UTM
UNIVERSITI TEKNOLOGI MALAYSIA

UNIVERSITI TEKNOLOGI MALAYSIA
ASCEND
2030

SDG REPORT 2025

Innovating Sustainable Solutions

INNOVATIVE | SUSTAINABLE | GLOBAL

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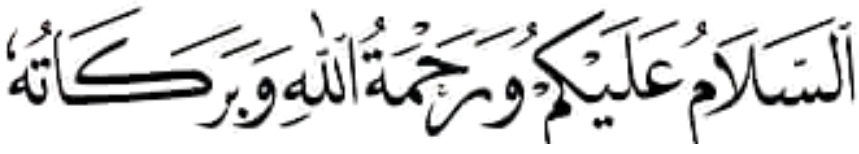
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https://sustainable.utm.my/

FOREWORD

Driving Sustainability, Shaping the Future





It is my great pleasure to present the **Universiti Teknologi Malaysia (UTM) SDG Report 2025**, reflecting our unwavering commitment to advancing sustainability as a fundamental pillar of institutional excellence and our responsibility to society.

In an era marked by climate change, economic uncertainties, technological disruption, and social challenges, universities must go beyond the pursuit of knowledge to become catalysts for meaningful transformation. As a globally recognised research university, UTM remains steadfast in translating knowledge into impactful solutions, nurturing responsible future leaders, and fostering partnerships that contribute to the well-being of humanity.

Our commitment to the **United Nations Sustainable Development Goals (SDGs)** is reinforced through the integration of **Environmental, Social and Governance (ESG)** principles across our governance, education, research, innovation, and campus operations. Guided by **UTM ASCEND 2030**, we continue to strengthen a sustainable and inclusive university ecosystem that drives innovation, empowers communities, and addresses national and global challenges.

The **UTM SDG Report 2025** highlights our collective achievements in advancing sustainability through impactful research, transformative education, strategic collaborations, community engagement, and responsible campus development. These accomplishments reaffirm our belief that the true measure of university excellence lies not only in academic distinction, but also in the lasting impact we create for society.

I extend my sincere appreciation to our staff, students, alumni, industry partners, and stakeholders for their dedication and invaluable contributions. As we move forward, let us remain united in our aspiration to build a more resilient, inclusive, and sustainable future, guided by our institutional philosophy, **"In the Name of God for Mankind,"** and our commitment to **"Innovating Sustainable Solutions"**.

Together, we shall continue to transform knowledge into impact and shape a better future for generations to come.

In the Name of God for Mankind

Innovating Sustainable Solutions

Thank you.

PROF. TS. DR. MOHD SHAFRY BIN MOHD RAHIM
VICE CHANCELLOR
UNIVERSITI TEKNOLOGI MALAYSIA

PREFACE

اَلسَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللهِ وَبَرَكَاتُهُ



The publication of the Universiti Teknologi Malaysia (UTM) SDG Report 2025 reflects our continued commitment to embedding sustainability into every aspect of the University's operations, academic mission, research, and community engagement. More than a record of achievements, this report demonstrates UTM's determination to create meaningful and measurable impact for society, the environment, and future generations.

As the focal point for coordinating the University's sustainability agenda, the Campus Sustainability Centre works closely with faculties, departments, institutes, students, industry partners, government agencies, and communities to mainstream sustainability across the institution. Our role extends beyond implementing initiatives to strengthening a culture where sustainability becomes a shared responsibility embraced by every member of the UTM community.

Throughout 2025, UTM continued to strengthen its contributions towards the United Nations Sustainable Development Goals (SDGs) while integrating Environmental, Social and Governance (ESG) principles into institutional planning, operations, and performance measurement. From responsible resource management and carbon reduction initiatives to community empowerment, sustainable education, and transparent governance, our efforts reflect a holistic approach towards long-term sustainability.

These initiatives are further guided by the aspirations of UTM ASCEND2030, which positions sustainability as a key enabler of institutional excellence and global impact. By fostering innovation, strengthening strategic partnerships, and empowering talents with sustainability values, UTM continues to create solutions that respond to emerging local and global challenges.

This report is the result of the collective efforts of many dedicated individuals and partners across the University. It highlights significant achievements while also recognising opportunities for continuous improvement. Sustainability is an ongoing journey that requires collaboration, innovation, accountability, and shared commitment from all stakeholders.

I would like to express my sincere appreciation to everyone who has contributed to the preparation of this report and to the successful implementation of UTM's sustainability initiatives throughout the year. May this publication serve not only as a record of our progress but also as an inspiration to further strengthen our commitment towards building a resilient, inclusive, and sustainable future for all.

PROF. IR. TS. DR. MOHD FADHIL BIN MD DIN
DIRECTOR
CENTRE FOR CAMPUS SUSTAINABILITY
UNIVERSITI TEKNOLOGI MALAYSIA

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CONTRIBUTORS

WRITERS

Mohd Fadhil Md Din | Zanariah Jasmani | Shamsul Sarip | Kiflee Jimpi | Muhamad Hairulnizam Ishak | Sabrina Zainal Abidin | Mohd Hafizan Hamzah | Zainal Affandi Zainal Abidin | Nurulhuda Radznam | Jani Akmal Jaapar

EDITORS

Mohd Fadhil Md Din | Shamsul Sarip | Zanariah Jasmani

GRAPHIC DESIGNERS

Muhamad Hairulnizam Ishak | Zainal Affandi Zainal Abidin



ABOUT UTM

Universiti Teknologi Malaysia (UTM) is more than just a higher education institution; it is a catalyst for meaningful global transformation. Guided by the philosophy "In the Name of God for Mankind," UTM stands out as a world class research university that actively translates knowledge into high impact solutions.

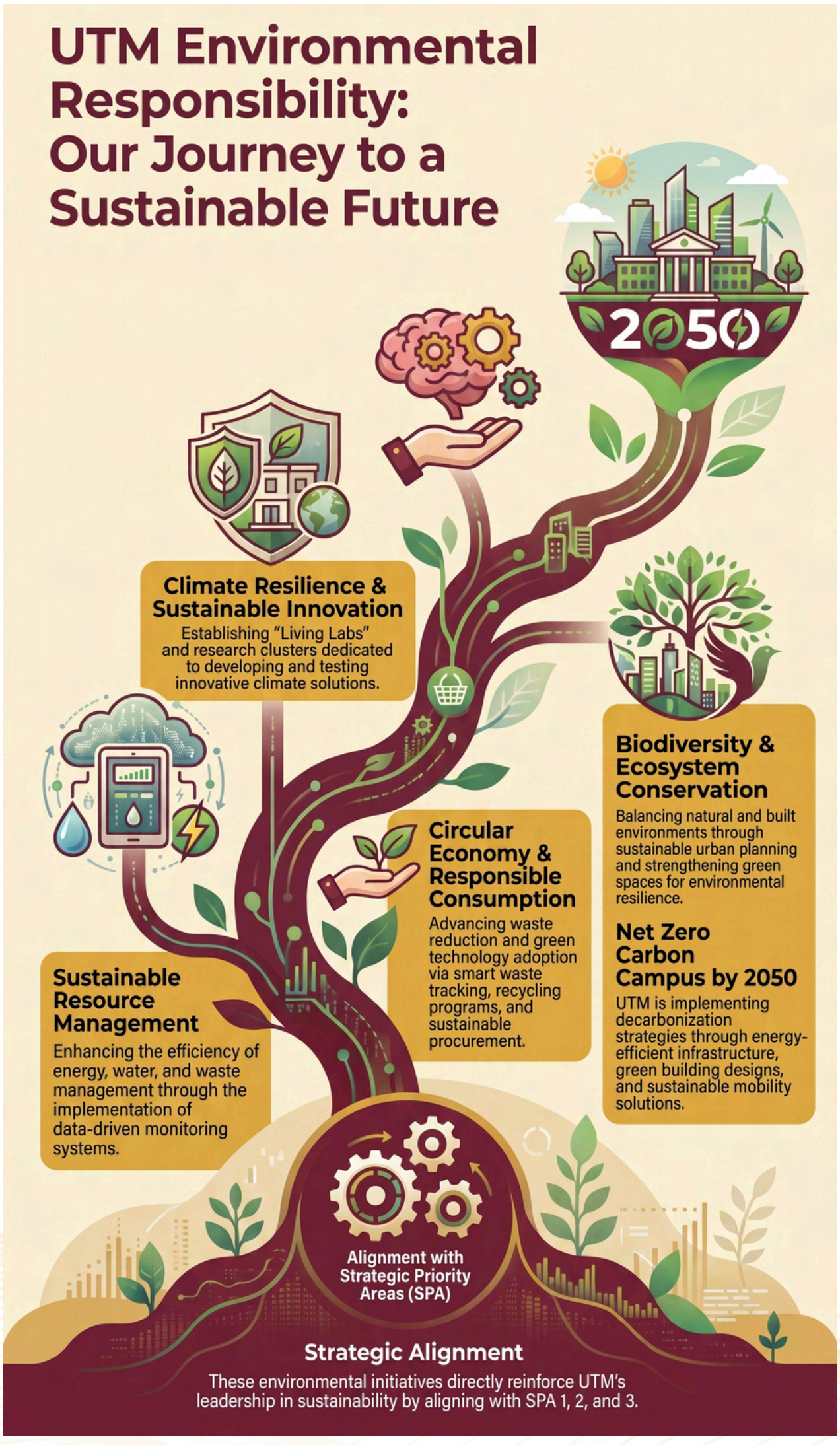
In line with the UTM ASCEND 2030 strategic plan, the sustainability agenda is placed at the heart of the university's operations. UTM holistically integrates Environmental, Social, and Governance (ESG) principles across its governance, education, research, innovation, and campus operations to fully support the United Nations Sustainable Development Goals (SDGs).

UTM's commitment to sustainability is driven by three (3) core pillars:

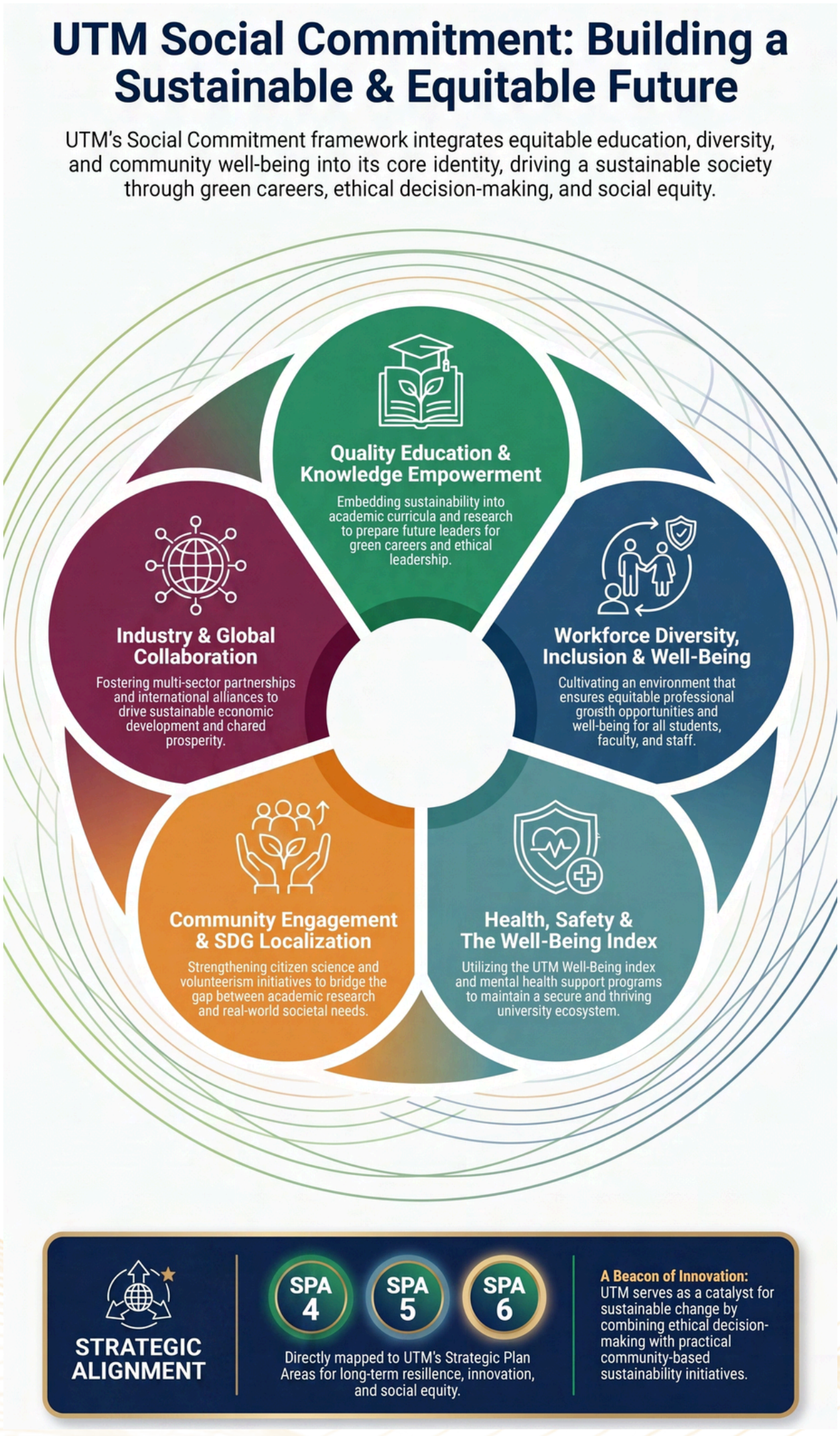
- **Environmental Resilience and Innovation:** UTM aims to achieve a Net Zero Carbon Campus status by 2050. This vision is realized through decarbonization strategies, efficient resource management, circular economy adaptation, and biodiversity conservation to build a robust future in the face of climate challenges.
- **Community Empowerment and Social Well-being:** The true measure of a university's excellence lies in the lasting impact it creates for society. UTM proactively bridges the gap between academic expertise and real-world needs through poverty eradication initiatives, inclusive educational support for the B40 income group, and the generation of healthcare innovations.
- **Educating Ethical Future Leaders:** UTM is dedicated to nurturing talent and future leaders who are ready to navigate complex technological and social challenges. Sustainability values are embedded into the curriculum to cultivate ethical graduates with sustainable leadership skills who are prepared for green careers.

Guided by the commitment to "Innovating Sustainable Solutions," UTM continues to stride forward by combining academic excellence with institutional accountability. We remain committed to creating a meaningful legacy to build a more resilient, inclusive, and sustainable world for generations to come.

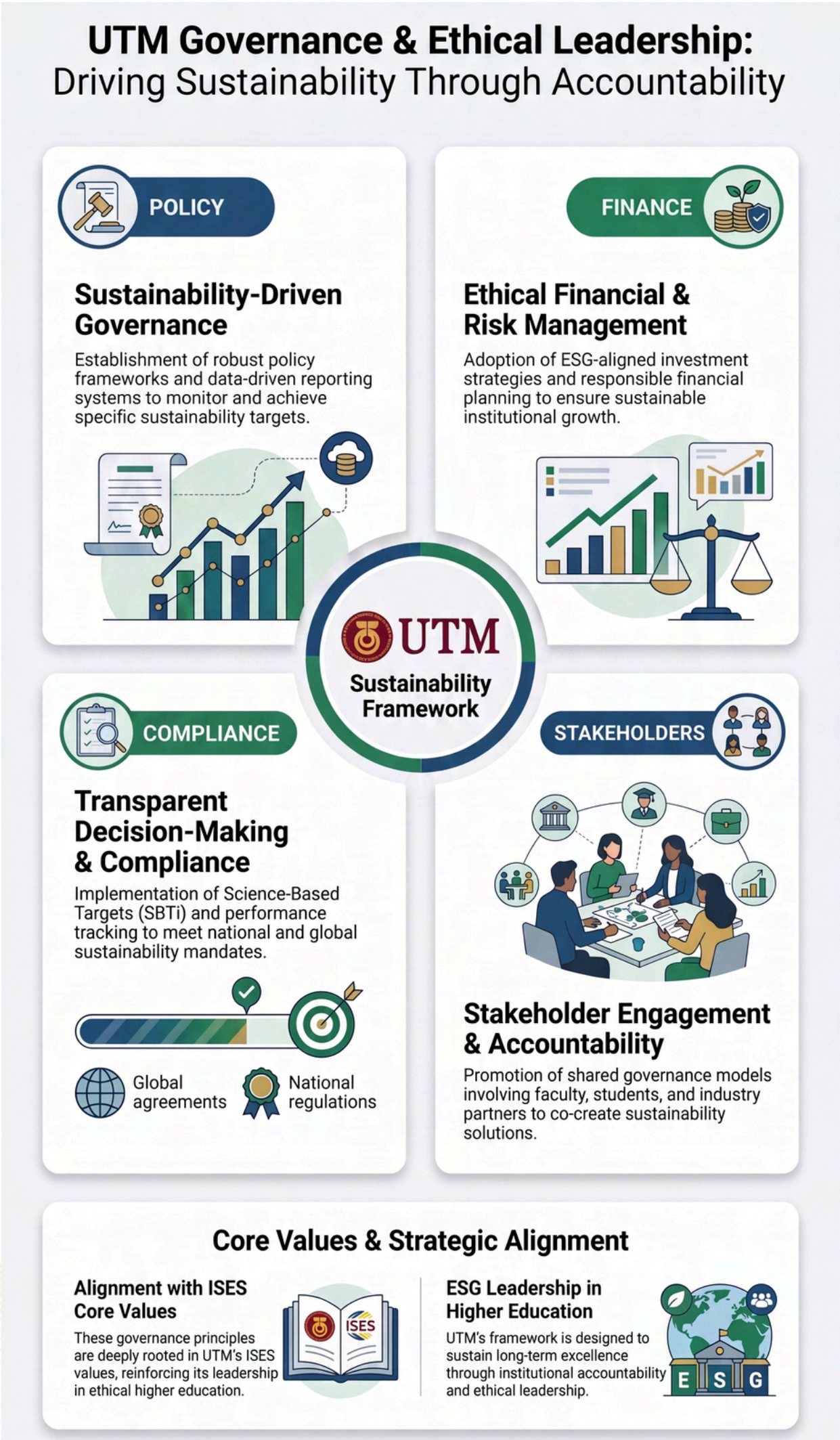
UTM ENVIRONMENTAL RESPONSIBILITY



UTM SOCIAL COMMITMENT



UTM GOVERNANCE
ETHICAL LEADERSHIP



END POVERTY IN ALL ITS FORMS EVERYWHERE

1 NO POVERTY

RESEARCH/INNOVATION

UTM ADVANCES RESEARCH-INFORMED SOCIOECONOMIC EMPOWERMENT FOR INDIGENOUS COMMUNITIES

Universiti Teknologi Malaysia (UTM) is driving inclusive socioeconomic growth by empowering underserved Indigenous communities through targeted, research-backed interventions. In June 2025, UTM launched a transformative STEM, TVET, Health, and Socioeconomic Enhancement Programme for Kampung Orang Asli Kuala Pangsun.

Led by UTM researchers, this multidisciplinary initiative bridged the gap between academic innovation and grassroots needs. Key highlights included hands-on STEM and health education, community entrepreneurship training, and a practical youth-led project installing heat-filtering window films.

By equipping vulnerable populations with applied technologies and vocational skills, UTM actively fosters self-reliance and long-term economic resilience. Directly advancing SDGs 1, 4, 8, and 10, the program ensures equitable access to critical knowledge and livelihood opportunities. Ultimately, this initiative exemplifies UTM's ongoing commitment to translating high-level academic expertise into tangible, lasting community impact.

source : https://news.utm.my/2025/06/utm-perkasa-komuniti-orang-asli-kuala-pangsun-melalui-program-pemindahan-ilmu/



TEACHING/LEARNING

UTM EMPOWERS UNDERPRIVILEGED STUDENTS THROUGH SKILLS DEVELOPMENT AND INCLUSIVE LEARNING

Universiti Teknologi Malaysia (UTM) is championing inclusive education and economic empowerment for disadvantaged students through targeted, practical skills development. In July 2025, UTM Zakat—partnering with the Islamic Centre and Sultan Ismail Mosque—launched the transformative Asnaf Pro programme. Designed for students receiving zakat assistance, this initiative bridges the crucial gap between academic study and financial independence.

By emphasizing hands-on vocational training and entrepreneurial thinking, Asnaf Pro equips vulnerable students with marketable competencies. The inaugural module successfully trained participants in professional haircutting, directly opening avenues for immediate income generation and self-reliance.

This proactive approach ensures that students from low-income households build the economic resilience needed to break cycles of poverty. Directly advancing SDGs 1, 4, and 8, UTM's initiative proves that integrating practical livelihood skills with conventional higher education is a powerful catalyst for decent work, equity, and long-term socioeconomic empowerment.

source : https://news.utm.my/2025/07/zakat-utm-laksana-program-asnaf-pro-tingkat-kemahiran-pelajar/



END POVERTY IN ALL ITS FORMS EVERYWHERE

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM STRENGTHENS FINANCIAL ASSISTANCE AND SOCIAL PROTECTION FOR LOW-INCOME STUDENTS

Universiti Teknologi Malaysia (UTM) is breaking down socioeconomic barriers to higher education, ensuring financial hardship never derails academic potential. Throughout 2025, UTM spearheaded comprehensive poverty reduction initiatives, deploying targeted welfare and financial protection to thousands of vulnerable students.

Through the UTMCARE program, the university distributed nearly RM2.5 million in vital assistance, directly benefiting over 3,200 students. UTM further championed equitable access by awarding RM1.1 million in Endowment Scholarships to 212 scholars and granting full tuition exemptions to 240 first-generation university students from low-income households under the SULUNG initiative.

Beyond direct financial aid, UTM actively mitigates cost-of-living pressures through affordable campus services like the Menu Siswa Rahmah and subsidized transportation. Directly advancing SDG 1 (No Poverty), these robust institutional commitments guarantee that economically disadvantaged students receive the comprehensive social protection and financial backing necessary to thrive academically and secure a prosperous future.

source : https://news.utm.my/2025/09/utm-perkukuh-sokongan-mahasiswa-baharu-melalui-program-sulung-dan-santuni-pelajar-baharu/



ENGAGEMENT (COMMUNITY/INDUSTRY)

KTP NEXUS REMAJA PROJECT DRIVES EDUCATIONAL EXCELLENCE AND CHARACTER DEVELOPMENT FOR B40 STUDENTS

Universiti Teknologi Malaysia (UTM), through its Centre for Community and Industry Network (CCIN), has launched the KTP Nexus Remaja program in collaboration with the Johor State Education Department (JPNJ). This high-impact social initiative utilizes a structured 5-year developmental intervention model (from Form 1 to Form 5) targeting underprivileged B40 students and orphans across 5 selected secondary schools located within a 5-kilometer radius of the UTM campus.

The program focuses on developing well-rounded capabilities across four core pillars: academics, character building, psychology, and spirituality. By leveraging UTM academic experts to provide comprehensive student profiling, robotics-infused STEM modules, and mental resilience training, the university is actively driving equitable educational access and leadership skills. This strategic engagement fosters socio-economic mobility, directly mitigating marginalization gaps and preparing a competitive generation of youths aligned with national sustainable human capital development frameworks.

source : https://news.utm.my/2025/05/ktp-nexus-remaja-pacu-kecemerlangan-pendidikan-dan-sahsiah-pelajar-b40/



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

2 ZERO HUNGER

RESEARCH/INNOVATION

UTM EXPLORES STRATEGIC COLLABORATION WITH PSU IN SEAFOOD SCIENCE RESEARCH

Universiti Teknologi Malaysia (UTM) is exploring high-impact research and academic opportunities with Prince of Songkla University (PSU) in Thailand, focusing on the specialized domain of seafood science and biotechnology. This transnational initiative aims at driving collaborative bio-scientific research, particularly to enhance UTM's M.Sc. Biotechnology program. By engaging with PSU's renowned Center of Excellence in Seafood Science and Innovation, the strategic alliance focuses on developing eco-friendly breakthroughs in seafood safety, quality management, and the utilization of marine biomass—such as fish and seaweed—to support green economy initiatives.

This collaborative framework is designed to provide postgraduate students with vital cross-border research exposure while upholding ASEAN University Network-Quality Assurance (AUN-QA) standards. Ultimately, the partnership actively positions UTM within a resilient regional academic network, transforming advanced bioscience exploration into sustainable, bio-based industrial practices that directly address regional ecological and food quality challenges.

source : https://news.utm.my/2025/05/purposeful-research-for-transformative-healthcare-in-malaysia/



TEACHING/LEARNING

FOOD PRESERVATION AND FREEZE-DRYING INNOVATION: JICA-MJIIT SPECIALIZED TRAINING PROGRAMME

The Malaysia-Japan International Institute of Technology (MJIIT) at Universiti Teknologi Malaysia, in strategic partnership with the Japan International Cooperation Agency (JICA), organized an advanced capacity-building training programme focused on food preservation and freeze-drying technologies. This international educational initiative is dedicated to developing specialized technical competencies among regional food scientists, agricultural officers, and industry professionals.

By delivering data-backed academic modules and hands-on laboratory experiences, the program explores the physics, engineering, and biochemistry behind thermal preservation and advanced shelf-life extension methods. The framework succeeds in driving sustainable post-harvest technologies that are highly vital for optimizing agricultural value chains and minimizing crop losses. Ultimately, this international educational exchange addresses global food security challenges by equipping professional cohorts with low-energy, highly efficient preservation techniques, thereby actively mitigating industrial organic waste and fostering a resilient global food production network.

source : https://news.utm.my/2025/12/food-preservation-freeze-drying-jica-mjiit-training-programme/



END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

2 ZERO HUNGER

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM STRENGTHENS CAMPUS FOOD SECURITY THROUGH AFFORDABLE MEALS AND STUDENT FOOD ASSISTANCE

Universiti Teknologi Malaysia (UTM) is actively combating student food insecurity and championing holistic well-being through comprehensive, affordable dining initiatives. Recognizing that nutritional access is vital for academic success, UTM officially launched the transformative Menu Siswa Rahmah program in September 2025. Through strategic partnerships with campus operators and government bodies like KPDN Johor, 14 campus cafeterias now provide balanced, nutritious meals for RM5.00 or less.

To further support economically vulnerable (B40) students, UTM expanded its institutional safety net with targeted welfare programs, including the Because We Care Chancellor's Fund, Food Bank Siswa, and Almari Kasih Sayang. These vital food distribution networks effectively alleviate the daily financial burdens of university life.

By prioritizing affordable and safe food access, UTM directly advances SDG 2 (Zero Hunger), alongside SDGs 1, 3, and 4. These robust institutional frameworks ensure that no student's educational journey is ever compromised by the stress of food insecurity.

source : https://news.utm.my/2025/12/utm-memelihara-kebajikan-dan-kesejahteraan-pelajar-penuhi-harapan/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM LECTURERS LEAD APPGM-SDG FOOD SECURITY PROJECT

Academic experts from Universiti Teknologi Malaysia (UTM) are partnering with Sekolah Kebangsaan (SK) Tanjung Kupang to pioneer the Solar-Powered Hydroponic Garden community project. Financed by a RM40,000 All-Party Parliamentary Group Malaysia (APPGM)-SDG grant, this 10-month initiative focuses on developing a localized greenhouse system inside the Iskandar Puteri constituency. The project trains 10 community participants to cultivate fresh crops using energy-saving, automated hydroponic technologies.

By implementing cross-disciplinary training modules led by UTM's Faculty of Science and Faculty of Electrical Engineering, the alliance is successfully driving low-carbon urban agriculture and grassroots climate action. A structured train-the-trainer pathway ensures long-term operational resilience, with generate revenues pooled into a revolving fund to sustain the micro-enterprise. This strategic societal engagement is vital for mitigating regional food insecurity, boosting household nutrition, and introducing clean-energy solutions directly within local school communities.

source : https://news.utm.my/2025/09/utm-lecturers-lead-appgm-sdg-food-security-project/



ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

RESEARCH/INNOVATION

PURPOSEFUL RESEARCH FOR TRANSFORMATIVE HEALTHCARE IN MALAYSIA

Universiti Teknologi Malaysia (UTM) is spearheading a strategic initiative focused on purposeful research to elevate the national healthcare sector. By bridging advanced technological innovation with critical medical needs, this initiative focuses on developing high-impact solutions that address current healthcare challenges in Malaysia. Integrating biomedical engineering, data analytics, and clinical research, UTM is empowering healthcare professionals and improving patient outcomes.

The collaborative framework actively involves industry partners and public health institutions, driving tangible improvements in healthcare accessibility and operational efficiency. By prioritizing sustainable medical innovations, the university is mitigating systemic bottlenecks and enhancing diagnostic precision. This institutional commitment not only aligns with national health objectives but also establishes a resilient healthcare ecosystem. The ongoing research targets substantial reductions in treatment times and aims to elevate the overall quality of care, ultimately solidifying UTM's role as a vital catalyst for transformative and sustainable healthcare development nationwide.

source : https://news.utm.my/2025/05/purposeful-research-for-transformative-healthcare-in-malaysia/



TEACHING/LEARNING

TESTED BY HEALTH ISSUES, UTM HAFIZ ICON COMPLETES PHD WITH EXCELLENCE

Universiti Teknologi Malaysia (UTM) continuously champions inclusive education and student welfare, empowering scholars to achieve academic excellence despite severe personal adversities. Demonstrating remarkable resilience, a distinguished UTM student and Quranic Hafiz successfully completed his doctoral studies with outstanding academic distinction while navigating significant health challenges. This achievement highlights the university's robust support systems, which actively mitigate barriers to education by providing crucial pastoral care and academic flexibility.

By prioritizing student well-being alongside rigorous intellectual development, UTM is driving an equitable learning environment that nurtures holistic graduates. The successful graduation of this resilient scholar underscores the effectiveness of institutional interventions designed to support at-risk students, ensuring a 100% commitment to accessible, high-quality higher education. Cultivating such perseverance directly aligns with sustainable educational goals, ultimately delivering highly capable, values-driven leaders ready to contribute meaningfully to society.

source : https://news.utm.my/2025/11/diuji-masalah-kesihatan-ikon-hafiz-utm-tamat-phd-dengan-cemerlang/



ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM PRESERVES STUDENT WELFARE AND WELL-BEING, FULFILLING EXPECTATIONS

Universiti Teknologi Malaysia (UTM) is aggressively enhancing its institutional frameworks to prioritize holistic student welfare and campus well-being. By implementing comprehensive financial and socio-emotional support systems, UTM is driving equitable access to quality higher education. Key institutional interventions include the Menu Siswa Rahmah, providing nutritious meals under RM5.00 across 14 campus cafeterias, and distributing over RM4.46 million in Endowment Scholarships to 876 recipients.

Furthermore, the university strategically allocated RM2.49 million via the UTMCARE initiative to support 3,247 students, alongside RM1.9 million in Zakat funds to 3,542 beneficiaries. Addressing critical mental health needs, UTM delivered 1,309 professional counseling sessions for 1,001 students in 2025. Institutional arrangements also feature inclusive infrastructure, including free campus transportation, the 'Kampung Inklusif' housing for disabled students, and festive travel subsidies. Through these robust operational policies, UTM ensures a highly conducive, safe, and sustainable campus environment, actively mitigating socioeconomic barriers and empowering resilient graduates.

source : https://news.utm.my/2025/12/utm-memelihara-kebajikan-dan-kesejahteraan-pelajar-penuhi-harapan/



ENGAGEMENT (COMMUNITY/INDUSTRY)

FEST UTM EMPOWERS PARENTS' MENTAL HEALTH AND WELL-BEING THROUGH THE 'PROSPEROUS PARENTS, SAFE CHILDREN' PROGRAM SERIES 1

Universiti Teknologi Malaysia (UTM) is advancing community resilience and family well-being through the high-impact "Prosperous Parents, Safe Children" program. Backed by the Iskandar Puteri Low Carbon Community Grant (IPRK 5.0), UTM successfully mobilized 100 participants, encompassing parents and children from local early childhood education centers. This strategic community engagement prioritizes mitigating psychosocial risks by enhancing mental health literacy and promoting sustainable, healthy lifestyles.

Through interactive workshops, family aerobics, and group counseling, the university is directly empowering parents to create safe, supportive home environments that protect children from emotional distress. By forging strong collaborative partnerships with local religious institutions, community educators, and the Iskandar Puteri City Council, UTM is actively cultivating a harmonious and highly resilient urban society. This initiative underscores UTM's enduring commitment to driving holistic social sustainability and fostering a robust ecosystem of care that serves as a benchmark for safe neighborhood development across the region.

source : https://news.utm.my/2025/10/fest-utm-perkasa-kesejahteraan-kesihatan-mental-ibu-bapa-melalui-program-ibu-bapa-sejahtera-anak-selamat-siri-1/



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

4 QUALITY EDUCATION

RESEARCH/INNOVATION

UTM STRENGTHENS REGIONAL POSITION BY HOSTING THE FIRST ASEAN QUANTUM SUMMIT

Universiti Teknologi Malaysia (UTM) demonstrated strong regional leadership by hosting the inaugural ASEAN Quantum Summit 2025, a landmark scientific gathering driving Southeast Asia's advancement in quantum science and technology. Empowering a robust technological ecosystem, the summit successfully convened over 200 delegates from 10 ASEAN member states and Japan, alongside 2,632 participants comprising students, policymakers, and industry experts.

Aligning with the ASEAN Malaysia 2025 agenda, this initiative established vital cross-border partnerships. During the event, UTM highlighted its pioneering breakthrough in executing secure quantum communication between the university and the Johor-Singapore Special Economic Zone Data Centre. Furthermore, the summit catalyzed high-impact collaborations, formalizing strategic agreements with Osaka University, AQSolotl Pte. Ltd., and Japan's AIST. Fostering long-term regional development, UTM also secured a RM500,000 allocation to upgrade its facilities, cementing its vital role as a premier hub for global innovation, knowledge exchange, and the preparation of future scientific leaders.

source : https://news.utm.my/2025/12/utm-perkasa-kedudukan-serantau-dengan-penganjuran-asean-quantum-summit-pertama/



TEACHING/LEARNING

UTM BECOMES THE FIRST UNIVERSITY ACCREDITED TO CONDUCT THE PROFESSIONAL INTERNATIONAL WELDING ENGINEER (IWE) IIW DIPLOMA PROGRAM

Universiti Teknologi Malaysia (UTM) achieved a strategic milestone by becoming the first university in Malaysia to receive official accreditation to conduct the International Welding Engineer (IWE) Professional Course under the International Institute of Welding (IIW) Diploma Program. Empowering the national TVET agenda, this prestigious initiative reflects UTM's capability in delivering global-standard engineering education. The program aims to produce highly competent professional welding engineers by integrating rigorous academic modules with industry-level practical training.

Furthermore, UTM is expanding its inclusive educational ecosystem by offering two additional professional pathways: International Welding Technologist (IWT) and International Welding Specialist (IWS). Driving high-impact collaborations, the university formalized strategic partnerships with key industry players, including Welding Institute Malaysia and The Welding Institute, to ensure continuous curriculum relevance. This strategic certification successfully strengthens UTM's position as a premier institution for developing highly skilled human capital and globally competitive graduates for critical industrial sectors.

source : https://news.utm.my/2025/12/utm-universiti-pertama-menerima-tauliah-bagi-menjalankan-kursus-profesional-international-welding-engineer-program-diploma-iiw/



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

4 QUALITY EDUCATION

ENGAGEMENT (COMMUNITY/INDUSTRY)

COSPHE PROGRAM SOCIALIZES ENVIRONMENTAL SCIENCE KNOWLEDGE

Universiti Teknologi Malaysia (UTM), through its Centre for Campus Sustainability (UTMCCS) in collaboration with the Malaysian National Commission for UNESCO (SKUM), successfully executed the Citizen and Open Science for Planetary Health (COSPHe) program. Empowering local community and municipal leaders, the initiative engaged 60 participants from local authorities including MBIP, MBJB, MPKu, alongside industry partner Flex.

The program focused on driving environmental science literacy to build resilient communities. Participants underwent rigorous outdoor training across 5 practical modules, encompassing water quality measurement, biological indicator assessment, biodiversity data collection via the I-Naturalist platform, eco-botanical art creation, and sustainable composting techniques. Mitigating the broader impacts of climate change, the initiative directly supports Sustainable Development Goals 4, 11, 13, 14, and 15. By developing actionable science skills and ecological awareness among local government staff, UTM effectively positioned these key stakeholders as active agents of change for long-term environmental conservation and resource management.

source : https://news.utm.my/2025/10/program-cosphe-memasyarakatkan-ilmu-sains-alam-sekitar-kepada-komuniti-setempat/



OPERATION/INSTITUTIONAL ARRANGEMENT

UTM AMONG THE EARLIEST PUBLIC UNIVERSITIES IN MALAYSIA TO INTRODUCE A GLOBAL POSTGRADUATE RESEARCH INTERNSHIP GRANT

Universiti Teknologi Malaysia (UTM) is driving global academic excellence by introducing a structured postgraduate research internship grant through the UTM Nexus Attachment Programme. Empowering the next generation of academic and industrial leaders, this high-impact initiative successfully placed 20 Master's and PhD researchers in rigorous research internships lasting one to three months across two implementation phases.

By developing strategic international alliances, UTM connected participants with world-renowned institutions—including Top 100 QS-ranked universities such as Imperial College London and the University of Tokyo—alongside leading multinational corporations across Asia and Europe. Mitigating the gap between theoretical academia and real-world industrial applications, researchers engaged in intensive research and development activities directly aligned with their core theses. This pioneering global mobility program effectively accelerates advanced research progress, fosters critical cross-cultural competencies, and catalyzes sustainable joint publications, significantly elevating UTM's standing as a premier world-class research university.

source : https://news.utm.my/2025/12/utm-among-the-earliest-public-universities-in-malaysia-to-introduce-a-global-postgraduate-research-internship-grant/



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

RESEARCH/INNOVATION

ASSOC PROF DR SYUHAIDA ISMAIL FIRST MALAYSIAN TO RECEIVE THE WFEO GREE WOMEN IN ENGINEERING AWARD

Universiti Teknologi Malaysia (UTM) academic, Assoc. Prof. Dr. Syuhaida Ismail, achieved a historic milestone by securing the highly prestigious WFEO GREE Women in Engineering Award 2024, showcasing the profound global impact of women in STEM. Currently driving strategic initiatives as the Director of Research at the Maritime Institute of Malaysia (MIMA), she plays a critical role in shaping national maritime policies and ensuring coastal sustainability. Demonstrating exceptional research excellence, Dr. Syuhaida successfully acquired international projects valued at nearly USD 4 million, significantly enhancing Malaysia's global academic reputation.

Furthermore, her prolific academic output encompasses 440 published articles and books, which directly catalyzed the commercialization of 120 innovative products. Empowering the next generation of industry leaders, she actively champions STEM education and women's advocacy. By seamlessly integrating rigorous academic frameworks with real-world industry applications, her outstanding contributions continue to advance the frontiers of sustainable engineering and regional maritime governance.

source : https://news.utm.my/2025/03/assoc-prof-dr-syuhaida-ismail-first-malaysian-to-receive-the-wfeo-gree-women-in-engineering-award/



TEACHING/LEARNING

UTM PROMOTES GENDER EQUALITY THROUGH EXPERIENTIAL LEARNING AND WOMEN'S HEALTH EDUCATION

Universiti Teknologi Malaysia (UTM) is championing gender-responsive education and social equity by integrating women's health and personal well-being into active community engagement. In May 2025, UTM's Faculty of Social Sciences and Humanities launched the impactful "Fitrah Qaseh: We Care, We Love" initiative to support disadvantaged children at a welfare organization in Johor Bahru.

Driven by students from the Ethics and Social Responsibility course, the experiential program delivered crucial education on personal hygiene, self-care, emotional expression, and women's health. This framework allowed university students to translate academic ethical principles into tangible community action, cultivating essential leadership, empathy, and communication skills.

By prioritizing health literacy, dignity, and gender-related well-being, UTM actively nurtures socially conscious graduates. Directly advancing SDG 5 (Gender Equality), alongside SDGs 3 and 4, this compassionate initiative demonstrates UTM's unwavering dedication to fostering inclusive environments and empowering vulnerable communities with essential, life-enhancing knowledge.

source : https://news.utm.my/2025/06/fitrah-qaseh-utm-students-care-for-underprivileged-children/



ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM STRENGTHENS INSTITUTIONAL RECOGNITION AND SUPPORT FOR WOMEN IN TECHNOLOGY AND ACADEMIC LEADERSHIP

Universiti Teknologi Malaysia (UTM) is actively championing gender equality and empowering women to lead in traditionally male dominated STEM fields. In 2025, this commitment was showcased when Ts. Dr. Nur Haliza Abdul Wahab from the Faculty of Computing received the prestigious Ibu Zain Award for Technology.

Celebrated alongside International Women's Day, Dr. Nur Haliza was recognized for her trailblazing contributions to blockchain technology, the Internet of Things, and innovative computer science education. Beyond individual accolades, this milestone served as a powerful platform to advocate for female mentorship, inclusive academic environments, and expanded opportunities for young women pursuing tech careers.

By elevating female role models and advocating for robust institutional support systems, UTM actively dismantles barriers to female leadership in technological innovation. Directly advancing SDG 5 (Gender Equality), alongside SDGs 4 and 9, UTM remains dedicated to ensuring women's full participation and equal opportunities at the forefront of academic advancement.

source : https://news.utm.my/2025/03/faculty-of-computing-lecturer-awarded-prestigious-ibu-zain-award-2025/



ENGAGEMENT (COMMUNITY/INDUSTRY)

SRI PULAI HEALTHY AND FIT: EMPOWERING WOMEN THROUGH FITNESS

Universiti Teknologi Malaysia (UTM) successfully advanced community well-being through the "Sri Pulai Sihat dan Cergas" initiative, a high-impact project funded under the Knowledge Transfer Programme – Research Innovation Grant (UTM KTP-RIG). Empowering local demographics, the program actively engaged over 30 women in the Taman Sri Pulai community from February 2024 to January 2025. By collaborating with KEMAS Iskandar Puteri and Trio Diva Fitness, UTM Sports Science students practically applied theoretical knowledge, developing customized fitness modules encompassing aerobics, tai chi, yoga, and Zumba.

To ensure measurable progress, the team implemented a comprehensive participant profiling system and conducted rigorous fitness screening tests. Validating its outstanding impact, the initiative secured a prestigious Silver Medal at NALI 2024 and resulted in a published academic book chapter. Ultimately, the program succeeded in transforming community health practices while fostering sustainable lifestyle improvements and delivering invaluable real-world training for university students.

source : https://news.utm.my/2025/01/sri-pulai-sihat-dan-cergas-empowering-women-through-fitness/



ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

6 CLEAN WATER AND SANITATION

RESEARCH/INNOVATION

UTM RESEARCHERS DEVELOP JERNEH2O WATER FILTER STRAW AS A PORTABLE CRISIS SOLUTION

Universiti Teknologi Malaysia (UTM) researchers successfully engineered JerneH2O, an innovative portable water filtration straw designed to provide immediate access to clean drinking water during natural disasters. Driving practical humanitarian solutions, experts from the Advanced Membrane Technology Research Centre (AMTEC) integrated low-pressure hollow fiber microfiltration membranes with activated carbon. This technology effectively eliminates harmful bacteria, sediments, and odors without requiring electrical power or complex logistics.

Mitigating the severe impacts of clean water disruptions during floods, the commercially ready device offers a critical, life-saving mechanism for affected communities. Furthermore, the invention champions environmental sustainability by significantly reducing reliance on single-use plastic bottles. Developing future enhancements, the research team is actively formulating advanced membranes to filter dissolved salts and utilizing agricultural biowaste for carbon replacement. This high-impact innovation firmly establishes UTM's dedication to empowering society through scalable engineering breakthroughs.

source : https://news.utm.my/2025/12/penyelidik-utm-hasilkan-straw-penapis-air-jerneh2o-sebagai-solusi-mudah-alih-ketika-krisis/



TEACHING/LEARNING

UTM'S CHEME CUBE 2025 INSPIRES FUTURE ENGINEERS TO INNOVATE WATER PURIFICATION SOLUTIONS

Universiti Teknologi Malaysia (UTM) successfully hosted the national-level ChemE Cube 2025 competition, empowering future engineers to tackle critical environmental challenges. Themed "Advancing Water Purification through Innovation," the flagship program challenged 13 participating teams from universities across Malaysia to design fully functional water purification systems within a compact one-cubic-foot prototype. Driving experiential Education for Sustainable Development (ESD), the initiative seamlessly integrated technical creativity with rigorous sustainability principles.

The event actively fostered robust academia-industry collaborations, featuring a distinguished evaluation panel comprising 9 experts from leading corporations such as Petronas Carigali and Kurita Water. Developing essential problem-solving competencies, students conducted live water analysis demonstrations to prove their prototypes' operational efficacy. By mitigating the gap between theoretical learning and practical execution, this high-impact platform ensures the next generation of chemical engineering graduates is fully equipped to champion global water sustainability and deliver viable, real-world ecological solutions.

source : https://news.utm.my/2025/11/utms-cheme-cube-2025-inspires-future-engineers-to-innovate-water-purification-solutions/



ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

6 CLEAN WATER AND SANITATION

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM AND JPS PROPOSE NEW MOU TO STRENGTHEN RESEARCH AND WATER RESOURCE MANAGEMENT COOPERATION

Universiti Teknologi Malaysia (UTM), through the Malaysia-Japan International Institute of Technology (MJIIT) and the Faculty of Civil Engineering (FKA), convened a high-level strategic meeting with the Department of Irrigation and Drainage (JPS) on November 11, 2025, in Cyberjaya. The discussion, chaired by JPS Senior Director Ir. Hanizan Deraman, focused on drafting a new Memorandum of Understanding (MoU) to succeed the previous five-year agreement signed on February 27, 2020, which concluded on February 27, 2025.

Driving institutional and industrial collaboration, this upcoming framework aims to heavily reinforce joint capabilities in water resource management and disaster mitigation. By combining academic intelligence with public infrastructure operations, the initiative fosters robust research knowledge exchange, paving the way for data-driven climate resilience and enhanced flood-risk strategies across the nation.

source : https://news.utm.my/2025/11/utm-dan-jps-rancang-mou-baharu-perkukuh-kerjasama-penyelidikan-dan-pengurusan-sumber-air/



ENGAGEMENT (COMMUNITY/INDUSTRY)

MJIIT FOSTERS WATER RESPONSIBILITY WITH ORANG ASLI YOUTHS

Universiti Teknologi Malaysia (UTM), through the Malaysia-Japan International Institute of Technology (MJIIT), successfully executed a highly impactful community outreach initiative at Kampung Orang Asli Kuala Pangsun in Selangor. Empowering indigenous populations through essential STEM education, the program strategically targeted environmental awareness and health literacy. Driving practical engagement, a specialized team of academic experts and 5 undergraduate students guided 15 Orang Asli youths through hands-on river water sampling and testing activities.

Participants effectively learned to measure critical water quality parameters, including pH, ammonia, and nitrate levels. By mitigating environmental degradation risks, the initiative fostered profound ecological responsibility and reinforced the community's connection to vital natural resources. This collaborative knowledge transfer endeavor, funded by the Knowledge Transfer Programme – Research & Innovation Grant, directly supports Sustainable Development Goals 4 and 6. Ultimately, UTM continues developing resilient and informed communities, ensuring indigenous youths are well-equipped to champion sustainable practices and water conservation for future generations.

source : https://news.utm.my/2025/07/mjiit-fosters-water-responsibility-with-orang-asli-youths/



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

7 AFFORDABLE AND CLEAN ENERGY

RESEARCH/INNOVATION

UTM, TNB-ILSAS FORGE STRATEGIC COLLABORATION IN FUTURE ENERGY TRAINING AND RESEARCH

Universiti Teknologi Malaysia (UTM) formalized a robust institutional partnership by signing a Memorandum of Understanding (MoU) with TNB Integrated Learning Solutions Sdn. Bhd. (TNB ILSAS). Empowering the national clean energy transition, this strategic alliance directly supports Malaysia's National Energy Transition Roadmap (NETR) and the critical aspiration to achieve Net Zero Carbon Emissions by 2050. Driving high-impact capacity building, UTM's Institute of Future Energy (IFE) leads the collaboration, leveraging expertise across vital domains including hydrogen technology, solar photovoltaic systems, and battery energy storage.

Since 2023, the partnership has successfully delivered over 40 specialized training sessions focusing on hydrogen, bioenergy, ammonia, and carbon capture technologies. By developing industry-scale training modules and advancing future energy research, UTM and TNB ILSAS are effectively mitigating skill gaps in the energy sector. This formalized arrangement significantly strengthens institutional synergies, ensuring the sustainable development of a highly skilled workforce equipped to secure national energy resilience.

source : https://news.utm.my/2025/04/utm-tnb-ilsas-forge-strategic-collaboration-in-future-energy-training-and-research/



TEACHING/LEARNING

ENERGY LITERACY BOOSTED AT SMK BANDAR PUTRA THROUGH UTM'S 'WATTS UP' PROGRAM

Universiti Teknologi Malaysia (UTM) is driving national sustainability objectives through the highly impactful "Watt's Up: Energy for a Greener Future" educational outreach program. Empowering the next generation of environmentally conscious youth, UTM students strategically engaged Form 1 and Form 2 students at SMK Bandar Putra to bridge critical knowledge gaps regarding responsible energy consumption. The initiative featured comprehensive lecture sessions and a dynamic "Watt's Up Challenge" encompassing 3 interactive learning stations.

By developing practical literacy in renewable energy and electrical safety, the program directly advances Sustainable Development Goals 4, 7, 11, and 12. To validate the initiative's success, rigorous pre- and post-event surveys were administered, revealing a measurable improvement in students' capacity to recognize hazardous conditions and adopt vital energy-saving habits. Ultimately, this robust community collaboration succeeded in mitigating unsafe electrical practices while actively cultivating a greener, low-carbon future for Malaysia's developing communities.

source : https://news.utm.my/2025/12/energy-literacy-boosted-at-smk-bandar-putra-through-utms-watts-up-program/



ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

7 AFFORDABLE AND CLEAN ENERGY

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM KUALA LUMPUR ADVANCES NET-ZERO AMBITIONS WITH LARGE-SCALE SOLAR PV DEPLOYMENT UNDER NET ENERGY METERING

Universiti Teknologi Malaysia (UTM) Kuala Lumpur is driving a significant transition towards a low-carbon campus by executing a large-scale Solar Photovoltaic (PV) installation project. Empowering the university's institutional sustainability agenda, the project boasts a total installed capacity of 934.8 kilowatt-peak (kWp) across key academic and administrative facilities, including the MJIIT building and the campus mosque. Scheduled for full completion by 10 February 2026, this strategic deployment operates under the Net Energy Metering (NEM) mechanism.

By developing an optimized on-site renewable energy generation network, UTM is effectively mitigating its long-term reliance on fossil fuel-based electricity while exporting surplus energy to the national grid. This high-impact operational intervention directly supports Sustainable Development Goal 7 (Affordable and Clean Energy). Ultimately, the initiative yields measurable reductions in carbon emissions and sustained operational cost savings, establishing a resilient clean energy framework that substantially elevates UTM's standing in global institutional sustainability assessments.

source : https://news.utm.my/2025/12/utm-kuala-lumpur-advances-net-zero-ambitions-with-large-scale-solar-pv-deployment-under-net-energy-metering/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM AND YAYASAN JCORP STRENGTHEN NATIONAL SUSTAINABILITY AGENDA WITH SOLAR PV PROJECT IN JOHOR

Universiti Teknologi Malaysia (UTM) and Yayasan JCorp successfully executed a transformative community engagement project by installing a 5.6 kilowatt-peak (kWp) Solar Photovoltaic (PV) system at Sekolah Agama Tunjuk Laut in Kota Tinggi, Johor. Empowering a rural school lacking conventional grid access, the hybrid system comprises 9 solar panels, a specialized inverter, and 4 Lithium Iron Phosphate (LFP) batteries to ensure uninterrupted, reliable electricity. Driving the United Nations Sustainable Development Goal 7 (Affordable and Clean Energy), UTM acted as the expert consultant, while Yayasan JCorp fully sponsored the initiative.

Furthermore, UTM experts effectively mitigated long-term operational risks by conducting a comprehensive maintenance training course for the school's teachers and 8 JCorp staff members. By developing practical knowledge transfer and renewable energy infrastructure at the grassroots level, this strategic collaboration significantly strengthens Malaysia's national sustainability agenda while establishing a resilient, self-sufficient educational environment.

source : https://news.utm.my/2025/12/utm-dan-yayasan-jcorp-perkukuh-agenda-kelestarian-negara-dengan-projek-solar-pv-di-johor/



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

8 DECENT WORK AND ECONOMIC GROWTH

RESEARCH/INNOVATION

UTM CONDUCTS STUDY TO EMPOWER LOCAL COMMUNITIES IN THE GREEN JOBS SECTOR

Universiti Teknologi Malaysia (UTM) is driving local economic transformation through the Green Resilience Opportunity Work (GROW) initiative. Empowering grassroots populations, the project systematically engaged communities across Flat MMHE, Kampung Pasir Gudang Baru, and Mukim Tanjung Kupang to identify critical skills within the emerging green job sector. Through comprehensive Focus Group Discussions, researchers successfully identified high-potential economic pathways, specifically urban farming, the commercialization of mussel-shell-based organic products, and marine eco-tourism.

Mitigating socioeconomic vulnerabilities, the initiative actively equips these groups with targeted technical training and essential research and development (R&D) support to penetrate sustainable markets. By developing specialized capacity-building modules based on empirical findings, UTM directly advances Sustainable Development Goals 8, 11, and 13. Ultimately, this strategic community engagement successfully positions marginalized local populations to proactively participate in the national green economy, ensuring long-term financial resilience and robust environmental stewardship.

source : https://news.utm.my/2025/06/utm-laksana-kajian-perkasa-komuniti-sekitar-dalam-sektor-pekerjaan-hijau/



TEACHING/LEARNING

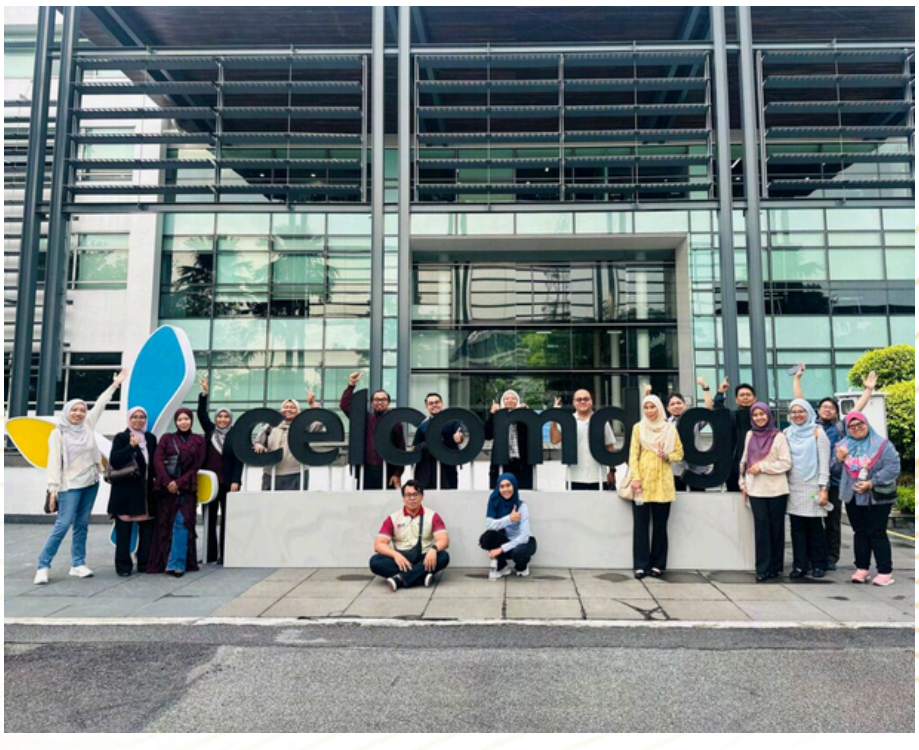
UTM STRENGTHENS GRADUATE EMPLOYABILITY THROUGH INDUSTRY-BASED LEARNING AND CAREER DEVELOPMENT

Universiti Teknologi Malaysia (UTM) is proactively bridging the gap between academic learning and global workforce readiness. Driven by the UTM Career Centre, the university empowers students through strategic corporate partnerships and dynamic career development initiatives.

In September 2025, UTM led 23 Graduate Employability Ambassadors on an immersive industry expedition to Talentbank, CIMB Bank, and the CelcomDigi AI Experience Centre. This strategic engagement provided students with critical, frontline exposure to emerging technologies, digital workforce transformations, and evolving corporate expectations.

By equipping these student leaders with direct industry insights, UTM empowers them to actively mentor peers and elevate campus-wide career preparedness. This hands-on approach ensures graduates emerge as adaptable, highly competent professionals primed for the modern job market. Directly advancing SDG 8 (Decent Work and Economic Growth), alongside SDGs 4 and 9, UTM remains deeply committed to securing productive employment pathways and future-proofing the next generation of innovators.

source : https://news.utm.my/2025/09/utm-career-centre-bimbing-mahasiswa-tingkat-kebolehpasaran-graduan-melalui-lawatan-strategik/



PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

8 DECENT WORK AND ECONOMIC GROWTH

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM STRENGTHENS EMPLOYEE WELL-BEING THROUGH FLEXIBLE WORKING ARRANGEMENTS AND WORKPLACE TRANSFORMATION

Universiti Teknologi Malaysia (UTM) is championing a progressive, resilient workplace by prioritizing employee well-being and institutional productivity. In late 2025, UTM launched a pilot Flexible Working Arrangement (AKF), empowering eligible staff to work remotely for up to five days a month. Announced to nearly 2,000 personnel, this initiative fosters an adaptable, supportive environment without compromising service quality.

To amplify these modern workplace strategies, UTM established a Digital Transformation Committee in July 2025. This pivotal move focuses on streamlining digital administrative platforms to eliminate repetitive tasks. By reducing administrative burdens, the university empowers its academic and professional staff to dedicate their expertise toward impactful teaching, high-level research, and innovation.

Through these forward-thinking upgrades, UTM directly advances SDG 8 (Decent Work and Economic Growth), alongside SDGs 3 and 9. By seamlessly blending workplace flexibility with digital efficiency, UTM ensures a thriving, highly productive workforce equipped for the future.

source : https://news.utm.my/2025/09/utm-tekankan-budaya-optimasi-sebagai-teras-keutuhan-institusi-menerusi-majlis-bersama-naib-canselor-september/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM EMPOWERS SINGLE MOTHERS AND B40 WOMEN THROUGH ENTREPRENEURSHIP AND INCOME-GENERATING SKILLS

Universiti Teknologi Malaysia (UTM) is driving inclusive economic empowerment by transforming the livelihoods of vulnerable women. Between February and July 2025, UTM launched the Knowledge Transfer Programme (KTP) Nexus to cultivate community entrepreneurship. Partnering with government and local agencies, the initiative empowered over 70 single mothers and low-income women through intensive vocational training.

Participants mastered practical, market-ready skills in culinary production, tailoring, and therapeutic massage. This hands on curriculum directly equipped them to launch sustainable home-based businesses, generate supplementary income, and achieve financial independence. Furthermore, UTM reinforced the program's long-term efficacy by conducting a comprehensive evaluation workshop with key stakeholders to refine future interventions.

By translating academic knowledge into tangible economic opportunities, UTM champions self-reliance for marginalized groups. This collaborative initiative directly advances SDGs 1, 5, 8, and 10, underscoring UTM's steadfast commitment to fostering gender equity, eradicating poverty, and promoting sustainable microenterprise development.

source : https://news.utm.my/2025/08/ktp-nexus-platform-utm-hasilkan-ibu-tunggal-berminda-keusahawanan/



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

RESEARCH/INNOVATION

POWER INVERTER: UTM'S SUSTAINABLE INNOVATION REPLACING CONVENTIONAL GENERATORS

Universiti Teknologi Malaysia (UTM) researchers engineered a high-impact Power Inverter designed as a clean green-energy alternative to carbon-heavy fuel generators. Led by Dr. Nur Faizal Kasri from the Faculty of Electrical Engineering (FKE), the project received a RM20,000 grant under the Iskandar Puteri Low Carbon 4.0 (IPRK 4.0) initiative. Mitigating severe urban air and noise pollution, the green solution uses advanced pure sine wave technology to steadily convert direct current (DC) into alternating current (AC).

Empowering small-scale operators, the system supports a load up to 100 watts, providing safe energy for LED lighting and fans. Field metrics demonstrate that this technology reduces carbon emissions by nearly 95%, dropping operational charging costs from RM5.00 down to 40 sen. In collaboration with MBIP, 20 units were distributed to night market traders. UTM is actively developing its next-generation prototype, securing an additional RM500,000 funding to integrate Internet of Things (IoT) monitoring and advance national green commercialization goals.

source : https://news.utm.my/2025/06/power-inverter-utm-inovasi-lestari-pengganti-generator-konvensional/



TEACHING/LEARNING

CHEME DAY FKT GATHERS INNOVATION AND EXPERTISE OF CHEMICAL ENGINEERING STUDENTS

The Institution of Chemical Engineers Student Chapter (IChemE UTM SC) successfully launched ChemE Day FKT 2025, a premier innovation and sustainability carnival hosted at Laman Meranti, UTM. Empowering chemical engineering undergraduates, this high-impact event focused on developing real-world competencies and experiential engineering knowledge. The carnival featured technical milestones, including the ChemE Car Competition where 72 students engineered 16 prototypes driven entirely by zero-battery chemical reactions.

Additionally, the national ChemE Cube challenge pushed boundaries in water purification design. Mitigating environmental impact, the event incorporated a drive-thru recycling counter that successfully amassed 2,290 kilograms of recyclable materials, preventing 4,500 kilograms of carbon dioxide emissions. The initiative also promoted climate action at the secondary education level, involving 7 local schools in green innovation challenges. Through targeted career talks, industrial problem-solving, and sustainable design, UTM continues driving progressive learning modules that effectively prepare future-ready engineers aligned with global sustainability goals.

source : https://news.utm.my/2025/11/cheme-day-fkt-himpun-inovasi-dan-kepakaran-pelajar-kejuruteraan-kimia/



BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM AND WESTERN DIGITAL LAUNCH SATELLITE LABORATORY TO ADVANCE ENGINEERING TALENT AND INDUSTRY COLLABORATION

Universiti Teknologi Malaysia (UTM) formalized a highly strategic institutional alliance with global technology giant Western Digital by establishing the Industrial and Systems Engineering Satellite Laboratory. Located within the Faculty of Mechanical Engineering (FKM) at Level 1, Block C25, this specialized facility is engineered to satisfy Malaysia's rising demand for a highly skilled technical workforce. Driving long-term talent cultivation and workforce readiness, the joint initiative serves as a shared infrastructure for applied learning, postgraduate research, and digital transformation.

Developing specialized technical competencies, students are trained in advanced data analysis, system simulation, and process optimization. The state-of-the-art facility features progressive equipment integrations, including a real industrial conveyor system, specialized engineering software, and digital conferencing tools. By mitigating the gap between academic theory and real-world execution, this open innovation model effectively establishes a permanent campus "idea space" empowering industry professionals and university experts to co-develop sustainable solutions.

source : https://news.utm.my/2025/04/utm-and-western-digital-launch-satellite-laboratory-to-advance-engineering-talent-and-industry-collaboration/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM AND ALCON CIBA VISION DEVELOP SUSTAINABLE CONTACT LENS TECHNOLOGY

Universiti Teknologi Malaysia (UTM) and global manufacturing leader CIBA Vision Johor Sdn. Bhd. (Alcon Johor) formalized a high-impact Memorandum of Agreement (MoA) to drive bio-based and eco-friendly contact lens technologies. Marking their third formal agreement since 2018, this 2-year project focuses on developing a highly sustainable contact lens prototype formulated from OrthaG Cellulose Hydrogel—a naturally biodegradable material. Driving green innovations in optometry, the initiative is funded and supported by the Higher Education Ministry's Industry Matching Programme (IMaP).

The collaboration seamlessly connects academic research with market commercialization while successfully mitigating industrial plastic footprint concerns. Building on milestones that include a co-published academic book with Springer Nature, the strategic alliance directly enhances future talent cultivation and medical tech-transfer. Ultimately, this robust partnership firmly anchors UTM's position as a premier research hub empowering green, long-term societal and industrial engineering solutions.

source : https://news.utm.my/2025/05/aquatech-enterprise-inovasi-iot-akuakultur/



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

10 REDUCED INEQUALITIES

RESEARCH/INNOVATION

UTM ADVANCES INCLUSIVE DIGITAL CONNECTIVITY RESEARCH TO BRIDGE THE DIGITAL DIVIDE

Universiti Teknologi Malaysia (UTM) is actively bridging the global digital divide by pioneering inclusive, next-generation communication infrastructure. At the SOFTT 2025 symposium in Indonesia, researchers from UTM's Faculty of Artificial Intelligence showcased groundbreaking advancements in 6G wireless technologies alongside Telkom University.

The UTM delegation presented transformative research targeting critical connectivity challenges. Key innovations included AI-based 6G decoding, quantum-secured satellite networks, and energy-efficient, UAV-assisted communication systems utilizing reconfigurable intelligent surfaces. These cutting-edge alternatives are specifically designed to deliver robust, reliable connectivity to geographically underserved and economically constrained communities, effectively bypassing the severe limitations of conventional terrestrial networks.

By championing equitable digital infrastructure through international interdisciplinary collaboration, UTM aggressively dismantles technological inequalities. Directly advancing SDGs 9, 10, and 17, UTM's forward-thinking research ensures that marginalized populations are not left behind, leveraging advanced telecommunications to drive global connectivity, social equity, and sustainable digital inclusion.

source : https://news.utm.my/2025/08/utm-strengthen-research-collaboration-at-softt-2025-in-lombok/



TEACHING/LEARNING

UTM ADVANCES INCLUSIVE EDUCATION THROUGH NEURODIVERSITY AWARENESS AND EQUITABLE LEARNING PRACTICES

Universiti Teknologi Malaysia (UTM) is championing inclusive education by transforming how academic institutions approach cognitive diversity. In October 2025, UTM's Faculty of Educational Sciences and Technology launched the inaugural Neurodiversity Colloquium Series, uniting educators and students to dismantle learning barriers and foster truly equitable academic environments.

Led by experts like Dr. Aida A. Rahman, the colloquium challenged traditional disability frameworks, urging a deeper understanding of individual cognitive processing and communication differences. Participants explored highly effective, adaptable pedagogical strategies, including Universal Design for Learning (UDL), multimodal teaching, and inclusive assessment practices designed to accommodate diverse educational needs without exclusion.

By equipping academia with these dynamic, differentiated instructional tools, UTM ensures no student is left behind. This powerful initiative directly advances SDG 10 (Reduced Inequalities) and SDG 4 (Quality Education), cementing UTM's role as a proactive leader in cultivating socially inclusive, empowering, and accessible learning ecosystems for all.

source : https://news.utm.my/2025/11/fest-colloquium-fosters-deeper-understanding-of-neurodiversity/



REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM EXPANDS EQUITABLE ACCESS TO HIGHER EDUCATION THROUGH ENDOWMENT SCHOLARSHIPS AND FINANCIAL INCLUSION

Universiti Teknologi Malaysia (UTM) is decisively dismantling financial barriers to higher education, ensuring that socioeconomic status never limits academic potential. In 2025, UTM strengthened its commitment to equitable access by allocating RM1.1 million through the UTM Endowment Scholarship Fund to 212 deserving scholars. This includes the targeted Azman Hashim Endowment Scholarship, specifically designed to uplift students from low-income (B40) households.

Recognizing the critical need for sustained support, UTM actively champions the educational journeys of its 12,784 B40 students enrolled as of June 2025. By maintaining robust safety nets like the Manfaat Siswa Sulung program, the university provides comprehensive financial protection for disadvantaged and first-generation learners.

Through these strategic endowment mobilizations, UTM directly advances SDGs 1, 4, and 10. By replacing financial hardship with tangible opportunity, UTM actively drives socioeconomic inclusion, empowering marginalized students to thrive academically and secure a prosperous, equitable future.

source : https://news.utm.my/2025/09/utm-komited-biaya-pendidikan-pelajar-menerusi-biasiswa-endowmen/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM EMPOWERS DISADVANTAGED COMMUNITIES THROUGH INCLUSIVE TVET AND ENTREPRENEURSHIP TRAINING

Universiti Teknologi Malaysia (UTM) is aggressively closing socioeconomic and educational gaps through transformative Technical and Vocational Education and Training (TVET) initiatives. In 2025, UTM's Faculty of Educational Sciences and Technology partnered with local agencies in Iskandar Puteri to launch six high-impact community programs designed to empower marginalized groups.

These initiatives directly targeted systemic inequalities by equipping B40 women and single mothers with marketable industrial sewing and digital entrepreneurship skills, paving the way for sustainable, home-based income generation. Furthermore, UTM championed equitable education by constructing a state-of-the-art multisensory learning room, ensuring children with special needs receive essential developmental support.

By democratizing access to technical knowledge and vital vocational training, UTM actively dismantles barriers to economic independence. Directly advancing SDGs 4, 5, 8, and 10, these collaborative interventions showcase UTM's unwavering dedication to fostering social inclusion, gender equity, and lasting community resilience.

source : https://news.utm.my/2025/12/utm-perkukuh-kemahiran-komuniti-melalui-enam-program-tvet-di-iskandar-puteri/



MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

11 SUSTAINABLE CITIES AND COMMUNITIES

RESEARCH/INNOVATION

FABU RESEARCH WEEK: BRIDGING RESEARCH, INDUSTRY, AND COMMUNITY FOR SUSTAINABLE FUTURES

The Faculty of Built Environment and Surveying (FABU) of Universiti Teknologi Malaysia (UTM) successfully organized its annual flagship event, FABU Research Week 2025. Themed "Bridging Research, Industry, and Community for Sustainable Futures," this 4-day event from 10 to 13 November 2025 aimed to catalyze interdisciplinary collaboration and strengthen a community-oriented built environment research culture. Driving regional knowledge transfer, the program featured expert forums, technical workshops, and a large-scale research exhibition.

Empowering local municipal networks and academic ties, FABU established strategic collaborations with key partners, including the Ipoh City Council (MBI), Pasir Gudang City Council (MBPG), and the Johor State Education Department. Highlight initiatives included the IEEE Workshop on Geoscience and Remote Sensing, the Earth Calling Bootcamp addressing climate change, and an industry forum exploring artificial intelligence in landscape architecture. This robust community engagement reinforces UTM's leading status, currently recognized as #1 in Malaysia for Architecture and Built Environment.

source : https://news.utm.my/2025/11/fabu-research-week-bridging-research-industry-and-community-for-sustainable-futures/



TEACHING/LEARNING

KTP-RIG 2025 PROGRAM: UTM EMPOWERS SCHOOL COMMUNITIES WITH AI

Universiti Teknologi Malaysia (UTM), through the Centre for Community and Industry Network (CCIN), successfully conducted a high-impact educational transformation program at SMK Padang Tembak. Supported by the Knowledge Transfer Programme – Research Innovation Grant (KTP-RIG) 2025, the initiative focused on integrating Artificial Intelligence (AI) tools into classroom preparation. Empowering local secondary educators, the 1-day hands-on workshop actively upskilled 53 teachers in responsible and ethical AI adoption. The training addressed critical time constraints in teaching material preparation by developing competencies in strategic prompting and digital asset generation.

Participants utilized cutting-edge platforms like NotebookLM, Copilot, Canva, and Gamma to build smart slide presentations, question banks, and short animations. Driving cross-sector synergy, the workshop featured expert speakers from UTM alongside industrial insights from Ultrack Technology Sdn. Bhd. This strategic engagement successfully mitigated preparation time barriers, effectively equipping teachers with interactive, future-ready learning modules.

source : https://news.utm.my/2025/08/program-ktp-rig-2025-utm-perkasa-komuniti-sekolah-dengan-ai/



MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

11 SUSTAINABLE CITIES AND COMMUNITIES

OPERATION/INSTITUTIONAL ARRANGEMENT

SHOWCASE HUB CATALYZES FACULTY, INDUSTRY, AND COMMUNITY COLLABORATION TOWARDS SUSTAINABLE SOLUTION

Universiti Teknologi Malaysia (UTM) launched Showcase Hub, a strategic physical space within the Faculty of Computing designed to accelerate technology transfer and foster robust industry-academia networks. Driving the national digital economy, the facility acts as a high-impact point of convergence for researchers, students, and key industrial stakeholders like the Malaysia Digital Economy Corporation (MDEC). Empowering community-oriented technological alignment, the hub exhibits ethical, sustainable solutions mapped to the United Nations Sustainable Development Goals, including IoT-based air quality monitoring, smart waste management applications, and digital learning platforms for rural demographics.

The launch prominently featured D.I.A.N.A, an advanced intelligent holographic avatar developed by faculty lecturers. By developing an inclusive innovation ecosystem that translates laboratory research into viable market commercialization—encompassing smart city frameworks and blockchain solutions—UTM effectively mitigated barriers to sustainable tech deployment, positioning the university as a leading institutional catalyst for global and national digital progress.

source : https://news.utm.my/2025/07/showcase-hub-pemangkin-kolaborasi-fakulti-industri-dan-komuniti-ke-arah-solusi-mapan/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM STRENGTHENS COMMUNITY SKILLS THROUGH SIX TVET PROGRAMS IN ISKANDAR PUTERI

Universiti Teknologi Malaysia (UTM) is driving sustainable socio-economic development by implementing six high-impact Technical and Vocational Education and Training (TVET) programs in Iskandar Puteri. In a strategic collaboration with the Yayasan Penyayang Iskandar Puteri (YPIP) and the Iskandar Puteri City Council (MBIP), UTM is empowering over 150 community members through targeted skill-building initiatives. The robust programs include a multisensory room development project for special needs students, sewing courses for B40 women, digital entrepreneurship and business model canvas training, chocolate making, and basic electrical wiring courses.

By equipping vulnerable populations—such as single mothers and lower-income families—with practical and digital skills, UTM is enhancing local economic resilience and employability. This strategic engagement directly elevates social well-being and technical competency, ensuring that the local workforce is competitive and prepared to meet the demands of the Johor-Singapore Special Economic Zone (JS-SEZ). Ultimately, this initiative reinforces UTM's institutional commitment to fostering an inclusive, skilled, and highly empowered community.

source : https://news.utm.my/2025/12/utm-perkukuh-kemahiran-komuniti-melalui-enam-program-tvet-di-iskandar-puteri/



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

RESEARCH/INNOVATION

MOA BETWEEN UTM AND EARNEST GROWER EMPOWERS SUSTAINABLE LIVESTOCK NUTRITION RESEARCH

Universiti Teknologi Malaysia (UTM) has entered into a Memorandum of Agreement (MoA) with Earnest Grower to pioneer high-impact advancements in sustainable livestock nutrition and alternative feed production. This joint industrial initiative focuses on developing eco-friendly agro-technological formulas that integrate organic by-products and nutrient-dense alternative feeds to replace carbon-intensive commercial feedstuffs.

By bridging UTM's biotechnology labs directly with Earnest Grower's livestock facilities, the collaboration is strategically driving sustainable agriculture and waste-to-wealth transitions. The joint research efforts aim to lower corporate overhead costs for local farmers while heavily mitigating greenhouse gas emissions associated with standard livestock operations. Ultimately, this strategic industry engagement transforms commercial organic waste streams into low-carbon, high-protein animal feed modules, offering a scalable blueprint that actively secures national food security and promotes a climate-resilient agricultural ecosystem.

source : https://news.utm.my/2025/12/moa-utm-earnest-grower-perkasa-penyelidikan-pemakanan-ternakan-lestari/



TEACHING/LEARNING

KNOWLEDGE SHARING ON LOW-CARBON INITIATIVES TOWARDS SUSTAINABLE URBAN COMMUNITIES

Universiti Teknologi Malaysia (UTM) has spearheaded an interactive knowledge-transfer seminar focusing on Low-Carbon City Frameworks (LCCF) to accelerate regional eco-friendly urbanization. This high-impact community program bridges advanced academic green architecture and engineering blueprints directly with municipal planners, industrial partners, and local stakeholders. The initiative targets driving practical urban carbon management by demonstrating systematic reductions in institutional and public greenhouse emissions.

Through comprehensive training modules, UTM researchers shared data-backed strategies for optimizing energy efficiency, transitioning to renewable power grids, and developing sustainable waste-to-energy models. By empowering local public administrators with actionable climate governance tools, this multi-stakeholder collaboration is actively mitigating industrial footprints across local municipalities. Ultimately, this strategic engagement creates a highly replicable roadmap for transitioning standard municipal infrastructures into resilient, low-carbon zones, positioning higher-learning research as a primary catalyst for national sustainable development targets.

source : https://news.utm.my/2025/02/perkongsian-ilmu-inisiatif-rendah-karbon-tuju-kelestarian-bandar-mampan/



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM AND MERSING LOCAL AUTHORITY PROMOTE WASTE MANAGEMENT AMONG THE COMMUNITY

Universiti Teknologi Malaysia (UTM), via the Faculty of Built Environment and Surveying (FABU), spearheaded the highly impactful Community Solid Waste Management & Focus Program in Mersing under the Service Learning (SULAM) framework. Empowering the grassroots populace, the initiative directly engaged 40 community participants to catalyze deep ecological awareness. By collaborating with the Mersing District Council (MDM), SWCorp, SWM Environment, and the Pulau Tengah Conservation Association (TIC), UTM students and academics facilitated 5 interactive booths to demonstrate sustainable waste-to-wealth practices.

Participants received hands-on technical guidance on upcycling used cooking oil into functional candles, converting plastic bottles and newspapers into household furniture, and composting domestic food waste into organic fertilizer using expired tempeh water. This strategic quad-helix endeavor successfully mitigated municipal waste challenges while developing tangible, sustainable waste segregation habits. Ultimately, the successful program drives community-driven social transformation and establishes a baseline for responsible circular economy amalgams across Johor.

source : https://news.utm.my/2025/01/utm-pbt-mersing-galak-pengurusan-sisa-di-kalangan-komuniti/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM CRC AND UMSB PARTNERSHIP: ANCHORING INNOVATION AND SUSTAINABILITY IN THE CONSTRUCTION SECTOR

The strategic collaboration between the Universiti Teknologi Malaysia Construction Research Centre (UTM CRC) and United Malayan Land Bhd (UMSB) establishes a proactive alliance focused on driving eco-friendly industrial transformations. This high-impact initiative is actively mitigating carbon footprints within infrastructure development by developing and integrating cutting-edge, sustainable building technologies into commercial frameworks.

Through targeted joint knowledge-transfer sessions, technological piloting, and industrial training frameworks, the alliance bridges institutional research directly with commercial building applications. This collaborative effort serves as a benchmark for public-private synergy, directly advancing sustainable infrastructure goals while positioning both entities as frontrunners in eco-centric engineering practices. Ultimately, this strategic engagement effectively addresses environmental compliance and accelerates the regional deployment of resilient, green technologies across the commercial construction sector.

source : https://news.utm.my/2025/06/kerjasama-utm-crc-dan-umsb-kukuhkan-inovasi-dan-kelestarian-dalam-dunia-pembinaan/



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

UTM SUSTAINABLE WASTE MANAGEMENT 2025

UTM recorded a total of 3,762.26 metric tonnes of waste in 2025, comprising 3,369.00 metric tonnes of landfill waste, 258.90 metric tonnes of landscape waste, 84.34 metric tonnes of food waste, and 50.0221 metric tonnes of recycling, including used clothing. Landfill accounted for the largest proportion at 89.55% of the total recorded waste, while the separately recorded recycling stream represented 1.33%. These figures reflect the distribution of recorded waste by category and should not be interpreted as evidence of actual waste treatment or recovery outcomes, particularly for organic waste materials.



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

13 CLIMATE ACTION

RESEARCH/INNOVATION

SATELLITE LAB BOOSTS IPASA UTM AND NEWCASTLE UNIVERSITY STRATEGIC PARTNERSHIP

The establishment of the UTM-Newcastle University Satellite Lab marks a significant advancement for the Centre for Environmental Sustainability and Water Security (IPASA) at Universiti Teknologi Malaysia. Operating as a critical collaborative research hub, the satellite lab focuses on driving groundbreaking scientific innovation to address global environmental challenges. Equipped with advanced technological infrastructure, the facility focuses on developing localized strategies for water quality analysis, climate resilience studies, and long-term water resources stewardship.

This joint initiative accelerates high-impact research, knowledge exchange, and technical capacity building between the two world-class academic institutions. By bridging academic excellence with practical, data-driven applications, the laboratory enables scientists to design actionable engineering and biological solutions. Ultimately, the partnership actively safeguards regional ecosystems, directly mitigating environmental degradation threats and advancing sustainable water security goals.

source : https://news.utm.my/2025/11/satellite-lab-boosts-ipasa-utm-newcastle-university-partnership/



TEACHING/LEARNING

UTM, IRDA, JPNJ, AND UNICEF LAUNCH 'WIRA TINDAKAN IKLIM' E-BOOKLET TO FOSTER YOUTH SUSTAINABILITY LEADERS

Universiti Teknologi Malaysia (UTM), the Iskandar Regional Development Authority (IRDA), and the Johor State Education Department (JPNJ), with support from UNICEF, launched the interactive digital booklet titled 'Wira Tindakan Iklim' (Climate Action Heroes). Officially introduced under the Iskandar Malaysia Ecolife Challenge (IMELC) framework, this digital resource serves as a practical blueprint for developing low-carbon literacy, energy-saving practices, and eco-friendly school activities across 909 primary schools in Johor.

By translating core Sustainable Development Goals (SDGs) into actionable student tasks—such as water audits, composting, and waste reductions—the initiative aims to empower over 100,000 pupils and reach 500,000 community members. This collaborative ecosystem is crucial for driving behavioral changes and preparing a green-skilled future workforce. Historically, the overarching IMELC framework has successfully achieved a reduction of 11.5 million $kgCO_2$ and generated RM15.2 million in resource savings, directly mitigating regional ecological impacts while cultivating grassroots environmental leadership.

source : https://news.utm.my/2025/07/utm-irda-jpnj-and-unicef-launch-wira-tindakan-iklim-e-booklet/



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM CHAMPIONS ASEAN SUSTAINABILITY EFFORTS THROUGH NATIONAL CLIMATE GOVERNANCE SUMMIT 2025 SATELLITE SEMINAR

Universiti Teknologi Malaysia (UTM) has reinforced its regional leadership in climate advocacy by hosting a high-impact satellite seminar in conjunction with the National Climate Governance Summit (NCGS) 2025. Aligned with Malaysia's 2025 ASEAN Chairmanship focus on inclusivity and sustainability, the seminar serves as a crucial platform for driving collaborative dialogues on climate governance and transition finance across Southeast Asia.

The initiative focuses on developing robust capacity-building frameworks, addressing structural hurdles to achieve net-zero emissions, and unlocking the region's massive US$300 billion green economy potential by 2030. By bringing together international climate experts, policymakers, and institutional leaders, UTM bridges academic sustainability research with actionable corporate and regulatory compliance strategies. Through this active multi-stakeholder engagement, the university effectively accelerates regional carbon reduction pathways, mitigating cross-border climate risks and equipping the next generation of industrial leaders with vital green-governance competencies.

source : https://news.utm.my/2025/04/utm-champions-asean-sustainability-efforts-through-national-climate-governance-summit-2025-satellite-seminar/



ENGAGEMENT (COMMUNITY/INDUSTRY)

LAUNCH OF THE 'CELIK IKLIM' BOOK STRENGTHENS PUBLIC AWARENESS OF THE LOW-CARBON AGENDA

The official launch of the 'Celik Iklim' (Climate Literacy) book marks a highly proactive institutional initiative aimed at driving community-level ecological awareness and environmental stewardship. Developed by researchers from the Faculty of Built Environment and Surveying (FABU) at Universiti Teknologi Malaysia, the book was officially launched during the closing ceremony of the Iskandar Puteri Low Carbon Carnival 2025.

This collaborative milestone bridges advanced academic climate research directly with grassroots societal engagement, providing accessible, data-backed guidance on carbon footprint reductions and climate mitigation. By converting complex sustainability metrics into practical everyday strategies, the initiative actively empowers local communities to adopt low-carbon habits. The strategic deployment of this publication reinforces UTM's societal mission, transforming institutional expertise into highly impactful civic actions that directly support the regional transition toward a resilient, carbon-neutral ecosystem.

source : https://news.utm.my/2025/10/buku-celik-iklim-perkukuh-kesedaran-masyarakat-terhadap-agenda-rendah-karbon/



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

14 LIFE BELOW WATER

RESEARCH/INNOVATION

AQUATECH ENTERPRISE: ADVANCING AQUACULTURE VIA INTERNET OF THINGS (IOT) INNOVATIONS

Universiti Teknologi Malaysia (UTM) undergraduate students have successfully launched AquaTech Enterprise, a high-impact technology startup specializing in developing advanced Internet of Things (IoT) solutions tailored for the aquaculture industry. Supported by UTM academic advisors and institutional funding bodies like the Malaysian Technology Development Corporation (MTDC), the startup engineered two flagship devices: a real-time Water Monitoring System and an automated Pump Management System.

These interconnected devices track critical metrics including dissolved oxygen, pH values, and temperature variations while implementing automatic power-failure alerts. The breakthrough initiative plays a vital role in mitigating massive fish mortality rates caused by sudden water quality degradation or unmonitored equipment failure. To date, the venture has actively deployed 15 commercial IoT units across regional farming zones in Johor, successfully driving smart agricultural practices, enhancing climate resilience, and transforming institutional research into actionable, commercial-grade technological solutions that safeguard local food production systems.

source : https://news.utm.my/2025/05/aquatech-enterprise-inovasi-iot-akuakultur/



TEACHING/LEARNING

ROUTE TO TROFIA: CHAMPIONING SUSTAINABLE TROPICAL FISHERIES AND AQUACULTURE EDUCATION

Universiti Teknologi Malaysia (UTM) has strengthened regional academic excellence by launching the specialized 'Route to TROFIA' educational roadmap. Operating as a targeted international inbound academic initiative, this comprehensive educational framework focuses on developing highly skilled professional capital tailored for the tropical fisheries and aquaculture sectors across Southeast Asia. The program integrates multi-disciplinary curricula spanning aquatic biotechnology, molecular enzymology, biofloc engineering, and sustainable water resource management.

By driving cross-border knowledge exchanges and practical technical training modules, UTM directly equips students and international scholars with the technical competencies required to tackle critical food security, climate resilience, and ecosystem conservation challenges. The framework establishes a robust academic pipeline that aligns higher education directly with the United Nations Sustainable Development Goals (SDGs), actively preparing a green-skilled global workforce capable of implementing resilient, data-backed aquatic production practices

source : https://news.utm.my/2025/08/route-to-trofia-tropical-fisheries-and-aquaculture-program/



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

14 LIFE BELOW WATER

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM PROFESSOR HIGHLIGHTS URGENT SATELLITE SOLUTIONS FOR SDG14 AT ASIA-EUROPE COASTAL FORUM

A leading professor from Universiti Teknologi Malaysia (UTM) presented high-impact space-based strategies at the prestigious Asia-Europe Coastal Forum, focusing on the deployment of advanced remote sensing technologies. This international initiative targets driving urgent satellite monitoring solutions to track ocean health and support United Nations Sustainable Development Goal 14 (SDG14: Life Below Water).

The scientific framework focuses on developing highly accurate, data-driven methodology for measuring sea surface temperatures, tracing marine pollution pathways, and evaluating coastal erosion dynamics. By linking transnational space research directly with local coastal management policies, the initiative plays a critical role in mitigating marine ecosystem degradation across the Asia-Europe corridors. UTM's active leadership at this global forum highlights the crucial value of converting satellite observation data into actionable conservation strategies, thereby safeguarding global marine biodiversity and fostering long-term climate-resilient blue economies.

source : https://news.utm.my/2025/12/utm-professor-highlights-urgent-satellite-solutions-for-sdg14-at-asia-europe-coastal-forum/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM, MPKU, AND KAMPUNG PERTANIAN KULAI COMMUNITY FORGE SYNERGY TO COMBAT INVASIVE FISH SPECIES IN SKUDAI RIVER

Universiti Teknologi Malaysia (UTM), in strategic partnership with the Kulai Municipal Council (MPKu) and the local community of Kampung Pertanian Kulai, executed a collaborative environmental conservation programme targeting the removal of destructive invasive aquatic species from the Skudai River. This field-driven initiative focused on mitigating the structural and biological damage caused by the hyper-population of Amazon sailfin catfish (ikan bandaraya or ikan tombot), which threatens native river biodiversity and destabilizes riverbanks.

Through active community mobilization and institutional environmental guidance, the collective efforts successfully extracted 158 kilograms of invasive fish during a dedicated conservation gotong-royong. By directly engaging local residents and student groups in river stewardship, this project succeeded in driving grassroots ecological awareness and restoring balance to the local freshwater ecosystem. This joint partnership serves as a highly scalable framework for developing community-led biosecurity measures and protecting critical regional water corridors from long-term environmental degradation.

source : https://news.utm.my/2025/02/utm-mpku-dan-komuniti-kampung-pertanian-kulai-jalin-sinergi-perangi-spesies-ikan-invasif-sungai-skudai/



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

15 LIFE ON LAND

RESEARCH/INNOVATION

THE HIDDEN WORLD: MICROBIAL BIODIVERSITY FOR A SUSTAINABLE FUTURE

Universiti Teknologi Malaysia (UTM) has fortified its scientific contributions to global sustainability through cutting-edge biological research spearheaded by Assoc. Prof. Dr. Shafinaz Shahir. Focusing on uncovering the intricate functions of the microscopic ecosystem, the publication underscores the critical importance of utilizing microbial biodiversity to drive circular bioeconomies and environmental remediation. Driving bio-innovations, the research targets critical areas such as bio-synthetic nanocellulose production from agricultural waste, biothreat monitoring, and bio-remediation of heavy-metal-contaminated soils, including cadmium biosorption and arsenic decontamination.

By developing advanced microbiological frameworks and genomic sequencing inputs, UTM is mitigating industrial toxicity risks and soil degradation. This high-impact scientific inquiry highlights how utilizing locally isolated bacterial strains can solve complex public health and environmental challenges. Ultimately, UTM's continuous research breakthroughs in biochemical analysis and biofilm-producing bacteria successfully convert hidden microbial assets into viable, scalable technological solutions for long-term planetary health.

source : https://news.utm.my/2025/05/the-hidden-world-microbial-biodiversity-for-a-sustainable-future/



TEACHING/LEARNING

UTM INTEGRATES BIODIVERSITY CONSERVATION AND NATURE-BASED SOLUTIONS INTO LANDSCAPE ARCHITECTURE EDUCATION

Universiti Teknologi Malaysia (UTM) is revolutionizing landscape architecture education by embedding biodiversity conservation and nature-based solutions (NbS) directly into its academic curriculum. In 2025, final-year students in the Faculty of Built Environment and Surveying tackled urgent environmental challenges through their advanced design theses, forging innovative solutions for sustainable terrestrial ecosystem management.

Through the Student Landscape Architecture Portfolio (SLAF), these future architects showcased visionary design projects that seamlessly integrate climate resilience, human well-being, and ecological stewardship. By prioritizing sustainable urban environments over conventional development, students learned to translate complex ecological principles into tangible, environmentally responsible landscapes.

This forward-thinking educational model equips graduates with the critical design competencies needed to defend global ecosystems. Directly advancing SDG 15 (Life on Land) alongside SDGs 4, 11, and 13 UTM guarantees that the next generation of landscape architects will actively champion biodiversity and resilient urban planning at the forefront of their professional practice.

source : https://news.utm.my/2025/11/student-landscape-architecture-folio-of-2025-graduates-students/



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

15 LIFE ON LAND

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM EMPOWERS RECREATIONAL FOREST SUSTAINABILITY FOR THE ENVIRONMENT

Universiti Teknologi Malaysia (UTM) has reinforced its strategic institutional framework by launching internal operational mandates dedicated to the comprehensive preservation and sustainable governance of campus green spaces and recreational forests. Driving the university's transition into a low-carbon institution, these structural arrangements focus on optimizing ecosystem preservation, managing land-use activities responsibly, and safeguarding local biodiversity directly within university boundaries.

UTM is actively developing strict administrative guidelines and monitoring frameworks to maintain carbon-sink capacities and control soil erosion across its extensive forested terrains. By mitigating environmental degradation through strict maintenance protocols and carbon stock protection, the university successfully balances institutional asset utilization with aggressive climate action. This proactive sustainability policy sets a high-impact benchmark for higher education infrastructure management, ensuring that corporate campus operations seamlessly align with both national environmental preservation agendas and the United Nations Sustainable Development Goals.

source : https://news.utm.my/2025/03/utm-perkasa-kelestarian-hutan-rekreasi-demi-alam-sekitar/



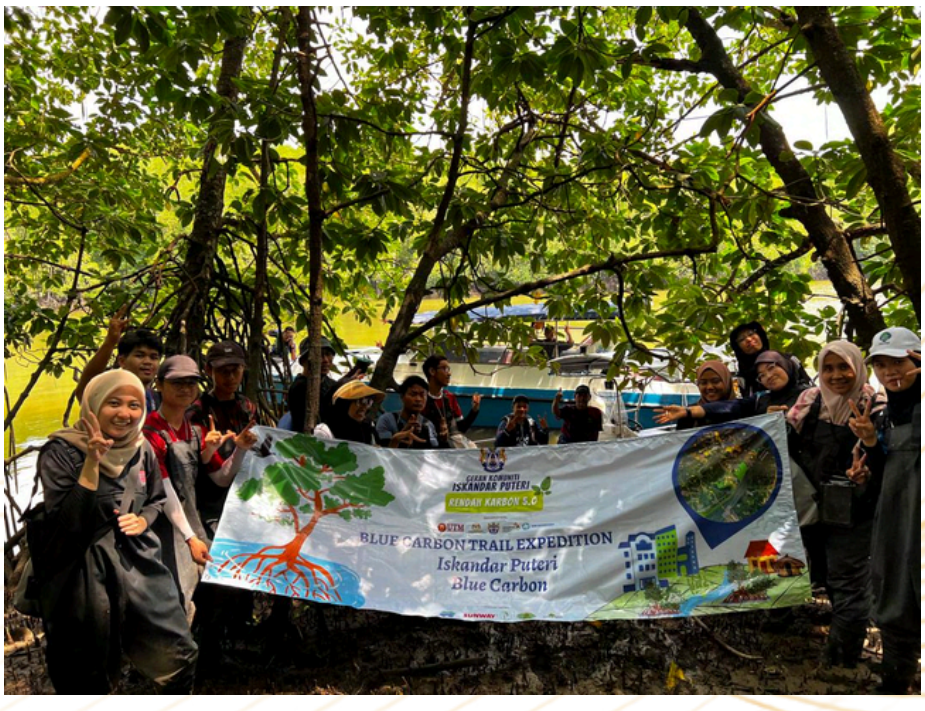
ENGAGEMENT (COMMUNITY/INDUSTRY)

480 MANGROVE TREES RECORDED IN ISKANDAR PUTERI'S BLUE CARBON TRAIL EXPEDITION

Universiti Teknologi Malaysia (UTM), through the Faculty of Built Environment and Surveying (FABU), advanced regional climate action by leading the Blue Carbon Trail Expedition in collaboration with the local non-governmental organization Kelab Alami. Funded under the Iskandar Puteri Low Carbon 5.0 (IPRK 5.0) community grant by the Pasir Gudang City Council (MBIP), the initiative actively engaged student volunteers in intensive fieldwork at Pulau Merambong, Gelang Patah.

Driving nature-based solutions to combat climate change, the expedition focused on mapping coastal blue carbon assets and measuring mangrove carbon stock capacities. The research team successfully mapped and recorded a total of 480 mangrove trees, generating vital baseline empirical data on coastal biodiversity resilience. By developing practical field-assessment skills among students and collaborating closely with local stakeholders, UTM effectively mitigated ecological informational gaps, transforming scientific research into actionable coastal preservation strategies to shield the Iskandar Puteri shoreline from escalating climate change impacts.

source : https://news.utm.my/2025/08/480-pokok-bakau-direkod-dalam-ekspedisi-blue-carbon-trail-iskandar-puteri/



PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

RESEARCH/INNOVATION

UTM STRENGTHENS RESEARCH INTEGRITY AND ETHICAL SCHOLARSHIP IN THE DIGITAL ERA

Universiti Teknologi Malaysia (UTM) is aggressively championing academic integrity and institutional accountability by embedding rigorous ethical standards into its research culture. In 2025, UTM's School of Graduate Studies launched the four-part Professional Research Skills Course Series, designed to equip postgraduate researchers with critical competencies in modern methodologies and the responsible application of artificial intelligence.

This forward-thinking initiative meticulously trains scholars in systematic literature reviews, transparent methodologies, and plagiarism prevention, while emphasizing the ethical boundaries of AI-assisted academic writing. By merging cutting edge research tools with unwavering ethical principles, UTM ensures its scholars produce credible, original, and impactful work.

Ultimately, this comprehensive capacity-building effort cultivates a trusted academic ecosystem grounded in professional responsibility. Directly advancing SDG 16 (Peace, Justice and Strong Institutions), alongside SDGs 4 and 9, UTM solidifies its role as a transparent, accountable institution committed to fostering responsible innovation and the highest standards of educational excellence.

source : https://news.utm.my/2025/12/future-ready-postgraduates-technology-and-ethics-in-research/



TEACHING/LEARNING

PM URGES YOUTH TO LEAD WITH INTEGRITY, UPHOLD JUSTICE AND HUMAN VALUES

During the International Young Future Leaders Summit (iFUTURE 2025), Prime Minister YAB Dato' Seri Anwar Ibrahim engaged with young scholars to address national governance and societal transformation. This educational initiative focuses on developing visionary leadership by urging the youth to balance modern technological advancement with moral conscience. The Prime Minister highlighted critical macroeconomic recoveries, noting that RM15.5 billion retrieved from anti-corruption frameworks will directly finance free tertiary education for the poorest families starting next year.

Furthermore, to address a shortfall of 30,000 engineers, national strategies will heavily target upskilling through TVET and specialized modules in emerging fields like artificial intelligence. By driving a human-centered approach to technology and global justice, the summit empowers students to look past examinations and prioritize civic compassion, successfully mitigating regional skill gaps and cultivating a highly ethical generation of global future professionals.

source : https://news.utm.my/2025/10/pm-urges-youth-to-lead-with-integrity-uphold-justice-and-human-values/



PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

OPERATION/INSTITUTIONAL ARRANGEMENT

UTM ADVANCES INSTITUTIONAL ACCOUNTABILITY THROUGH GOVERNANCE AND DIGITAL TRANSFORMATION

Universiti Teknologi Malaysia (UTM) is aggressively fortifying its institutional governance by prioritizing organizational credibility, administrative accountability, and digital transformation in 2025. During the Vice-Chancellor's February address, "UTM Sanjungan Bangsa," the university cemented its commitment to leadership excellence, unwavering integrity, and institutional trust as the bedrock of sustainable performance.

To operationalize this vision, UTM launched bold digital optimization initiatives, establishing a Digital Transformation Committee in July. Key technological advancements include the upgraded Research and Development Information System (RADIS) and the newly integrated ECSV2.0 complaints management platform. These robust digital frameworks dramatically reduce administrative burdens, streamline information management, and elevate institutional responsiveness.

By merging ethical leadership with cutting-edge administrative technology, UTM actively dismantles operational inefficiencies. Directly advancing SDG 16 (Peace, Justice, and Strong Institutions), UTM cements its position as a highly effective, transparent, and accountable institution equipped to deliver exceptional, future-ready public service.

source : https://news.utm.my/2025/02/8th-utm-vice-chancellor-sets-vision-to-strengthen-utms-institutional-credibility/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM PROMOTES PEACE, GLOBAL JUSTICE AND HUMANITARIAN SOLIDARITY THROUGH COMMUNITY ENGAGEMENT

Universiti Teknologi Malaysia (UTM) is actively championing global justice, peace, and humanitarian solidarity. In June 2025, UTM hosted the impactful "Voices for Palestine: Bearing Witness and Calling for Global Justice" program, uniting students, staff, and civil society to advocate for communities affected by conflict.

Spearheaded by student societies and the UTM Islamic Centre, the event transformed the campus into a dynamic platform for civic dialogue. Through educational exhibitions, personal testimonies, and a campus peace march, the initiative fostered deep reflection on human dignity and the devastating consequences of war.

To drive long-term impact, UTM launched the Tabung Palestine humanitarian endowment, targeting RM50,000 to support ongoing educational and advocacy efforts. By partnering with prominent NGOs like MyCARE and Global Peace Malaysia, UTM powerfully demonstrates how academic institutions can mobilize collective action. Directly advancing SDGs 16 and 17, this collaborative initiative cements UTM's dedication to fostering inclusive dialogue and international solidarity.

source : https://news.utm.my/2025/06/utm-empowers-advocacy-through-voices-for-palestine-peace-event/



STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

17 PARTNERSHIPS FOR THE GOALS

RESEARCH/INNOVATION

STRATEGIC UTM-INFINEON COLLABORATION ENHANCES SEMICONDUCTOR AND AI RESEARCH

Universiti Teknologi Malaysia (UTM) signed a strategic Memorandum of Agreement (MoA) with Infineon Technologies Asia Pacific Pte. Ltd. on December 8, 2025, marking the launch of the Infineon–UTM Innovation Launchpad (UIL). This high-impact initiative is designed to drive advanced talent development, technology transfer, and joint research in semiconductor engineering and Artificial Intelligence (AI) technology. Led by UTM's Faculty of Artificial Intelligence (FAI), the collaboration provides researchers and students with access to state-of-the-art industry tools, including automation systems, simulation equipment, power devices, and AI manufacturing applications.

By focusing on critical technological sectors such as power electronics, smart systems, advanced sensors, and advanced materials, the partnership aims to develop specialized engineers competent across the entire semiconductor value chain. Ultimately, this initiative strengthens Malaysia's national innovation ecosystem and reinforces its position as a regional semiconductor hub, directly aligned with the New Industrial Master Plan (NIMP).

source : https://news.utm.my/2025/12/kerjasama-strategik-utm-infineon-tingkatkan-penyelidikan-semikonduktor-dan-ai/



TEACHING/LEARNING

FLC 2025 FOSTERS GLOBAL COLLABORATION VIA WORKSHOPS AND DIALOGUES

Universiti Teknologi Malaysia (UTM) successfully hosted the two-day Festival of Languages and Cultures 2025 (FLC2025), driving advanced intercultural dialogue and inclusive global education. The festival deployed nine immersive Language and Culture Workshops and three Scholarly Dialogue sessions, engaging educators, language experts, and students from multiple nations including Vietnam, Japan, and the Philippines. A major focus was placed on expanding inclusive pedagogies, highlighted by a specialized session addressing adult ADHD in language acquisition.

Real-world skills were further enhanced through integrated partnerships, including gamified English training by ELS Language Centres and life-saving health communication modules delivered by Columbia Asia Hospital. Additionally, a roundtable discussion uniting regional public university deans emphasized strategic national frameworks for multilingual learning. This comprehensive pedagogical initiative successfully empowers diverse student cohorts, bridging linguistic knowledge with cross-border collaborative learning and long-term academic synergy.

source : https://news.utm.my/2025/05/flc-2025-fosters-global-collaboration-via-workshops-and-dialogues/



OPERATION/INSTITUTIONAL ARRANGEMENT

ATU-NET BOARD MEETING BOOSTS CROSS-BORDER ACADEMIC COLLABORATION

Chaired by Universiti Teknologi Malaysia (UTM), the 13th Asia Technological University Network (ATU-Net) Board Meeting in Hanoi, Vietnam, convened leaders from 20 member universities to accelerate regional academic integration. This strategic alliance solidified key action items for the 2025–2027 phase, focusing heavily on improving Special Interest Groups (SIGs), driving international publications, and expanding student mobility through integrated initiatives like the Integrated Design for Sustainability Challenge.

By expanding its regional footprint, the network officially welcomed four new member institutions from the Philippines and Türkiye, swelling the total alliance to 50 universities across Asia. This collective expansion empowers cross-border innovation, student leadership development, and joint engineering research. Grounded in the spirit of ASEAN 2025, this collaborative framework actively promotes inclusivity and technology-driven education, positioning technological higher education institutions to deliver tangible, sustainable impacts and resilient community growth across borders.

source : https://news.utm.my/2025/11/atu-net-board-meeting-boosts-cross-border-academic-collaboration/



ENGAGEMENT (COMMUNITY/INDUSTRY)

UTM AND TUDM FORGE STRATEGIC ALLIANCE TO ADVANCE MILITARY TECHNOLOGY AND ENGINEERING CAPABILITIES

Universiti Teknologi Malaysia (UTM) has entered into a high-impact strategic partnership with the Royal Malaysian Air Force (TUDM) aimed at driving technological sovereignty and sovereign defense readiness. Facilitated through targeted training and research transferring technology based on Technology Readiness Levels (TRL), this collaborative initiative is designed for developing and scaling localized innovations in military engineering, aerospace, and advanced defense systems.

The strategic alliance focuses heavily on joint intellectual talent alignment, dual-use scientific development, and providing professional training pathways to elevate operational capability. By bridging academic technical research with rigorous military requirements, the partnership successfully ensures that sovereign defenses are modernized using local engineering solutions. This synergistic relationship positions UTM as a key industrial catalyst, translating cutting-edge science into actionable capabilities that actively secure national aerospace interests and critical infrastructure resilience.

source : https://news.utm.my/2025/02/utm-tudm-meterai-kerjasama-strategik-perkukuh-keupayaan-teknologi-dan-kejuruteraan-ketenteraan/



UTM
WAY FORWARD

The sustainability journey at Universiti Teknologi Malaysia (UTM) is an ongoing commitment that demands continuous collaboration, innovation, accountability, and a shared dedication from our entire community. Guided by the aspirations of the UTM ASCEND 2030 strategic plan, we will continue to position sustainability as a key enabler of institutional excellence and global impact



The success of these initiatives relies heavily on the strength of our strategic collaborations. By remaining steadfast to our institutional philosophy, "In the Name of God for Mankind," and our commitment to "Innovating Sustainable Solutions," UTM will continue to lead transformative change. Together with our industry partners, alumni, students, and communities, we will keep moving forward to shape a more resilient, inclusive, and sustainable future for generations to come

UTM
UNIVERSITI TEKNOLOGI MALAYSIA

ASCEND 2030

SDG REPORT 2025