aghilan A/L Ganesan, a Bachelor of Chemical Engineering (Hons) student, on his achievement in receiving the UMPSA Chancellor Award at the 20<sup>th</sup> Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Convocation. This distinguished recognition is awarded to students who demonstrate exceptional academic performance, exemplary character, and a strong commitment to holistic excellence throughout their studies. Aghilan's success reflects his unwavering dedication, discipline, and perseverance in achieving outstanding results, as well as his ability to balance academic responsibilities with personal development. The faculty extends its heartfelt congratulations to Aghilan and wishes him continued success in his future endeavours, confident that he will continue to excel and contribute positively to the profession, society, and the nation.



The Faculty of Chemical and Process Engineering Technology (FTKKP) extends its heartfelt congratulations to Nursyifa Syuhada Azlie Sham, a graduate of the Bachelor of Chemical Engineering (Hons) programme, on her outstanding achievement in receiving the prestigious Vice-Chancellor Award at the 20<sup>th</sup> UMPSA Convocation. The Vice-Chancellor Award is a distinguished recognition conferred upon graduates who demonstrate excellent academic performance, commendable character, and a strong commitment to personal and professional development throughout their studies. Nursyifa Syuhada's accomplishment reflects her dedication, perseverance, and consistent pursuit of excellence during her academic journey at UMPSA. The faculty wishes Nursyifa Syuhada continued success and excellence in all her future endeavours and is confident that she will continue to make meaningful contributions to the engineering profession, industry, and society at large.

## DR. WAN AMNIN WAN YAHAYA WONS UMPSA POSTGRADUATE RESEARCH AWARD 2025

The Faculty of Chemical and Process Engineering Technology (FTKKP) extends its heartfelt congratulations to Dr. Wan Amnin Wan Yahaya, a PhD graduate, on receiving the UMPSA Postgraduate Research Award 2025 at the 20<sup>th</sup> Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Convocation.

Under the supervision of Associate Professor Ts. Dr. Nurul Aini Mohd Azman, this outstanding achievement reflects Dr. Wan Amnin's dedication, perseverance, and excellence in postgraduate research. His success not only brings honour to the faculty and the university but also serves as an inspiration for young researchers to remain committed to pursuing academic excellence and meaningful research contributions.



## HIEW TZECHING WINS BASF PETRONAS CHEMICALS EXCELLENCE AWARD



The Faculty of Chemical and Process Engineering Technology (FTKKP) congratulates Hiew Tzeching, a Bachelor of Chemical Engineering (Hons) graduate, on receiving the BASF PETRONAS Chemicals Excellence Award at the 20<sup>th</sup> Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Convocation.

The award, sponsored by BASF, a leading global chemical company, and PETRONAS Chemicals Group, recognises outstanding academic performance and strong potential in the chemical engineering field. His achievement reflects dedication and excellence, and serves as an inspiration for fellow students to strive for both academic and professional success.

# CHIEW KAH HENG WINS YAYASAN PAHANG EXCELLENCE AWARD

The Faculty of Chemical and Process Engineering Technology (FTKKP) congratulates Chiew Kah Heng, a graduate of the Bachelor of Mechanical Engineering Technology (Petroleum) with Honours, on receiving the Pahang Foundation Excellence Award at the 20<sup>th</sup> Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Convocation.

A native of Kuantan, Pahang, he is currently a Process Engineer at Samsung SDI Energy Malaysia, and achieved a CGPA of 3.65. His accomplishment reflects excellence in academics, leadership, and active involvement in university activities, serving as an inspiration to the FTKKP community.



# MUHAMAD IBRAHIM WINS EXCELLENCE AWARD IN PHARMACEUTICAL MANUFACTURING ENGINEERING



The Faculty of Chemical and Process Engineering Technology (FTKKP) congratulates Muhamad Ibrahim Abdul Malek, Bachelor of Manufacturing Engineering Technology (Pharmaceutical) graduate, on receiving the Excellence Award at the 20<sup>th</sup> UMPSA Convocation. During his study, he achieved a CGPA of 3.75, earned Dean's List recognition every semester, and won a gold medal at CITREX 2025 for his research on Safe Nanobots for Accurate Cancer Combats. Muhamad Ibrahim also actively participated in ISPE Student Chapter, CSR programmes, and an international mobility programme to Chulalongkorn University, Thailand. He plans to pursue a Fast-Track PhD in pharmaceutical and biotechnology studies in February 2026.

# CELEBRATING FTKKP'S GLOBAL COLLABORATIONS THROUGH IMMERSIVE ONLINE LEARNING



## SPE EXPEDITION - CONNECTING ASEAN OIL & GAS LEADERS



16 July - A group of 20 students from the SPE Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Student Chapter, together with 3 accompanying lecturers, participated in a Student Mobility Programme in Pekanbaru, Indonesia. The programme is scheduled to take place from 16–22 July 2025 in Pekanbaru, Indonesia, aimed at strengthening regional collaboration and exposure within the ASEAN oil and gas community.

## ECO SCHOOLS GREEN SCIENCE & TECHNOLOGY CARNIVAL AND GISPRO 2025 GRAND FINALE



16 July - Sekolah Berasrama Penuh Integrasi (SBPI) Kuantan hosted the GISPRO 2025 Grand Finale, featuring 15 schools nationwide presenting STEM-based green innovation projects. The event was jointly organised by BASF Petronas Chemicals, GGAF, and the Faculty of Chemical and Process Engineering Technology (FTKKP). FTKKP conducted six interactive STEM activities and joined BASF Petronas in showcasing hands-on chemistry demonstrations. A Green Transformation Forum, featuring Dr. Jun Haslinda from FTKKP, highlighted the role of education and industry in climate action. The closing ceremony, officiated by the Pahang State Education Department, marked GISPRO 2025 as a key platform for nurturing scientific creativity and sustainable innovation among students.

## UMPSA STEM CSR PROGRAMME INSPIRES STUDENTS AT BRASS



30 July - The Faculty of Chemical and Process Engineering Technology (FTKKP), through the RISE Research Cluster, hosted a STEM-focused CSR programme for 102 students from SMK Bukit Rangan (BRASS) under the Social Innovation and Community Knowledge Transfer Grant (CDU).

Led by Prof. Ts. Dr. Sumaiya Zainal Abidin and supported by 16 UMPSA facilitators, students participated in hands-on STEM activities bridging theory and real-world applications. Reflection sessions encouraged critical thinking and sharing of learning experiences.

The programme strengthened STEM awareness and fostered closer ties between UMPSA and the local community.

7 August - A total of 37 students accompanied by five teachers from Sekolah Kebangsaan Jenderak visited the Faculty of Chemical and Process Engineering Technology (FTKKP) in an educational visit aimed at exposing students to the university learning environment.

Led by the Senior Assistant of Co-Curriculum, Encik Junaidi bin Jaffar, the visit included an academic briefing and admission overview delivered by FTKKP Marketing Coordinator, Associate Professor Dr. Sunarti binti Abd Rahman, followed by guided laboratory tours. The programme provided early exposure to chemical and process engineering, inspiring students' interest in science, technology, and future career pathways.

## SK JENDERAK STUDENTS VISIT FTKKP UMPSA GAMBANG



# FTKKP CHEM-E-CAR STEM PROGRAM IGNITES INTEREST AT SMK SULTANAH HAJJAH KALSOM

**FTKKP CHEM-E-CAR STEM PROGRAM  
ORGANIZED BY SEPARATION AND  
ENVIRONMENTAL RESEARCH CLUSTER  
(SERC) IGNITES INTEREST AT  
SMK SULTANAH HAJJAH KALSOM**



20 August - The Chem-E-Car program, organized by the Separation and Environmental Research Cluster (SERC), the Faculty of Chemical and Process Engineering Technology (FTKKP) was held at SMK Sultanah Hajjah Kalsom, engaging Form 4 students in hands-on STEM activities. Students learned chemical engineering fundamentals, explored Chem-E-Car principles, and participated in exciting car demonstrations and test runs powered by chemical reactions. Winners received hampers and certificates, while all participants received souvenirs. The program, led by AP Ts Dr. Siti Kholijah Abdul Mudalip and supported by FTKKP postgraduate students, reflects UMPSA's commitment to promoting STEM education and inspiring future careers in science and engineering.

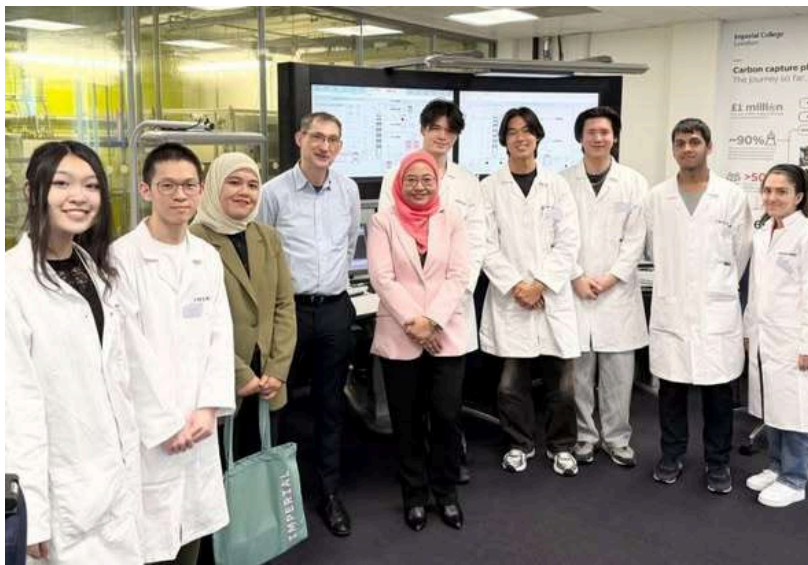
27 August - The STEmpire: Inspiring Young Minds Through STEM programme, organised by the Pharmaceutical Technology (PharmTech) Cluster, FTKKP, UMPSA, in collaboration with Sekolah Menengah Kebangsaan Lepar Hilir (SEMILIR), engaged 40 students in hands-on pharmaceutical and bioprocess activities. Participants explored GMP laboratories, tablet and capsule demonstrations, microbiology experiments, and health screening sessions, gaining experiential learning in STEM applications.

The initiative promotes early exposure to higher education and careers in pharmaceuticals and biotechnology while supporting SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), and SDG 9 (Industry, Innovation and Infrastructure), and strengthens collaboration between UMPSA and SEMILIR.

## STEMPIRE PROGRAM INSPIRES YOUNG MINDS AT SEMILIR



## UMPSA STRENGTHENS RESEARCH COLLABORATION WITH IMPERIAL COLLEGE LONDON



8 September - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) delegation led by Associate Professor Dr. Herma Dina Setiabudi conducted an official visit to the Department of Chemical Engineering, Imperial College London, to strengthen research and academic collaboration.

The visit included discussions with senior academics, tours of world-class research facilities, and exploration of joint research, academic mobility, and programme development opportunities. The engagement was held in conjunction with UMPSA's participation in EAIE 2025, supporting the university's goal to expand global partnerships and advance its aspiration as an ASEAN Advanced TVET Hub by 2030.



## EIGHT UMPSA CHEMICAL ENGINEERING STUDENTS DEPART FOR CHINA UNDER UMPSA-TJU DUAL DEGREE PROGRAMME

9 September - Eight Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) students departed for Tianjin, China to pursue the UMPSA–Tianjin University (TJU) Dual Degree Programme in Chemical Engineering. Under this programme, students complete two years of study at UMPSA followed by two years at TJU.

The initiative reflects UMPSA's commitment to producing globally competitive graduates, offering students international exposure and the opportunity to obtain two degrees from UMPSA and TJU. The programme also strengthens long-standing academic collaboration between the two institutions and supports Malaysia–China cooperation in higher education and talent development.

24 September - The Professor Turun Padang (PTP): Greening the Earth Mission with SK Cherok Paloh programme was successfully held through a collaboration between PJIM, the Faculty of Chemical and Process Engineering Technology (FTKKP), and the Sustainability Development Centre (SDC).

The programme involved students, teachers, the local community, and UMPSA academic staff, focusing on environmental awareness, particularly solid waste management and food waste composting. With support from SWCorp Pahang, the initiative aimed to instil early awareness and promote sustainable practices among schoolchildren and the community, reflecting FTKKP's ongoing commitment to community engagement and environmental sustainability.

## PTP PROGRAMME: GREENING THE EARTH MISSION WITH SK CHEROK PALOH



## UMPSA STRENGTHENS STRATEGIC TIES WITH TIANJIN UNIVERSITY (TJU) THROUGH DUAL DEGREE PROGRAMME

19 September - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) continues to expand its international footprint through the UMPSA–Tianjin University (TJU) Dual Degree Programme in Chemical Engineering. The programme, now in its second intake with 24 students across two cohorts, allows students to earn degrees from both UMPSA and TJU. The first cohort of eight students will begin their third year at TJU in late September 2025. An official UMPSA delegation visited TJU from 9–14 September 2025 to support students' transition, engage with university administrators, and secure industry partnerships for internships, enhancing graduate employability. Associate Professor Dr. Nik Aloesnita emphasized that the collaboration reflects UMPSA's commitment to providing globally relevant education and developing future-ready engineers, coinciding with TJU's 130th anniversary celebrations.

## UMPSA STUDENTS BEGIN OUTBOUND MOBILITY AT TIANJIN UNIVERSITY, CHINA



2 October - Four Bachelor of Chemical Engineering Technology (BTK) students from UMPSA—Allycia Liew Ee Ann, Chou Xuan Liu, Lee Jia Hui, and Nikki Khoo Jhyi Yan—have commenced their Outbound Mobility Program at Tianjin University (TJU), China, running from September 2025 to January 2026.

This initiative strengthens UMPSA's global academic network and complements the existing UMPSA–TJU Dual Degree Programme in Chemical Engineering. UMPSA congratulates the students and wishes them a rewarding international experience.

## FTKKP HOSTS MICROSOFT EXCEL WORKSHOP FOR INTEK STUDENTS

15 October - The Process Systems Engineering and Safety (ProSES) Cluster, FTKKP, UMPSA, organised a Hands-on Workshop: Microsoft Excel for Beginner for 33 students and 2 teachers from Sekolah Berasrama Penuh Integrasi Kuantan (INTEK) at UMPSA Gambang Computer Lab. The workshop aimed to strengthen school-university engagement, introduce students to FTKKP, and highlight the importance of IT skills like Excel for education and future careers. Participants also toured FTKKP laboratories, gaining hands-on experience in science and technology.



## SWEET SCIENCE: STEM EXPLORATION WITH STUDENTS OF SMK SUNGAI ISAP MURNI



28 October - The Process Systems Engineering and Safety (ProSES) Research Cluster, Faculty of Chemical and Process Engineering Technology, Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), conducted an engaging STEM-based CSR programme with students of Sekolah Menengah Kebangsaan Sungai Isap Murni under the UMPSA Social Innovation Grant and Community Knowledge Transfer initiative.

Led by Associate Professor Ts. Dr. Ruwaida Abdul Rasid, the programme involved 100 students and featured hands-on activities on lotion formulation and granular bar preparation using honey as a key ingredient. The initiative successfully enhanced students' interest in STEM while highlighting sustainable applications in skincare and food solutions.

## INTERNATIONAL UMPSA CSR STRENGTHENS COMMUNITY SUSTAINABILITY IN KUANTAN

29 November – Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), through students of the Faculty of Chemical and Process Engineering Technology (FTKKP), successfully organised an international Corporate Social Responsibility (CSR) programme at Kampung Lubuk Puyu, Kuantan, involving students from Institut Teknologi Sepuluh Nopember (ITS), Indonesia, Industrial University of Ho Chi Minh City (IUH), Vietnam, and PPKI SMK Pandan. Held under Mobitech 2025: International Student Mobility Through TVET & STEM Empowerment from 27–30 November 2025, the programme featured sustainability-focused activities such as farm clean-ups, planting projects, recycling used cooking oil into candles and soap, and composting food waste. The initiative supported SDG 11 and SDG 12, promoting environmental awareness, green innovation, and sustainable community development.



## SK BUNUT RENDANG STUDENTS EXCITED TO LEARN SOAP MAKING FROM USED COOKING OIL



6 November – A total of 70 students from Sekolah Kebangsaan Bunut Rendang (SKBR) enthusiastically participated in the Eco-Campus-Greenovation 2025 programme held at Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) Gambang Campus in conjunction with the 20th UMPSA Convocation Expo.

Organised by the Sustainability Development Centre in collaboration with the Department of Student Affairs and Alumni and the Eco Nexus UMPSA Club, the programme introduced students to sustainable practices through hands-on soap making using used cooking oil. The programme also highlighted UMPSA's recent recognition as an Eco-Campus and strengthened collaboration between UMPSA and SKBR as eco-friendly institutions in promoting green culture and sustainability education.

18 November – The Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), in collaboration with Kolej Kemahiran Tinggi MARA (KKTm) Kemaman, successfully organised the 'Mencetus Aspirasi, Menggilap Potensi' programme involving 150 KKTm students. The programme featured briefings on FTKKP degree programmes, career prospects, dual-degree opportunities with partner universities in China and Germany, alumni sharing sessions, and interactive exhibitions by FTKKP student clubs. The initiative strengthened collaboration between both institutions while providing valuable academic and career insights for TVET students.

## FTKKP-KKTm KEMAMAN INSPIRE STUDENTS PROGRAMME



## UMPSA HOSTS SULAM PROGRAM TO INSPIRE YOUTH IN GEOSCIENCE AND PETROLEUM



19 November – The SULAM (Service Learning Malaysia – University for Society) programme, organised by the Bachelor of Mechanical Engineering Technology (Petroleum) programme, FTKKP, UMPSA, in collaboration with Society of Petroleum Engineers (SPE) Terengganu & Kuala Lumpur and the Pahang Department of Minerals and Geoscience (JMG), engaged 80 secondary school students from Sekolah Menengah Teknik Kuantan and Sekolah Sukan Malaysia Pahang. The one-day programme featured forums on petroleum and geoscience, interactive exhibits on minerals, oil platforms, volcanic simulations, and lab visits, as well as a tour of Sungai Lembing Museum. Facilitated by UMPSA SPE student members and BTO students, the programme provided early exposure to careers in petroleum and geoscience, strengthened industry-academia-community networks, and fostered interest in technical and engineering fields.

21 November - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), through FTKKP and FTKMA, collaborated with Universitas Brawijaya (UB), Indonesia, to host a short-term international mobility programme for 20 UB students and two academic staff. Participants experienced campus life, lab visits, industry tours, and special lectures on Asset Integrity Management, alongside cultural excursions to Pahang heritage sites. The programme fostered global learning, academic exchange, and professional networking, strengthening ties between UMPSA and UB while enhancing students' technical skills and cross-cultural perspectives.



## UMPSA AND UNIVERSITAS BRAWIJAYA HOST SHORT-TERM INTERNATIONAL MOBILITY PROGRAM

# STEM IGNITE PROGRAM INSPIRES YOUNG MINDS AT SEKOLAH SUKAN MALAYSIA PAHANG (SSMP)



3 December - The Faculty of Chemical and Process Engineering Technology (FTKKP), led by Prof. Madya Ts. Dr. Sunarti Abd Rahman, successfully hosted the STEM Ignite Programme for eighty Form 3 students from Sekolah Sukan Malaysia Pahang (SSMP), as part of its ongoing outreach and youth engagement initiatives.

The programme aimed to inspire students to explore the vast potential of Science, Technology, Engineering, and Mathematics (STEM) while broadening their understanding of future career pathways in technical and engineering-related fields. Through an engaging and informative talk, students were exposed to emerging STEM disciplines, with particular emphasis on the role of green and sustainable technologies in addressing global challenges.

Among the key topics highlighted were advancements in electric vehicles (EVs), fuel cell electric vehicles (FCEVs), and renewable energy solutions derived from organic waste, showcasing how innovation and engineering contribute to environmental sustainability and the transition towards a low-carbon future.

In addition to the talk, students actively participated in a series of interactive STEM activities designed to stimulate critical thinking, creativity, and hands-on problem-solving skills. These activities encouraged curiosity and active learning, helping students appreciate the practical applications of STEM concepts beyond the classroom.

The initiative reflects FTKKP's continued commitment to nurturing young talent, promoting scientific literacy, and fostering interest in technology-driven and sustainable solutions. Through programmes such as STEM Ignite, FTKKP remains dedicated to empowering the next generation with the knowledge, skills, and innovative mindset needed to excel in science, technology, and creative problem-solving fields.

## NDT & ULTRASONIC TESTING WORKSHOP WITH INDUSTRY EXPERT



1 July - A total of 25 students from the Bachelor of Technology in Oil & Gas Facility Maintenance (Year 2 & 3), together with 6 lecturers, participated in an intensive NDT workshop and Ultrasonic Testing technical training delivered by Mr. Jeffry Jamil, NDT Technical Manager from Altec Industrial and Engineering Supply Sdn. Bhd. This programme not only strengthens the students' technical knowledge but also opens opportunities for them to obtain additional professional certifications, in line with the nation's TVET aspirations to produce highly skilled and industry-competitive graduates.

## FTKKP UMPSA RESEARCHERS VISIT MALAYSIA MINERAL ACADEMY PAHANG

30 July - Researchers from the Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), recently visited the Malaysia Mineral Academy Pahang (AMMP) in Kuala Lipis to explore potential collaboration. The visit aimed to strengthen bilateral cooperation through discussions on consultancy opportunities and strategic partnerships, particularly in the area of professional training and capacity building.





## EXPLORING THE POTENTIAL OF LAYER DUCK FARMING IN MALAYSIA

7 August - Layer duck farming is emerging as a promising industry in Malaysia, offering a stable market for eggs used domestically and in food products such as salted eggs, kuih-muih, and high-protein dishes. Ducks are hardier than chickens, produce eggs for longer periods, and provide high-value products, making the industry economically viable. Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) is actively supporting sustainable development of the sector through technology transfer, training, and community-based projects. Government initiatives, including grants, financing schemes, and technical support from agencies like MAFS, FAMA, and Agrobank, further bolster growth. Despite challenges such as rising feed costs, disease risks, and competition with the poultry industry, strategic planning, modern farming techniques, and support from universities and government programs position layer duck farming as a key contributor to food security, rural income, and Malaysia's agricultural economy.

## EXTERNAL ASSESSOR VISIT FOR MASTER OF SCIENCE (PROCESS PLANT OPERATION)

2 September - The Faculty of Chemical and Process Engineering Technology (FTKKP), UMPSA Gambang Campus, hosted an External Assessor (EA) visit for the Master of Science (Process Plant Operation) programme. The one-day visit by PM Ir Dr Chong Chien Hwa (University of Nottingham), an experienced EAC, ETAC, and MQA panel member, aimed to review the programme curriculum and provide recommendations for improvement and accreditation readiness. The visit also served as preparation for the full MQA accreditation assessment scheduled in 2027.



## FTKKP RECEIVES VISIT FROM PETRONAS PETROLEUM TECHNOLOGY INSTITUTE (INSTEP)



2 September - The Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), welcomed a delegation from the PETRONAS Petroleum Technology Institute (INSTEP).

The visit focused on discussions related to Renewable Energy and Hydrogen, as well as potential TVET collaboration, aimed at strengthening strategic partnerships between FTKKP and INSTEP. The delegation also toured FTKKP laboratories as part of the engagement. This visit is expected to open new opportunities for collaboration in renewable energy, hydrogen technologies, and TVET initiatives in the future.

22 October – The Separation and Environmental Research Cluster (SERC), Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), in collaboration with Talent Tech, successfully organised a two-day fast-track training programme on chemical engineering fundamentals at the UMPSA Gambang Campus.

The programme involved industry participants from Tosoh Chemical Sdn. Bhd. and Petronas Derivatives Sdn. Bhd., focusing on process operations, safety, and support for Net-Zero goals. Participants reported improved understanding of workplace processes, contributing to enhanced skills, safety awareness, and sustainable industry practices.

## CLUSTER ENHANCES INDUSTRIAL OPERATORS' UNDERSTANDING



## UMPSA HOSTS APEL.A BRIEFING WITH PAHANG MINING CORPORATION (PMC)



9 December - UMPSA Advanced, in collaboration with the Faculty of Chemical and Process Engineering Technology and Pusat APEL UMPSA, successfully organised a briefing session with YH. Dato' Haji Ahmad Rizal Ali@Jaafar, Chief Executive Officer of Pahang Mining Corporation (PMC), together with PMC management and staff.

The briefing aimed to strengthen strategic engagement between UMPSA and industry partners while promoting lifelong learning initiatives among professionals in the mining and related sectors. During the session, participants were introduced to the Accreditation of Prior Experiential Learning for Award of Academic Qualification (APEL.A) (Level 7) pathway, which enables experienced industry practitioners to obtain formal academic recognition based on their professional knowledge, skills, and work experience.

The presentation highlighted the flexibility of the APEL.A route, particularly its suitability for working professionals seeking to pursue master's level studies at UMPSA without following conventional academic entry requirements. The session also provided insights into programme structures, assessment processes, and the potential career and organisational benefits of upskilling through postgraduate education.

The engagement reflects UMPSA's continued commitment to supporting industry-driven education, strengthening university–industry collaboration, and expanding access to advanced learning opportunities aligned with national talent development goals.

## FTKKP PRE-UNDERGRADUATE ACADEMIC WORKSHOP 2025



15 July - The FTKKP Pre-Undergraduate Academic Workshop was successfully held at AC Hotel Kuantan, involving all lecturers from FTKKP undergraduate programmes. The workshop aimed to align curriculum implementation, streamline teaching documents, and ensure compliance with accreditation requirements.

The programme featured briefings by the Dean and Deputy Dean (Academic & International), followed by parallel sessions on strengthening Outcome-Based Education (OBE) in line with relevant accreditation bodies. The workshop concluded with programme-specific discussions on new curriculum implementation and teaching plan improvements, supporting FTKKP's continuous efforts to enhance academic quality and teaching effectiveness.

## FTKKP EXCELS AT INTER PTJ'25

The Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), extends its highest congratulations to the FTKKP contingent for their commendable performance at the Inter PTJ'25 Inter-Department Staff Sports Championship.

Demonstrating strong teamwork and sportsmanship, the FTKKP team secured an impressive total of one gold medal, one silver medal, and four bronze medals. The achievement reflects the commitment, discipline, and unity of the athletes, while promoting a healthy and active lifestyle among the FTKKP community.



## UMPSA COLLABORATES WITH KPBR TO DEVELOP MALAYSIA'S FIRST PREBIOTIC RICE

16 August - Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) has partnered with the Konsortium Padi dan Beras Rakyat (KPBR) to develop Malaysia's first prebiotic rice through research on organic prebiotic fertiliser for paddy cultivation. The collaboration agreement was signed by UMPSA Deputy Vice-Chancellor (Research and Innovation), Professor Ts. Dr. Aida Mustapha, and KPBR CEO, Dato' Fairuz Haji Hassan, during the launch of Beras Pahang. Led by FTKKP researcher Ts. Dr. Noormazlinah Ahmad, the project aims to produce premium, low glycaemic index, high-fibre rice while supporting sustainable agriculture, food security, and the Sustainable Development Goals (SDGs).





## FTKKP RESEARCHERS SHOWCASE INNOVATIONS AT UMPSA RECYCLING CENTRE LAUNCH

26 August - The launch of the UMPSA Recycling Centre at the Pekan Campus highlighted UMPSA's commitment to sustainability and green innovation. Officiated by Vice-Chancellor Professor Dr. Yatimah Alias, the centre supports 3R practices and the Sustainable Development Goals (SDGs 12 and 13).

Researchers from the Faculty of Chemical and Process Engineering Technology (FTKKP) showcased their innovations, including a pyrolyser machine that converts plastic waste into oil by Associate Professor Ts. Dr. Ruzinah binti Isha, and compost soil products from food waste by Dr. Jun Haslinda Shariffuddin, demonstrating practical solutions for waste reduction and the circular economy.





## FTKKP HOSTS ENVIRONMENTAL AWARENESS AND PLOGGING ACTIVITY IN CAMERON HIGHLANDS

11 October - 47 staff members from the Faculty of Chemical and Process Engineering Technology (FTKKP) and their families participated in the Cintai Alam Sekitar plogging and community service programme at Mossy Forest and Boh Sungai Palas Tea Plantation.

Organised by FTKKP's RISE Cluster in collaboration with local community representatives, the activity aimed to raise environmental awareness and promote cleanliness in tourist areas. The initiative highlighted the ongoing need for public responsibility in waste management and successfully fostered civic consciousness and care for the environment.



12 November - The Academic Advising Unit of the Faculty of Chemical and Process Engineering Technology (FTKKP), UMPSA, organised a sexual harassment awareness talk at the Library Auditorium, Gambang Campus, attended by 70 students from various courses.

The programme featured Inspector Nur Aishah Binti A. Zulkefli and Senior Psychologist Puan Norhayati Binti Abdullah from the Sexual and Child Investigation Unit, Pahang Police Headquarters. Topics included legal perspectives on sexual crimes, cyber sexual offences, grooming, and the psychological dimensions of trauma. The half-day session educated students on consent, healthy boundaries, reporting mechanisms, and relevant laws, aiming to enhance their understanding of rights and personal safety against sexual harassment.

## FTKKP HOLDS SEXUAL HARASSMENT AWARENESS TALK



## FTKKP HOLDS 2025 STAFF DINNER & APPRECIATION NIGHT



21 November - The Faculty of Chemical and Process Engineering Technology (FTKKP), UMPSA, celebrated the Staff Dinner & Appreciation Night 2025 at Anjung Zaharah Majid, recognising the dedication, achievements, and contributions of faculty members throughout the year. The event included family participation, lucky draws, themed outfit awards, and certificates for staff athletes who competed in the 2025 Inter-PTJ Staff Sports Championship. Awards were presented across categories including Administration, Technical, Student & Alumni Affairs, Undergraduate Academic, and Research & Postgraduate. The celebration highlighted professionalism, teamwork, and commitment, inspiring staff to continue driving excellence within FTKKP.

## DOE WORKSHOP “EXPERIMENTAL DESIGN: FROM SCREENING TO OPTIMISATION” ATTRACTS 47 PARTICIPANTS NATIONWIDE



3 December - The Bioprocess & Biochemical Engineering Club (BBEC), FTKKP, successfully organised the two-day workshop on Design of Experiment (DOE), attracting 47 participants including lecturers, researchers, and postgraduate students from UMPSA and other institutions such as UKM, UTP, UNIMAP, UTHM, Asia Pacific University, and MARDI. The programme featured practical sessions and hands-on activities, fostering knowledge sharing and strengthening academic-industrial networks. Participants actively engaged in interactive learning, enhancing their DOE skills for research and development applications.

# UMPSA STUDENTS AND STAFF PARTICIPATE IN SEGTA 2025 AT UNIVERSITAS AIRLANGGA

6 August - A delegation of 12 students and 2 academic staffs from Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) participated in the Sustainable Energy and Green Technology Applications (SEGTA) 2025 program hosted by Universitas Airlangga (UNAIR) from 6–14 August 2025.

The program involved students from FTKKP and FTKEE, accompanied by Assoc. Prof. Dr. Wan Mohd Hafizuddin Wan Yussof and Assoc. Prof. Ir. Dr. Syed Mohd Saufi Tuan Chik. SEGTA 2025 gathered participants from several countries, offering a dynamic platform for academic exchange, hands-on learning, and cultural engagement through lectures, laboratory sessions, field studies, and community projects. Focusing on renewable energy and green technology, the program aligned with key UN Sustainable Development Goals (SDGs 7, 9, 11, and 13), providing UMPSA students with valuable international exposure, cross-cultural experience, and insights into global sustainability practices.



# LENSA MOBILITI 2025: SPEXPEDITION CONNECTING ASEAN OIL & GAS LEADERS (SPEXCOAL)

16 July - A total of 20 students from the Faculty of Chemical and Process Engineering Technology (FTKKP) student association CHEST–SPE, together with three advisors from UMPSA, participated in the International Mobility Programme 2025 in Pekanbaru, Riau, Indonesia. The programme included a seminar on Advanced Core Analysis for Reservoir Management by experts from PT. Pertamina Hulu Rokan, an industry visit to an onshore oil field, and exposure to petroleum engineering facilities and operations. Students also carried out community service activities at Panti Asuhan Putra Al-Akbar. The programme successfully strengthened industry exposure, global engagement, and practical learning experiences for UMPSA students.





## FTKKP POSTGRADUATE RESEARCH COLLOQUIUM 2025 SERIES II CONCLUDES SUCCESSFULLY

22 October - The FTKKP Postgraduate Research Colloquium 2025 Series II was successfully held at Swiss-Belhotel, Kuantan. A total of 13 postgraduate students presented their research progress, with each presentation carefully evaluated by panels of academic experts. The colloquium serves as an important platform for Master's and PhD students to refine their research direction and strengthen their thesis preparation. Congratulations to all presenters for their commitment, insightful work, and contribution to advancing research excellence at FTKKP.

## UMPSA CHEMICAL ENGINEERING STUDENTS SHOWCASE ECO-INNOVATION AT CHEME CUBE 2025

1 November - A team of Chemical Engineering students from Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), known as Team Hydrovanta, represented the university at the ChemE Cube 2025 competition hosted by Universiti Teknologi Malaysia (UTM).

The team presented a compact cube-based water purification system developed using hybrid activated carbon from coffee waste and coconut husk, demonstrating strong sustainability and circular economy elements. The prototype successfully produced clear, colourless water during testing, highlighting its potential for low-cost and small-scale wastewater treatment applications. Their participation reflects UMPSA's commitment to producing industry-ready graduates and advancing sustainable innovation in line with SDG 6: Clean Water and Sanitation.



30 October - The ISPE UMPSA Student Chapter, in collaboration with PTSS UniKL, successfully organised the NARP 4.0 Collaboration Program involving students and academic staff from Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA). The three-day programme focused on strengthening academic collaboration, student leadership and social responsibility through Community Social Responsibility (CSR) activities at Tadika Tunas Pintar, Pantai Lagenda and Rumah Kanak-Kanak Sultanah Hajjah Kalsom. Activities included early childhood learning sessions, beach clean-up initiatives and motivational programmes for children. Overall, the programme enhanced student engagement with the community while reinforcing meaningful partnerships between higher education institutions.

## NARP 4.0 STRENGTHENS UMPSA-UNIKL PTSS PARTNERSHIP



## FTKKP ORGANISES TEA & TIES ALUMNI CONNECT 2025



8 November - The Faculty of Chemical and Process Engineering Technology (FTKKP), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), successfully organised the Tea & Ties Alumni Connect FTKKP 2025 programme at Awangan Palace, Kuantan. The event brought together more than 60 alumni from various graduating cohorts and academic staff, providing a platform to strengthen alumni networking and professional engagement. The programme featured career sharing sessions by FTKKP alumni from Lynas Malaysia Sdn. Bhd. and PETRONAS, offering valuable insights into industry experiences and career development.

The initiative reflects FTKKP's commitment to fostering strong alumni-faculty relationships and supporting UMPSA's aspiration to produce holistic, ethical and industry-ready graduates.

23 November - A delegation of 17 students and a lecturer from FTKKP, UMP SA, led by Ts. Junaidi Zakaria, participated in the Engineering Mobility Exchange 2.0 programme in Turkiye. The programme included academic visits to Yildiz Technical University, industry exposure at Technopark YTU, networking sessions with ISPE Turkiye Chapter, CSR activities with Syrian refugee children, and cultural excursions organised with MASAT Turkiye. This global mobility initiative, organised by CHEST UMP with support from HEPA UMP SA and FTKKP, aims to enhance students' academic knowledge, professional networks, cross-cultural understanding, and personal development.

## FTKKP STUDENTS JOIN ENGINEERING MOBILITY EXCHANGE 2.0 IN TURKIYE



## FTKKP STUDENTS PARTICIPATE IN ACADEMIC MOBILITY PROGRAMME AT SIT TOKYO



23 November - Twelve FTKKP, UMP SA students took part in a non-credit academic mobility programme at Shibaura Institute of Technology (SIT), Tokyo, gaining international exposure in engineering, technology, and research. Activities included lab visits, smart technology and innovation centre tours, academic discussions on AI, automation, green tech, and smart campus systems, as well as collaborative research presentations with SIT students. Participants also engaged in CSR activities at local mosques and cultural experiences such as calligraphy, kimono, and Asakusa tours. The programme strengthened UMP SA–SIT academic ties while enhancing FTKKP students' global competencies in engineering and technology.

# DIPLOMA IN CHEMICAL ENGINEERING



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UNIVERSITI MALAYSIA PAHANG  
AL-SULTAN ABDULLAH

## PROGRAMME SYNOPSIS

The Diploma in Chemical Engineering programme aims to provide students with the knowledge of chemical engineering and to expose students with the humanities and social sciences aspects through courses such as English, entrepreneurship and other non-engineering courses. The duration of this diploma programme is 2 years and 9 months.

### WHO CAN APPLY?

SPM holders



### ENTRY REQUIREMENTS

SCAN ME



<https://admission.umpsa.edu.my/>

## PRESTIGIOUS CAREER OPPORTUNITIES

Chemical engineering graduates from DRK programme have the skills required to work effectively in many industries and sectors.

- Chemical & Applied Products
- Pharmaceuticals
- Oil & Gas
- Water & Energy
- Food & Beverages
- Biotechnology
- Materials & Polymer
- Plant Production/ Process/ Operation
- Safety, Health and Environment
- Quality Assurance/ Quality Control
- Consultant
- Business & Management

## ACCREDITATION

The 2 years and 9 months programme of Diploma in Chemical Engineering was first offered by Universiti Malaysia Pahang Al-Sultan Abdullah since year 2002 and is accredited by the Engineering Technology Accreditation Council (ETAC) of Board of Engineers Malaysia (BEM) under the Dublin Accord.

## CURRICULUM AT A GLANCE

Thermodynamics, fluid mechanics, chemical reactions engineering, transport processes, environmental engineering, unit operation, plant safety & health, plant commissioning, start-up & shut down, plant utility and many other courses are addressed in the DRK curriculum.

At the end of their studies, students are required to complete a 20-weeks industrial training to gain new skills and experiences and importantly to expose students to the practices in the chemical process industry.

**APPLY  
NOW**

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MQA Number: MQA/FA9498

# BACHELOR OF CHEMICAL ENGINEERING WITH HONOURS

## PROGRAMME SYNOPSIS

The Bachelor of Chemical Engineering programme aims to educate potential engineers to design, develop, and operate chemical processes by which chemicals, petroleum products, food, polymers, pharmaceuticals and consumer goods can be produced in a safe and sustainable way.

### WHO CAN APPLY?

Diploma  
STPM  
Matriculation  
IPTS foundation



### ENTRY REQUIREMENTS

SCAN ME



<https://admission.umpsa.edu.my/>

## PRESTIGIOUS CAREER OPPORTUNITIES

Chemical engineering graduates from BKC programme have the skills required to work effectively in many industries and sectors.

- Chemical Engineer
- Process Control Engineer
- Plant Engineer
- Production/ Process/ Operation Engineer
- Safety Engineer
- Environmental Engineer
- Quality Assurance Engineer
- Consultant
- Researcher
- Academician
- Entrepreneur

## ACCREDITATION

The four-year Bachelor of Chemical Engineering (BKC) programme was offered by Universiti Malaysia Pahang since year 2002 is an accredited programme by Engineering Accreditation Council (EAC), Board of Engineers Malaysia under the Washington Accord.

## CURRICULUM AT A GLANCE

- ❑ Physics, chemistry, kinetics, chemical reactions, heat transfer, separation process, unit operation, and many other courses are addressed in the BKC curriculum.
- ❑ The BKC programme also provides exposure to aspects of humanities and social sciences through subjects such as English language and foreign languages, entrepreneurship, economics, management and other non-engineering subjects.



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# BACHELOR OF CHEMICAL ENGINEERING TECHNOLOGY WITH HONOURS



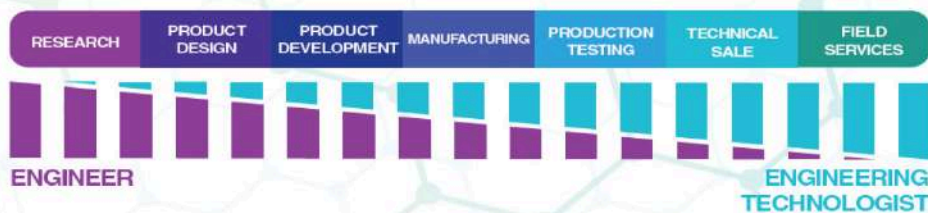
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UNIVERSITI MALAYSIA PAHANG  
AL-SULTAN ABDULLAH

## PROGRAMME SYNOPSIS

The Bachelor of Chemical Engineering Technology with Honours degree programme aims to produce graduates who are resourceful, knowledgeable, and exposed with technical skills that meet the demand of the current industrial market. This degree programme is for students who are interested in the application of chemical engineering technology especially in the area of chemical process plant. The learning system of this programme emphasized on the practical and hands-on component through embedded labs, to ensure graduates are balanced in both theoretical and practical aspects of chemical engineering technology applications. At the end of their studies, students are required to complete a 24-week industrial training to gain new skills and experiences and importantly to expose students to the practices in the chemical process industry.

## WHAT IS ENGINEERING TECHNOLOGY?

"Engineering technology education focuses primarily on the applied aspects of science and engineering aimed at preparing graduates for practice in that portion of the technological spectrum closest to product improvement, manufacturing, construction, and engineering operational functions" - The Accreditation Board for Engineering and Technology (ABET).



## WHO CAN APPLY?

Diploma  
STPM  
Matriculation  
IPTS foundation



## ENTRY REQUIREMENTS

SCAN ME



<https://admission.umpsa.edu.my/>

**APPLY  
NOW**

## CAREER OPPORTUNITIES

- Chemical Process Engineering Technologist
- Operation & Maintenance Technologist
- Product Development Technologist
- Project Engineering Technologist
- Consultant
- Researcher
- Academician
- Entrepreneur

## CONTACT US:

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MQA Number: MQA/PA13932

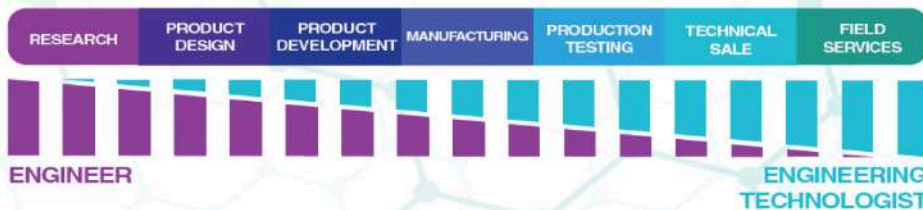
# BACHELOR OF MANUFACTURING ENGINEERING TECHNOLOGY (PHARMACEUTICAL) WITH HONOURS

## PROGRAMME SYNOPSIS

Bachelor of Manufacturing Engineering Technology (Pharmaceutical) with Honours will equip students with knowledge, skills and initiatives in the areas of pharmaceutical manufacturing with the ability to operate and maintain highly specialized technology and apply critical thinking and analytical skills. Students will be equipped with a thorough understanding of the technical aspects which include understanding in product development, manufacturing systems, quality control, compliance with regulations and production plants /equipment safety. Students will also be prepared with professional skills to enhance their employability.

### WHAT IS ENGINEERING TECHNOLOGY?

"Engineering technology education focuses primarily on the applied aspects of science and engineering aimed at preparing graduates for practice in that portion of the technological spectrum closest to product improvement, manufacturing, construction, and engineering operational functions" - The Accreditation Board for Engineering and Technology (ABET).



### WHO CAN APPLY?

Diploma  
STPM  
Matriculation  
IPTS foundation



### ENTRY REQUIREMENTS

SCAN ME



<https://admission.umpsa.edu.my/>

### CAREER OPPORTUNITIES

- Pharmaceutical Manufacturing/ Production
- Food & Beverages
- Validation & Quality Control
- Research & Development
- Health Industry
- Government Services
- Regulatory Affairs
- Academician
- Industries that apply the use of cleanroom technology such as semiconductor & cosmetics



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MQA Number: MQA/FA1255

# BACHELOR OF MECHANICAL ENGINEERING TECHNOLOGY (PETROLEUM) WITH HONOURS



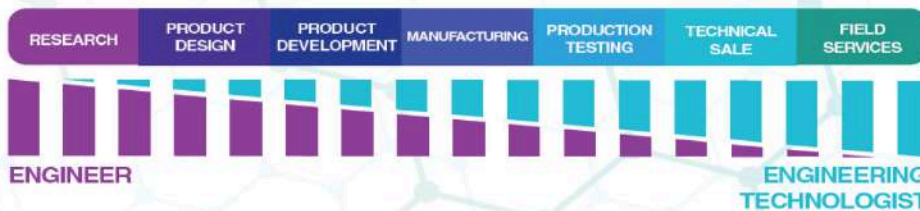
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UNIVERSITI MALAYSIA PAHANG  
AL-SULTAN ABDULLAH

## PROGRAMME SYNOPSIS

Bachelor of Mechanical Engineering Technology (Petroleum) with Honours degree is a programme that emphasizes a balance of theory and practical skills. Students can acquire substantial knowledge and comprehensive understanding in a combination of mechanical and petroleum disciplines to equip graduates with broad expertise that can be applied in industry and professional skills to enhance employability. This course contains mechanical and petroleum engineering technology, mainly focusing on fluid mechanics, thermodynamics, engineering economy, geosciences, reservoir and well drilling and completion. Moreover, the students will be able to expose hands-on experience with the software and equipment related to industrial activities in the oil & gas industry.

## WHAT IS ENGINEERING TECHNOLOGY?

"Engineering technology education focuses primarily on the applied aspects of science and engineering aimed at preparing graduates for practice in that portion of the technological spectrum closest to product improvement, manufacturing, construction, and engineering operational functions" - The Accreditation Board for Engineering and Technology (ABET).



## WHO CAN APPLY?

Diploma  
STPM  
Matriculation  
IPTS foundation

## ENTRY REQUIREMENTS

SCAN ME



<https://admission.umpsa.edu.my/>

APPLY  
NOW

## CAREER OPPORTUNITIES

- Pipeline Integrity Technologist
- Operation Technologist
- Reservoir Technologist
- Petroleum Process Technologist
- Drilling Technologist
- Production Technologists
- Process Technologist
- Research & development
- Government services

## CONTACT US:

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MQA Number: MQA/FA8584

# BACHELOR OF TECHNOLOGY IN OIL AND GAS FACILITIES MAINTENANCE WITH HONOURS



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UNIVERSITI MALAYSIA PAHANG  
AL-SULTAN ABDULLAH

## PROGRAMME SYNOPSIS

This programme is designed to produce highly skilled and competitive graduates in oil & gas facilities maintenance domain.

## PROGRAMME ADVANTAGES

- The course is structured to provide exposure on technical and theory of operation and equipment maintenance in oil and gas field.
- Mode 2.5u1i (2.5 years of learning in the University and 1 year training / case study in the industry).
- A TVET Programme with *profession based* where curriculum development is tailored-made based on the direct input from the oil and gas industry.
- Emphasize more on *work-based learning concept* with a combination of *theory embedded lab* approach.
- Applying the aspect of entrepreneurship, professionalism & ethic and IR 4.0 element in the course delivery

## ENTRY REQUIREMENTS

### Diploma

Have a Diploma Kemahiran Malaysia (**DKM**), Diploma Lanjutan Kemahiran Malaysia (**DLKM**), or Diploma Vokasional Malaysia (**DVM**), or other equivalent qualification recognized by the Government of Malaysia and approved by the University Senate with at least **CGPA of 2.00**.

### MUET

Obtain at least **Band 1** for Malaysian University English Test (**MUET**)

### Special Requirement

Candidates are not colour blind and do not have physical disabilities/limbs that will hinder in practical work.

### Career Opportunities in Oil and Gas Industry:

- |  |  |
|--|--|
| ➤ Maintenance and Service Supervisor   | ➤ Rotating Assistant Engineer                  |
| ➤ Plant Maintenance Assistant Engineer | ➤ Field Assistant Engineer                     |
| ➤ Planning Assistant Engineer          | ➤ Maintenance, Operation and Service Executive |
| ➤ Static Assistant Engineer            | ➤ Project Planner/ Project Executive           |



**APPLY  
NOW**

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MQA Number: MQA/FA12911



UNIVERSITI MALAYSIA PAHANG  
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Faculty of Chemical and  
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