



UNIVERSITI SAINS MALAYSIA
SUSTAINABLE DEVELOPMENT GOALS
2022 REPORT



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FOREWORD



Assalamu'alaikum warahmatullah/Salam Sejahtera and warmest greetings.

Adapting and adopting sustainable solutions will be on the list of many, ranging from individuals, institutions, organisations and even nations throughout the continents.

The aim for most would be to become self-sufficient in many aspects of life, from being able to efficiently utilise nature's plentiful resources, to be able to fulfill the needs in the future in an equitable manner.

The United Nations (UN) has been aiming for its 17 Sustainable Development Goals (SDGs) to be achieved by many of the world's nations by 2030. There is 7 more years to go before reaching the 2030 Agenda. The 2023 UN Climate Change Conference or COP28, which will be held in December in Dubai, is where evaluations and assessments on the success in achieving the SDGs thus far will be done.

Universiti Sains Malaysia (USM) has taken more serious steps on the path to sustainability, ever since the Malaysian Ministry of Higher Education accorded the APEX (Accelerated Programme for Excellence) status 15 years ago.

From becoming more cognizant in managing its resources such as water and electricity, the university has also implemented other initiatives in activities relating to teaching and learning, research, and making engagements with the various communities and the industry to fulfill the responsibilities in creating a more sustainable tomorrow.

Being placed two years in a row at no. 4 in the Times Higher Education (THE) Impact Rankings, is surely a testimony to the efforts taken by USM in its journey towards being more sustainable, and to further invigorate the dreams and desires to include sustainable practices in many of the activities by the university communities.

USM has progressed in the way it assists those in need in a more equitable manner, in addition to prioritising the safeguarding of its natural environment (and its inhabitants), as well as in taking measures with regard to its economic demands and needs.

Becoming sustainable is an ideal that many aspire to achieve, and USM is rightfully among them.

Being placed 4th makes it even more crucial for us to move forward, in promoting and instilling a way of life that is more sustainable for all.

We are APEX.

Thank you.

PROFESSOR DATO' SERI IR. DR. ABDUL RAHMAN MOHAMED, FASc.
Vice-Chancellor
Universiti Sains Malaysia

PREFACE



Assalamu'alaikum warahmatullah and warmest greetings.

In an era where the world confronts a multitude of pressing sustainability challenges, it becomes increasingly evident that a collaborative and proactive approach is indispensable. The issues at hand encompass a broad spectrum, from the ever more frequent and severe floods that displace communities and erode infrastructure to the dire need for clean and accessible water sources. Yet, arguably the most formidable of these concerns is climate change, with its far-reaching consequences on our environment, society, and the global economy.

In the face of such complex and interrelated sustainability challenges, the burden of addressing them falls upon all sectors of society, each with a unique role to play. Universities, in particular, are endowed with a distinct responsibility in this endeavour. They are not only at the forefront of research and innovation, pioneering solutions to the most formidable of sustainability dilemmas, but they also serve as the breeding grounds for the next generation of leaders and changemakers. Through their curricula, universities have the power to shape the values and knowledge of their students, instilling in them the importance of sustainable practices.

Guided by its vision and mission, USM is committed towards advancing knowledge and nurturing future leaders. USM recognizes its vital role in the ongoing battle for sustainability. This Sustainability Report delves into the multifaceted ways in which USM is contributing in addressing the world's sustainability challenges. From its cutting-edge research initiatives aimed at finding solutions to environmental crises to its dedication to embedding sustainability into its educational programmes, USM is poised to make a substantial difference. The university also extends its efforts beyond its campus boundaries, engaging with local communities and setting an example with its own sustainable practices.

USM has been part of the Times Higher Education Global Impact Rankings exercise for a few years. For the past two years, USM has been ranked and maintained its position at no. 4 in the world. USM has continued to pursue its own agenda on sustainability and aligning its initiatives with the UN SDGs since it was accorded the APEX (Accelerated Programme for Excellence) in 2008 by the Ministry of Higher Education Malaysia.

The sight of solar panels on the rooftops and at other designated areas throughout the main campus reflects the seriousness of the university in addressing its energy demands. Similarly with other efforts, though the scale may not be as grand, have the collective aim of implementing various aspects of the SDGs.

There are ongoing campaigns and programmes aiming to turn the campus into a more sustainable space to work and live in, such as avoiding the use of plastic straws, plastic bottles and food packs, carpooling, using e-bikes on campus, taking energy-saving measures at office premises, encouraging community members to lead a healthy lifestyle, assisting displaced or marginalised groups and recycling of waste, among others.

Sustainable practices will continue to be instilled in the campus community members, either by embedding them in teaching and learning activities or in other related programmes. Turning the practices into habits will surely take time, but with continued efforts, it could definitely yield the much desired results in the university's aspirations to realise a sustainable tomorrow for all.

PROFESSOR DR. AZLAN BIN AMRAN
Deputy Vice-Chancellor
Industry and Community Network

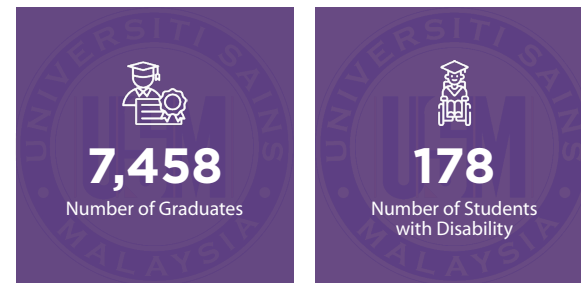
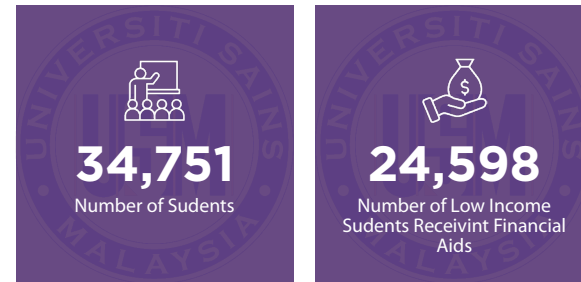
INTRODUCTION

2022 marks a significant milestone in the pursuit of sustainability and the achievement of the United Nations' Sustainable Development Goals (SDGs) by Universiti Sains Malaysia (USM). As a leading educational institution in Malaysia, USM has been deeply committed to integrating sustainable development principles into its operations and fostering a culture of responsibility and innovation among its students, faculty, and staff. The "USM Sustainability Development Goals Report for 2022" showcases the university's progress in aligning its initiatives with the global SDGs.

This report not only provides a comprehensive overview of the achievements and milestones reached in 2022 but also presents a roadmap for the university's continued efforts in promoting sustainability and social responsibility. It outlines the various initiatives, projects, and partnerships that have been undertaken by USM to address the 17 interconnected SDGs, reflecting the institution's dedication to creating a positive impact on the environment, society, and the economy. Through this report, USM aims to inspire, inform, and engage its stakeholders while contributing to the broader global dialogue on sustainable development.

In this introduction, we embark on a journey to explore the remarkable strides and promising endeavors of Universiti Sains Malaysia in the realm of sustainable development, as detailed in the "USM Sustainability Development Goals Report for 2022." This document emphasizes the university's dedication to achieving the SDGs and underscores its vital role as a catalyst for positive change within Malaysia and the international academic community.

USM IN NUMBERS





End poverty in all its forms everywhere

RESEARCH/INNOVATION

USM and Japanese Researchers Find Ways to Make Products from Palm Coconut Waste to Boost the Economy

Researchers from the Japan International Research Centre for Agricultural Sciences (JIRCAS) and USM have developed products from oil palm waste components, such as fronds and trunks, to help the economic level. The project, part of the Science and Technology Research Partnership for Sustainable Development (SATREPS-OPT), aims to find alternative uses for waste materials, reducing environmental impact and meeting the demand for palm oil production. The findings are nearing commercialization, and some private entities are using these items in their production processes, contributing to more responsible and sustainable practices..

RM3M
Zakat Colllction

RM1.5M
Distribution and Finan-
cial Aids (Zakat) to 1,365
Students

COMMUNITY & INDUSTRY ENGAGEMENT

USM, Persatuan Kebajikan 88 Kapten Pulau Pinang, and UOW Malaysia KDU Penang University College Offer Scholarships

USM inked an MoU with Persatuan Kebajikan 88 Kapten Pulau Pinang and UOW Malaysia KDU Penang University College to establish a student scholarship initiative. Students from B40 families will receive financial aid and opportunities to study at USM through the programme. Eligible students will get RM15,000–RM20,000 scholarships. The alliance also seeks to match Persatuan 88 Captains’ employment requirements with student career options, improving graduates’ employability.

Usains Holdings Sdn. Bhd. Contributed RM157,753 Zakat to Zakat Penang

USains Holdings Sdn. Bhd., a subsidiary of USM, has contributed RM157,753 in zakat to the Penang Zakat Center, a business zakat program that provides community assistance and fosters unity. The program, which introduced Wakalah, allows entities to return funds to eligible recipients (asnaf). USM’s commercial branch, USains Group of Companies, reported a 17% increase in revenue in 2021.

1,325 Students Benefited from USM’s Zakat Contributors

USM has honored zakat payers, including private companies, banks, and people, through the Association of Zakat Friendship and the Launch of Student Entrepreneurship Movement Asnaf@USM. Last year, the university distributed RM976,400 to 1,325 students, with the zakat aid totaling RM799.378.95. The university also provides various initiatives, including foreign zakat aid, Maidah Rahman kit assistance, citizen education support, emergency special assistance, laptop zakat assistance, humanitarian assistance, penis volunteer scheme, and sector management schemes. The university president, Faisal Rafiq Mahamd Adikan, emphasized the importance of private and corporate entities’ contributions to the student community, staff, and citizens.

TEACHING/LEARNING

USM Student Awarded the King’s Scholarship

Muhamad Huzaifah Omar, a second-year Master’s student at Universiti Sains Malaysia, was awarded the Yang di-Pertuan Agong Scholarship for the 2021/2022 session. The scholarship, presented by His Majesty Yang di-Pertuan Agong Al-Sultan Abdullah Ri’ayatuddin Al-Mustafa Billah Shah, supports students in science, technology, economics, law, and Islamic Finance.

Islamic Economic Empowerment through Zakat and Wakaf

The *Zakat* and *Wakaf* Economic Empowerment Seminar was held at the Islamic Centre of the USM on 21-22 July 2022. The seminar focused on identifying and planning resources to strengthen the Islamic economy and discussing IPTA/IPTS student zakat distribution tactics. The seminar achieved 12 IPTA/IPTS resolutions, which will serve as a follow-up action plan to implement the Islamic economy enrichment agendas. The resolutions included centralizing Islamic affairs, enhancing strategic collaboration between JAKIM and JAHEIS, modularly coordinating the Islamic Centre’s road map, establishing a link between the State Islamic Religious Council and JAHEIS, integrating institutional management’s responsibility in raising finances through *zakat*, *wakaf*, and *sedekah* instruments, collaborating with state organizations, and forming an institutional sharia panel and investment committee. The seminar also highlighted the importance of promoting more USM workers who can issue zakat and wakaf, and promoting the development of Islamic financing instruments.

OPERATION (INSTITUTIONAL ARRANGEMENT)

USM Collects Over RM3 Million in Zakat, Benefits 1,365 Needy Students

USM collected RM3,042,966.41 in zakat in 2022, benefiting 1,365 needy students. Half of this amount was returned by the Penang Zakat Centre, and USM redistributed the remaining RM1,505,700 to benefit the poor and underprivileged. Dato’ Seri Dr. Awang Adek Hussin, Chairman of the USM Board of Governors, commended the university’s success and pledged to strengthen collaborations.

New Assistance Scheme

Asnaf Prihatin and Asnaf Baitul Hikmah, two new welfare projects, were launched by USM and the Penang Zakat. These activities were created over three years in partnership. Critically ill people can receive RM1,000 from Asnaf Prihatin. To promote intellectual and Islamic development, Asnaf Baitul Hikmah gives eligible beneficiaries RM2,000 in Zakat benefits. According to USM's motto "KAMI MEMIMPIN" (We Lead), the goal is to empower and improve the lives of the needy. USM has received a yearly 50% return of RM1.3 million for four kinds of recipients: the impoverished, the indigent, those seeking Allah, and new converts. These measures should benefit the poor with transparent administration and reporting and enhance Zakat donations over time.

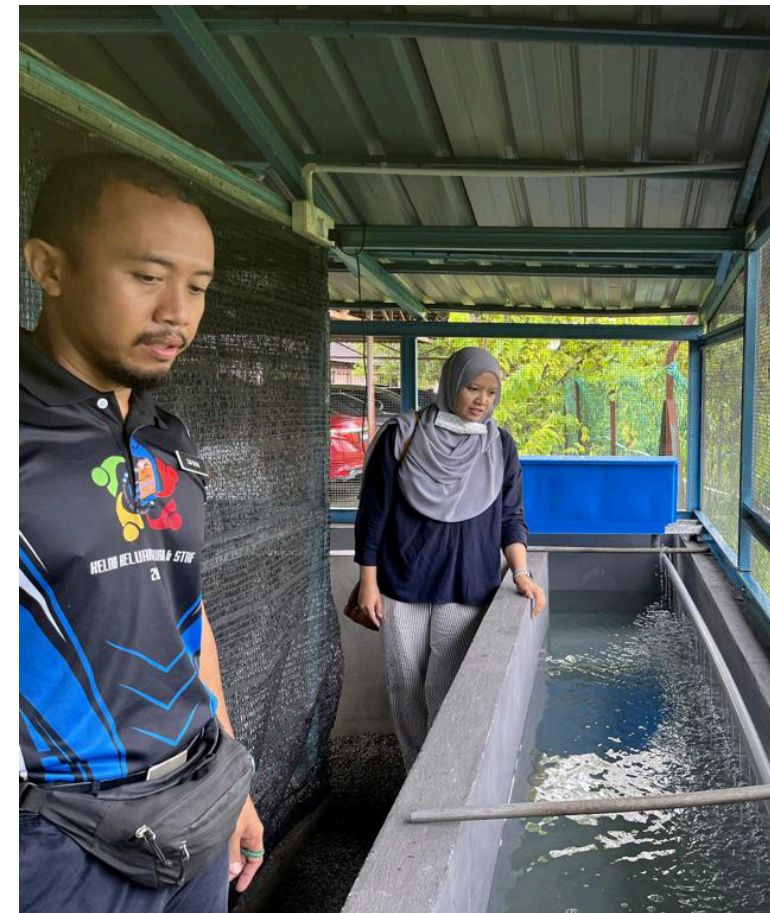


End hunger, achieve food security and improved nutrition and promote sustainable agriculture

RESEARCH/INNOVATION

USM Helps Special Education Students Farm Tilapia

USM, Fisheries Research Institute (FRI), PENCINTA, and SMK Machang Bubok are empowering special education students via sustainable tilapia farming. Dr. Amirah Hurzaid, a biology instructor at the Centre for Distance Education (PPPJJ), leads the project, which trains special education teachers and students to farm tilapia sustainably. A reference module for other special education institutions will be established. This RM9,000 Industry and Community Network Grant-supported programme teaches differently-abled pupils job-ready skills. Ahmad Kamal bin Abdul Ghani, Deputy Senior Director of the Special Education Sector of the Penang State Education Department, inaugurated the project and stressed the importance of self-reliance for special education pupils. Inclusion and independence are promoted through Community & Industry Engagement, contributing to sustainable development.



COMMUNITY & INDUSTRY ENGAGEMENT

Happy Lunch for USM Students

USM through the USM Islamic Center has established Happy Lunch@Zakat which allocates RM 15,000.00 to 1500 Asnaf students based on the concept of one RM 10.00 coupon per student.

MaidahTurrahman Kit Scheme—Aids to the Needy

USM's Islamic center provides assistance to USM staff and Qaryah citizens who receive aid from the MaidahTurrahman Kit Scheme. A total of 660 sets of Kits in the form of basic food supplies have been distributed to the staff of the entire campus and the Qaryah of Masjid Al-Malik Khalid USM.

THANK YOU USM! Free Basic Kit, Transportation, and USM New Student Welcome Party

USM has introduced initiatives to support new students during the 2022/2023 academic session. Free transportation is provided for students in the B40 category, including meals and transportation to the main campus on Penang Island. Basic Necessities Kits worth RM40,000 are provided to students with a family income of RM1,000 or less. A Student Feast: Lunch is organized for 3,500 guests, showcasing USM's commitment to supporting students, especially those facing economic challenges.

IKMAR-SUKSIS Helping Penang Island Homeless

Johor Students' Association (IKMAR) of USM and the Student Police Volunteer Corps Association (SUKSIS) of Penang produced "Tautan Kasih: Students Assisting the Homeless," a HEBAT-aligned high-impact volunteer initiative. Programme provided food and hygiene supplies to around 150 homeless Penang people. Students embodied USM's HEBAT agenda's "Balanced" values, attitudes, and humanity via the course. It taught youngsters gratitude and collaboration. The event was led by IKMAR USM chief advisor Prof. Madya Dr. Mohamad Nasir Mohamad Ibrahim and USM Media and Public Relations Centre director ASP/KS Dr. Ahmad Zulman Mohd Zain. Ahmad Zulman underlined the program's role in generating compassion and essential experiences, while Mohamad Nasir stressed students' need to help others and develop humanitarian beliefs.

TEACHING/LEARNING

USM Signed MoA with AGCO GSI (MALAYSIA) to Work Together in the Field of Agriculture

A Memorandum of Agreement (MoA) has been executed between USM and AGCO GSI (Malaysia) Sdn. Bhd. The objective of the collaboration is to investigate potential prospects in the domains of consulting, agricultural innovation, and training, which are all within their individual areas of proficiency. The collaboration is anticipated to yield environmentally friendly technological advancements and novel approaches within the agricultural sector. A leader on a global scale, AGCO GSI (Malaysia) is a provider of agricultural instruments and solutions.

Zakat and Waqf Instruments Empower Islamic Economy

The USM Centre for Islamic Studies' "Empowering the Economy Through Zakat and Waqf Instruments" conference in Penang was a success, organised alongside Penang Zakat, Penang Waqf, and other institutions. The event identified and planned zakat and waqf distribution techniques for B40 students in higher education institutions to boost the Islamic economy. The seminar produced 12 resolutions for higher education institutions, including efforts to elevate Islamic affairs departments, strengthen relationships with relevant government agencies, and increase fundraising through zakat, waqf, and sadaqah. The programme also taught personnel how to efficiently manage zakat and waqf collections.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Let's Make Time for Programmes Throughout Ramadan at the USM Islamic Centre

The Islamic Centre of USM is hosting various events during Ramadan, involving Muslim community members, campus members, and locals. These activities include daily online Quran recitation sessions, iftar fund contributions, and bubur lambuk provision. These initiatives promote spirituality and community, adhering to religious and cultural principles. Participants are encouraged to follow Penang State Islamic Religious Affairs Department's SOPs for protection. The USM Islamic Centre significantly contributes to the local community's spiritual and cultural enrichment during Ramadan.

USM Mobilises all Quarters to Maintain Cost of Food at University Cafeterias

USM is collaborating with residence hall administrators, student councils, and cafeteria proprietors to maintain the prices of food items sold on campus. In consideration of the financial hardships that numerous students encounter, they have imposed a maximum price on sustenance items. In addition to introducing a "economy" menu priced at RM5.00 to further assist students, "Plastic-Free Cafes" will be established to reduce the expenses associated with plastic items, thereby contributing to the provision of more affordable meals. Additionally, USM promotes environmentally friendly practises such as the use of reusable containers and metal utensils.

Iftar With Bertam Community

Surau Al-Muttaqin, Bertam Perdana hosted the Institute of Advanced Medical and Dental Sciences (IPPT) of USM's first iftar celebration, which was successful and significant. Despite the COVID-19 pandemic, almost 200 individuals attended iftar. Professor Tunku Kamarul Zaman Director of IPPT Tunku Zainol Abidin said this inaugural IPPT Community Iftar event sought to develop brotherhood and promote the "Malaysian Family" as espoused by the government among the local community and government and private agencies. USM Vice-Chancellor Professor Dato' Dr. Faisal Rafiq Mahamd Adikan also donated "Maidah Rahman" kits to 25 Surau al-Muttaqin youngsters and 25 IPPT B40 staff. The USM Islamic Center's "Maidah Rahman" kit includes locally sourced, quality-assured, halal rice, oil, sugar, salt, soy sauce, chilli sauce, and coffee. USM officials and community leaders also participated.



Ensure healthy lives and promote well-being for all at all ages

RESEARCH/INNOVATION

WHO and USM Strengthening Collaboration to Further Increase Sars-Cov-2 Genome Sequencing Capacity

USM has established state-of-the-art whole genome sequencing facilities in 2021, focusing on the SARS-CoV-2 virus. The collaboration, funded by the EU and WHO, aligns with Sustainable Development Goal 3 on Good Health and Well-Being, emphasizing scientific innovation in disease monitoring, vaccine development, and healthcare capacity enhancement.

Vaccines and Body Defence

In a Kelantan FM interview, University of Science, Malaysia Immunology Lecturer Dr. Maryam Azlan discussed vaccines. She explained vaccines as harmless molecules that stimulate the immune system to develop antibodies against specific diseases. Dr. Maryam stressed vaccinations' rigorous clinical testing and risk evaluation before widespread usage. Advanced combo vaccines like DTap-IPV-HepB-Hib protect against numerous diseases, simplifying immunisation. She said immunisations teach the immune system to fight illnesses and that many doses are needed for best protection. Since not all diseases have vaccinations, Dr. Maryam stressed the importance of broad immunisation to protect those who can't obtain them and advised people to live a healthy lifestyle to boost their immune systems.

Robotic Rehabilitation Helps Paralytic Patients

A Cyberdyne Robotic Rehabilitation Active Rehabilitation Programme was introduced at the USM Hospital in Kubang Kerian, Kelantan. Since September 2020, the programme has seen over 62 patients. USM Hospital is Malaysia's first university hospital to give paraplegic sufferers this service. USM Hospital's Robotic Rehabilitation uses Cyberdyne Inc. Japan's Hybrid Assistive Limb. Lower limb treatment enhances leg movement, lumbar treatment strengthens back and waist, and single-joint treatment restores upper and lower limb movement. In Kelantan and the east coast, six HAL Exoskeleton Robot Suits help stroke victims. The programme helps patients rehabilitate and return to normal life, as witnessed with Abdul Rashid Udin, who can now walk for himself and drive. The programme accepts non-PERKESO patients who want Robotic Rehabilitation. The programme helps people recover from physical injuries and return to work.



USM Medical Centre Rebrands IPPT USM

USM is renaming its Bertam Institute for Advanced Medical and Dental Sciences (IPPT) the "USM Medical Centre," effective June. The rebranding elevates IPPT to the level of other Malaysian hospitals and makes it a Northern cancer reference centre. IPPT, the only Northern reference centre within the Ministry of Higher Education, treats and diagnoses cancer with nuclear medicine. This hospital, supported by Kelantan's Universiti Sains Malaysia Hospital (HUSM), is being renamed to raise recognition. Upgrades and RMK-12 funds are planned to open the medical centre by 2024 or 2025. As Malaysia's only cancer treatment centre, BrachyAcademy International Training and Research Centre, IPPT is internationally recognised. IPPT has seen nearly 1,000 international patients and 578 brachytherapy patients. The centre will teach doctors and attract patients from Malaysia and beyond as the first brachytherapy academy in Malaysia, having pioneered the HyBIRT tongue cancer treatment.

COMMUNITY & INDUSTRY ENGAGEMENT

Stingless Bee Honey from USM Obtains "Amazon's Choice" status.

The condition of stingless bee honey (SBH), which is manufactured by USM, has been bestowed with the esteemed "Amazon's Choice" designation on the platform, an indication of its widespread appeal and favourable evaluations. 'Natharvest Store Stingless Bee Honey,' marketed as SBH, is a 200g container that serves as an organic substitute for Manuka honey. In Malaysia, stingless bee honey is referred to as "madu kelulut" and is renowned for its substantial quantities of essential nutrients and antioxidants. As evidenced by USM's efforts to promote SBH on Amazon, this superfood is experiencing increasing demand.

Communicate and Save Lives

Dr. Chooi Weng Tink of the School of Social Sciences at USM throws light on worldwide and national suicide rates. She emphasises the necessity of treating mental health, de-stigmatizing conversations about suicide, and providing assistance to those who may be at risk. The post promotes open communication, provides information, and emphasises the need of promoting hope and taking action to prevent suicide. It emphasises the need of compassion, understanding, and actively reaching out to those in need.

The KPT-USM Hospital CHRIS Programme Exposes Indigenous Communities to Basic Health Care

HUSM and the Ministry of Higher Education's Caring Community (KPT Prihatin, KRIS) programme provided crucial healthcare training to Pos Balar's Orang Asli community. The campaign taught Orang Asli volunteers CPR, choking first aid, wound treatment, and oral healthcare from June 8 to 10, 2022. The programme targeted a small group of Temiar indigenous people to provide basic treatment for 800 Orang Asli residents in remote locations without access to healthcare. Prof. Madya Dr. Shaik Farid Abdull Wahab, Head of the Emergency Medicine Department at Hospital USM and Project Director, said the programme teaches Orang Asli basic first aid while waiting for medical help. Under KRIS 2022-2023, this effort promotes community well-being, addresses health inequities, and provides quick care in difficult terrain. The programme included 43 emergency medical specialists, medical officers, dentists, nurses, healthcare assistants, dental surgery assistants, and USM medical students. Hospital humanitarian visits to Gua Musang Orang Asli tribes frequently consisted of pharmaceutical distribution, free medical checkups, and food help. This programme empowers Orang Asli by emphasising sustainable healthcare knowledge.

Magnetom Amira Biomatrix 1.5t Open at USM Hospital

USM Hospital now offers MRI services using the first-ever MAGNETOM Amira BioMatrix 1.5 Tesla MRI system in Malaysia. MRI imaging is essential for identifying tumours, bleeding, internal injuries, vascular disorders, and infections. This AI-enabled MRI machine can give high-quality, consistent imaging for all patient types, regardless of age or body size. Only Hospital USM in Malaysia has the RM5.7 million MAGNETOM Amira BioMatrix, which will be available in January 2022. This modern MRI technology improves patient diagnosis, reduces wait times, and improves healthcare in Kelantan and beyond.

TEACHING/LEARNING

24-hours Psychological First Aid Programme is a Necessity

Oon Yen Min, a graduate of USM's Master of Psychology (Clinical) degree, highlights the necessity of being imaginative and approachable when providing mental health help, particularly during the COVID-19 pandemic. Oon emphasises the importance of establishing a 24-hour psychological first aid programme and promises the community that university staff will provide support and a secure area. The Master of Psychology (Clinical) degree she completed is part of the USM-UPSI Psychology Integration Programme, a collaborative project between two Malaysian public universities to address the shortage of clinical psychology practitioners.

The White Sea, the White Coat and the White Gems of the USM Pharmaceutical Sciences School

At the 50th White Coat Ceremony, which was held at the School of Pharmaceutical Sciences, USM, 118 final-year students solemnly pledged their commitment to uphold the highest standards of responsibility and reliability as chemists. Established on an annual basis since 2006, the ceremony signifies the commencement of their professional development from pupils to chemists. Professor Dr. Habibah A. Wahab, dean of the School of Pharmaceutical Sciences, underscored the significance of upholding trust in their professional capacities as chemists. Prominent alumni, such as Professor Emeritus Tan Sri Dato' Dzulkifli Abdul Razak, were in attendance at the event. He motivated the students to strive for excellence and engage in community service.

More USM Neurosurgeons to Meet the Nation's Demands

The National Specialist Register (NSR) indicates that 110 out of 152 recognised local neurosurgery specialists in Malaysia were educated at USM. Nevertheless, the current shortage of specialists fails to satisfy the requirements of the country. In light of this, the Ministry of Health Malaysia has mandated that USM, in conjunction with other universities, produce an estimated 25 specialists annually in order to meet the escalating demand for neurosurgeons in Malaysia. USM is actively contributing to the resolution of the neurosurgeon shortage and the enhancement of healthcare services in Malaysia. Additionally, graduates of the USM 59th Convocation Ceremony were honoured in the fields of neuroscience and cognitive neuroscience.

OPERATION (INSTITUTIONAL ARRANGEMENT)

IPPT-USM Recognised as an International Educational and Research Centre of Brachyacademy

Despite the COVID-19 pandemic, the Advanced Medical and Dental Institute, USM (IPPT-USM) continues to provide cancer treatment, surgery, radiotherapy, and brachytherapy services to the community. Since 2015, IPPT-USM has been the only radiotherapy center in the northern region, operating under a government agency. The brachytherapy service, which began in 2017, has grown to include liver and head & neck cancer. IPPT-USM's excellence in brachytherapy has been recognized by BrachyAcademy, a prestigious accreditation for five cancer areas. With nearly 1,000 patients referred and 578 procedures undergone, IPPT has developed a new technique called HyBIRT for tongue cancer. The recognition by BrachyAcademy is the result of multidisciplinary experts and support from IPPT and USM management.

State-of-the Art Genome Sequencing Facility @ USM

USM has established state-of-the-art whole genome sequencing facilities in 2021, focusing on the SARS-CoV-2 virus. The collaboration, funded by the EU and WHO, aligns with Sustainable Development Goal 3 on Good Health and Well-Being, emphasizing scientific innovation in disease monitoring, vaccine development, and healthcare capacity enhancement.

USM Implements Essential Safety Protocols to Safeguard its Entire Student Body

The unfortunate demise of a student who fell from the eighth floor of a campus hostel has saddened USM. Professor Dr. Md Roslan Hashim, Deputy Vice-Chancellor of the university, conveyed his sincere condolences and underscored the critical nature of ensuring the safety of students. USM has implemented safety protocols, such as establishing a working group tasked with evaluating student facilities, in an effort to avert comparable occurrences. It is strongly recommended that all students exercise prudence, and routine safety inspections will be carried out in conjunction with residence councils and hostel administration. This incident highlights the critical importance of maintaining a safe campus environment in order to ensure the well-being of students.

Strengthening Strategic Cooperation – USM, Perkeso Signs MoA to Extend Robotic Rehabilitation Services

The Social Security Organisation (PERKESO) and USM have entered into a Memorandum of Understanding (MoA) regarding the expansion of robotic rehabilitation services via the establishment of the Neuro-Robotics and Cybernetics IPPT Clinic. The primary objective of this partnership between PERKESO and USM is to broaden the scope of sophisticated rehabilitation services and neuro-robotic therapy provided to patients afflicted with neurological disorders such as spinal cord injuries and strokes. The initiative exemplifies a dedication to enhancing the character of treatment for individuals requiring healthcare services.

Future Olympic Aspirations of the Malaysia Olympians Association and USM are to Produce More Athletes

A prospective partnership between USM and the Malaysia Olympians Association (MOA) is under discussion, with the shared objective of fostering talent and sports development, with a specific focus on the domain of hockey. Developing programmes that produce more talented athletes with the potential to qualify for future Olympic events is the primary objective. Both entities are enthusiastic about utilising the resources and knowledge of USM in the field of sport sciences and development to aid Malaysian athletes in their pursuit of athletic prowess. The partnership is anticipated to advance sports development, well-being, and health.

USM Mini Stadium KOPA ARENA

The tournament promotes grassroots football infrastructure, which is crucial to national football success. The RM5.5 million Mini Stadium Kopa Arena at USM in Penang was inaugurated by FAM President Datuk Haji Hamidin Haji Mohd Amin on February 20, 2022. The corporate sector and USM collaborated on this synthetic surface, which helps develop grassroots football talent and programmes. Hamidin stressed grassroots football development in line with infrastructure. Academies in the tiny stadium established by the private sector and USM are a concept for producing top players. The alliance aims to strengthen university-level football programmes, develop future football talent, and support national football academies.



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

RESEARCH/INNOVATION

USM Represent Malaysia

The WAU Rocketry USM team is set to represent Malaysia at the Intercollegiate Rocket Engineering Conference (IREC) and student rocket launch competition, Spaceport America (SA) Cup 2022 in the USA. This accomplishment showcases their dedication to research and innovation, aligning with SDG 4 (Quality Education). The team received sponsorship from Malaysia Airlines Berhad and is aiming for their HEBAT Rocket to reach 10,000 feet using a dual event parachute deployment system, contributing to advancements in rocketry and STEM fields.



The Division of Research and Innovation at USM Foresees Progress

The USM Research and Innovation (R&I) Division has established itself as a specialised domain with the objective of augmenting the university's research endeavours, calibre, and influence. Professor Dato' Ir. Dr. Abdul Rahman Mohamed, the Deputy Vice-Chancellor of R&I, underscored the significance of adhering to national development plans, fostering entrepreneurship, confronting global challenges, and attaining international recognition throughout a strategy-sharing session. The mission of USM is to develop accessible research products that benefit society and provide assistance to those who require them.

USM Lecturers Awarded British Council Catalyst Grant 2022

Two lecturers from USM, Associate Professor Dr. Salmi Mohd Isa and Dr. Khauthar Ismail, have been awarded the British Council Going Global Partnerships Catalyst Grant 2022. The grant, worth GBP 55,000, will support a project led by the University of Glasgow titled "Key Entrepreneurial Cognitive Education and Knowledge Advancement Project: A Network (KECEKAPAN)." The project will involve other partners, including Universiti Kebangsaan Malaysia (UKM), Universiti Malaya (UM), University of Aberdeen, and Liverpool John Moores University.

COMMUNITY & INDUSTRY ENGAGEMENT

Ramadhan Football Championsip

The USM International Mobility and Collaboration Centre (IMCC) and USM International (USMi) Student Society's collaborative effort to organize the Ramadhan Football Championship fosters a sense of community and inclusivity among local and international students. With 192 players from 20 countries and representing 17 schools, this initiative bridges the gap between students of diverse backgrounds, enabling them to interact, understand the importance of diversity, and uphold USM's internationalization goals. By creating a welcoming and inclusive environment, the event promotes cultural exchange and enhances the quality of education through holistic student experiences.

USM Works with Content Forum to Empower Students

USM collaborate with Content Forum to empower students and future media industry leaders through self-regulatory practices. By incorporating the Malaysian Communications and Multimedia Content Code (Content Code) into academic programs at USM and providing training on ethical content creation and self-regulation, this collaboration contributes to the quality education and preparation of students for careers in the media and communication industry. It promotes responsible content creation and consumption, fostering a culture of ethical practices in the field.

TEACHING/LEARNING

USM-Villa College Signed Education Collaboration MoU

USM and Villa College in the Maldives inked an MoU for education and research collaboration. Selected schools and departments from both institutions will collaborate to boost research and instructional programmes. Professor Dr. Azlinda Azman, USM's Deputy Vice-Chancellor, stressed the importance of academic partnership for both institutions and future innovation and technology. Dr. Ali Najeeb, Villa College's Vice Rector, indicated interest in research, academics, mobility programmes, and Maldives student registration at USM.

Wong Yee Jie, First USM PhD Student to be Recognised with USM-Osaka Double Degree Programme

PhD candidate Wong Yee Jie of USM has completed the USM-Osaka Double Degree Programme and become the first graduate of the initiative. In pursuit of a Doctorate in Philosophy in Chemical Engineering, Wong attended both USM and Osaka University (OU) for two years as part of his dual-degree voyage. "Theoretical and Experimental Study on Dry Reforming of Methane Over Cobalt-Based Catalysts" was the title of his research project, which included mathematical programming, theoretical computations, and experimental investigations. In addition to augmenting his scholarly acumen, this programme furnished him with invaluable cultural encounters and perspectives, thereby fostering global cooperation in the field of education.

USM Leadership Talk Series Explores the Qualities of a Successful Leader

The inaugural "Leadership Talk Series Programme" of 2022 was jointly organised and hosted by USM and *Pusat Transformasi Insan (PTi)*. Leadership: Values, Knowledge, and Skills was the topic of discussion at the event, which was hosted by Tan Sri Datuk Dr. Zulkefli A. Hassan, pro-chancellor of USM. Zulkefli placed significant emphasis on the criticality of fundamental values in leadership, which encompass integrity, dependability, punctuality, humility, and regard for others. By means of personal anecdotes and experiences from his academic and professional career, he emphasised the importance of these values. Assisting in the development of effective leadership abilities, the event sought to impart the wisdom of seasoned industry and academic leaders.

USM Launched the Turkiye Study Programme

USM has launched the Turkiye Study Programme, a global academic collaboration with European Global School University. The program offers 34 undergraduate and postgraduate study programs at EGS Besiktas branch campus in Istanbul, Turkiye. This initiative aligns with SDG 4 - Quality Education and aims to provide quality education beyond borders, promoting sustainability and self-sufficiency. The program aims to enhance educational opportunities for international students.

USM Judo Team to Rise in 2022 SEA Games in Vietnam

Three USM students have been chosen to represent Malaysia in judo at the Southeast Asian Games (SEA Games) in Vietnam in 2022. Kamini Sri, Ummi Nazeerah Amran, and Chuah Siew Imm are among the pupils recruited through the Lifelong Education Programme and will participate in various weight categories. The SEA Games were supposed to take place in November-December 2021, however they were moved to May 2022 owing to the COVID-19 pandemic. USM congratulates these athletes and wishes them luck in raising the university's international profile.

Metaverse Space Library @ USM Bertam

With the addition of a Metaverse Space Library to its Advanced Medical and Dental Institute (IPPT) Bertam campus, USM has embraced innovative education. This library provides a three-dimensional virtual world accessible via VR headsets, increasing education and information access. This programme, which is aligned with SDG 4 - Quality Education, promotes an immersive and participatory learning environment. The library translates source resources, such as anatomical models and electronic literature, into three-dimensional representations using the 'VR Discovery' technology and the 'GoVR' web portal. 'WebVR' allows users to experience virtual reality, which improves the effectiveness of education and training. Because of USM's commitment to technological innovation and innovative teaching, this effort is a great fit for the Teaching & Learning category, highlighting the university's commitment to quality education and new technology.



Hybrid Approach to Fostering Creative Thinking and Technology Integration in Arts Education

The annual Rintis Arts Showcase by USM's School of the Arts (SoTA) utilised a hybrid approach, presenting pieces from final-year Arts students. The showcase, in collaboration with the Design Department, took on the theme of #JALINAN and featured a diverse spectrum of design and art initiatives, including digital branding, visual communication, creative thinking, health apps, design thinking, agronomic furniture, and creative coding. Due to the COVID-19 epidemic, the show was exhibited both offline and online via various social media channels. This initiative fosters students' creative and critical thinking and incorporating technology into the learning process.

Exploring the Role of Human Senses in Creative Practices at OASIS 2022

OASIS 2022: Sensoria, an exhibition at the USM that explores the role of the human senses in creative practices. It emphasizes the importance of heightened sensitivity to touch, vision, sound, emotions, and other senses in creative decision-making. This annual showcase, organized by USM's School of the Arts, features carefully curated creative works that go beyond the traditional senses, delving into the connection between physical and mental aspects of perception, surroundings, and human spirituality. The exhibition aims to enhance perception, mood, and visual experiences while fostering reflection, exploration, and discovery. By promoting such sensory experiences, it contributes to the goal of quality education and artistic expression (SDG 4).

USM Among the Pioneers for MQA Stand-Alone Micro-Credentials (SAMC) Programme

The Malaysian Qualifications Agency (MQA) has signed a Memorandum of Understanding (MoU) with USM to become one of eight institutions pioneering the Stand-Alone Micro-Credentials (SAMC) programme. The SAMC initiative encourages lifelong learning while also improving the quality and recognition of micro-credential courses offered by higher education institutions. This move is consistent with initiatives to recognise micro-credential courses for credit transfer, allowing persons who have accumulated enough micro-credentials to graduate under institutionally imposed criteria.

OPERATION (INSTITUTIONAL ARRANGEMENT)

USM's 2022-2024 Strategic Plan: Prioritizing Neglected Areas, Operational Excellence, and Future Investment

USM is actively pursuing its 2022-2024 strategy plan, with an emphasis on tackling neglected areas, operational excellence, and future investment. The strategic plan intends to improve student, administrator, academic, and research alignment, as well as financial soundness. It focuses on three main areas: global foresight in dealing with pandemics and digital technologies, national positioning aligned with community ambitions, and institutional sustainability to assure relevance, resilience, and financial strength. USM seeks to generate globally competitive people, strengthen the research environment, and place an emphasis on ethical principles, sustainability, and global importance.

USM Leads the Way: Most Postgraduate Admissions Among Malaysian Public Institutions

The success of USM in having the greatest number of postgraduate admissions among all Malaysian public institutions (UAs) for 2021. The success of USM in attracting postgraduate students demonstrates the value of outstanding education and research in a research university.

EMDASH Bookstore: USM's Expansion of E-commerce Platform for Public Access to Academic Resources

Penerbit USM's establishment of the EMDASH Bookstore, an expansion of its e-commerce platform, helps to improve the university's operational and institutional arrangements. This programme will help increase public access to academic resources and publications, hence improving learning and knowledge transmission.

USM@Turkey: USM's First Offshore Presence in Europe with EGS Partnership

USM has partnered with the European Global School University (EGS) in Turkey to offer offshore academic programmes in Europe, marking USM's first offshore presence on the continent. The venture, known as USM@Turkey, will offer 28 undergraduate and postgraduate programmes, including dental sciences, engineering, language and business courses. This partnership supports SDG 4 (Quality Education) by increasing access to education and developing worldwide academic collaboration for the benefit of students from the Middle East, Africa, and Europe.





Achieve gender equality and empower all women and girls

RESEARCH/INNOVATION

Three USM Researchers and Two UK Collaborators Awarded The Newton Fund Impact Scheme (NFIS)

Three USM researchers and two UK collaborators have been awarded the Newton Fund Impact Scheme (NFIS) for their project “Piloting Health Interventions to Advance the Sexual and Reproductive Health of Women Migrant Workers in Malaysia”. The project, which will run for 18 months, will involve the implementation of health interventions from a toolkit developed by the United Nations Gender Theme Group (UNGTG) to ensure good sexual and reproductive health among female migrant workers. The project will be piloted in two multinational manufacturing companies in Penang, with a substantial population of female migrant workers. The project will also involve collaboration with three civil society organizations, including the Penang Family Health Development Association, Reproductive Rights Advocacy Alliance, and Tenaganita. The project aims to improve the wellbeing of female employees in the industry, addressing two Sustainable Development Goals: SDG 5 on gender equality and women’s empowerment and SDG 8 on decent work and economic growth.

A Study of Female- and Older Adults-Led Households’ Telecommunication Expenditure in Digital Malaysia

Researchers USM have done research on the A Study of Female- and Older Adults-Led Households’ Telecommunication Expenditure in Digital Malaysia. The research found the telecommunication expenditure resembles luxury goods spending behaviour. Households headed by older adults, female older adults, or those consisting entirely of older adults when compared to groups not possessing these characteristics, have a lower percentage share of monthly telecommunication expenditure over household income. The authors propose that further policies should improve telecommunication equipment and services’ affordability to improve the older adults’ participation rate in the digital economy which will exist in Malaysia as an aged nation by 2044.

Due Diligence in Cases of Sexual Harassment in The Civil Service in Malaysia: Towards models for sustainable intervention

Research by KANITA team led by Prof Dato’ Noraida on Due Diligence in Cases of Sexual Harassment in The Civil Service in Malaysia: Towards models for sustainable intervention was funded by Ministry of Higher Education under FRGS Grant.

COMMUNITY & INDUSTRY ENGAGEMENT

Two USM Professors Appointed as the Head of Clusters at CWAL UniKL

Professor Dr. Ir. Srimala Sreekantan and Professor Dr. Azlinda Azman have been appointed as Heads of Clusters at the Centre for Women Advancement and Leadership (CWAL) UniKL. Azlinda will lead the Social Development and Well-Being cluster, while Srimala will lead the Green Technology and Advanced Materials cluster..

TEACHING/LEARNING

USM Lecturer Voted UN Space Programme Mentor

The UN Office for Outer Space Affairs’ Space4Women program’s lone Malaysian mentor is USM lecturer Dr. Norilmi Amilia Ismail. The programme promotes gender equality and quality education by offering women worldwide STEM and space education and careers. This programme will showcase Dr. Norilmi Amilia’s STEM experiences and mentor young women. Her choice demonstrates her space skills and efforts.



Master of Social Science (Gender Studies)

KANITA offers postgraduate degrees in women’s and gender studies, including Doctor of Philosophy and Master of Social Sciences. These programs aim to develop gender-sensitive graduates in diverse work cultures and organizations. KANITA’s postgraduate degrees incorporate a gender lens, emphasizing the importance of gender in institutions, theories, and practices, and the significance of examining the lived realities of society, particularly women.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Staff Welfare is University Priority

USM Vice-Chancellor Professor Dato’ Dr. Faisal Rafiq Mahamd Adikan has emphasized the importance of staff well-being in strategic planning, addressing concerns about retirement readiness and debt among 5,000 executive staff members. The university requires special courses and employs the Credit Counselling and Debt Management Agency to teach personal financial management. USM also offers easy loans and a Welfare Fund, considers transport for residents, allows remote work, and plans to build staff quarters in the University Recreation Park.

Two Women win the 14th National Academic Award

USM professors Emerita Dato’ Dr. Asma Ismail and Nor’Aini Yusof received the 14th National Academic Awards. Asma, President of the Academy of Sciences Malaysia, is a prominent academic leader in higher education, microbiology research, and medical biotechnology. Nor’Aini, from USM’s School of Housing, Building, and Planning, has published nationally and internationally in sustainable built environment journals. Asma won RM200,000, a trophy, and a certificate..



Ensure availability and sustainable management of water and sanitation for all

RESEARCH/INNOVATION

Congratulations to REDAC on its RM1 Million Matching Grant

USM Engineering Campus Director and REDAC Director Professor Dato’ Dr. Nor Azazi Zakaria got a RM1 million matching grant from the Ministry of Higher Education. This award will support REDAC, an HICOE on Sustainable Urban Stormwater Management, research. REDAC’s study should help manage river and urban drainage difficulties, especially during water disasters. USM is the first Malaysian university to get a UNESCO Chair on Ecohydraulics for Sustainable Water Infrastructures in 2020, focusing on SDG6 in Asia-Pacific. Clean water and sanitation are the focus of UN Sustainable Development Goal 6. As UNESCO Chair host, REDAC is crucial to international sustainable water infrastructure research and teaching.



MANCO 24 Support National Agricultural Sector Improvement

Technological advances at the 24th Annual Conference of the National Association for Irrigation and Drainage Malaysia (MANCO 24) would boost Malaysia’s agricultural economy. Fourth Industrial Revolution (4IR) policy drives the conference, which emphasises AI, IoT, and blockchain. MANCID, BPSP, and MAFI support it. These technologies aim to replace human labour with technology in agriculture, including satellite navigation, GIS, and drones for soil investigation and other purposes. On the theme of “Innovation and Research in Agriculture Water Management to Achieve Sustainable Development Goals,” the event emphasises water efficiency and agricultural productivity. Experts, engineers, and industry leaders convene at MANCO 24 to deploy contemporary farming methods. The River and Urban Drainage Engineering Research Centre (REDAC) at Universiti Sains Malaysia advances agriculture. Advanced technology is crucial to agricultural efficiency and Malaysia’s sustainable development goals, as shown by the partnership.

COMMUNITY & INDUSTRY ENGAGEMENT

USM Sustainability Contribution

USM Acting Vice-Chancellor Professor Dato’ Dr. Narimah Samat praised the university’s sustainable development efforts. USM ranked fourth in the Times Higher Education Global Impact Ranking for its UN Sustainable Development Goals efforts. Since 2008’s Apex programme, which helped poor areas, the university has prioritised sustainability. USM supported women and the B40 group with poverty-reduction projects including Ikhtiar and Tekun. This university’s SDG focus has led to collaborations with many entities, developing globally marketable products. Professor Narimah stressed the necessity of repaying school loans and encouraged graduates to apply their expertise to improve themselves and their communities. She also advised families to help their loved ones succeed.

TEACHING/LEARNING

MANCO 24: Advancing Malaysian Agriculture Through Technological Innovation

The 24th Annual Conference of the National Association for Irrigation and Drainage Malaysia (MANCO 24) received strong support from MANCID, BPSP, and MAFI. Focused on the Fourth Industrial Revolution (4IR), with themes of AI, IoT, and blockchain, the conference aims to advance Malaysia’s agricultural sector. Deputy Minister Ahmad Hamzah highlighted the sector’s shift towards full technological integration, enhancing productivity and infrastructure management. With the participation of Universiti Sains Malaysia’s REDAC, the event fosters collaboration among engineers, consultants, and industry players to modernize agriculture. The conference, ongoing from March 21 to 23, 2022, facilitates the introduction and application of new farming techniques for sustainable development goals.

Undergraduates and Postgraduates Courses Offered by River Engineering and Urban Drainage Research Centre (REDAC)

UNDERGRADUATE	
EAH416	River Conservation and Rehabilitation
EAH422	Advance Water Resources Engineering
EQH221	FLuid Mechanics
EAH225	Hydraulics
POSTGRADUATE	
EAD511	River Management
EAD512	Urban Drainage Management
EAD513	Hydroinformatics
EAD514	River Ecosystem
EAD515	Hydraulic Structure

OPERATION (INSTITUTIONAL ARRANGEMENT)

Professor Dr. Nor Azazi named MANCID Vice-Chairman

Professor Dr. Nor Azazi bin Zakaria, Director of Universiti Sains Malaysia's Engineering Campus and REDAC, is Deputy Chairman I of the Malaysia National Committee on Irrigation and Drainage. In a June 7, 2022 letter, MANCID Chairman Mohamad Radzi Bin Abdul Talib announced this appointment, effective May 27, 2022. MANCID, founded in 1958, is a voluntary scientific and technical organisation that provides validated drainage and flood control data. Prof. Dr. Nor Azazi's nomination recognises his irrigation and drainage expertise in Malaysia.

Asian and Pacific UNESCO Chair on Ecohydraulics for Sustainable Water Infrastructures

Universiti Sains Malaysia will hold the UNESCO Chair on Ecohydraulics for Sustainable Water Infrastructures for SDG 6 in Asia and the Pacific from October 2020 to October 2024. UNESCO chose Dato Dr. Nor Azazi Zakaria, Honorary Professor at REDAC (previous Director), to lead the USM UNESCO Chair. Malaysia receives its third UNESCO Chair. USM's River Engineering and Urban Drainage Research Centre (REDAC), a pioneer in sustainable urban stormwater management, will host and support the Chairholder. REDAC's 2001 SDG 6 commitment earned it selection. REDAC planned and built Bio-Ecological Drainage Systems (BIOECODS) on the USM Engineering Campus, Penang in 2002 as a national pilot project in Malaysia.



Ensure access to affordable, reliable, sustainable and modern energy

RESEARCH/INNOVATION

Online Preparation of Green Technology & Stem Biodiversity Competition Activity Module 2022 at the National Level

The Online Green Technology & STEM-Biodiversity Competition Activity Module Preparation Workshop was held in Penang on March 22 and 23, 2022. The workshop aimed to transform existing face-to-face competition modules into online concepts for school students. Five activity modules were introduced: Green Technology Quiz, Green Technology Gamification, Green Technology Innovation, Green Technology Urban Design, and STEM-Biodiversity Quiz. The refined modules will be recognized nationally, promoting student engagement in Green Technology and STEM-Biodiversity. The competition will run online from June to October 2022.

A Visit to the Penang State Department of Education (JPNPP) for Energy Efficiency Program and Energy Audit

The Center for New Energy Education and Training, Energy Efficiency, and Green Technology (CETREE) visited the Penang State Education Department (JPNPP) on July 19, 2022, to gather data on electricity usage and facilities for an Energy Efficiency and Energy Audit program. The visit included presentations on electricity bill usage and facility overviews, as well as inspections of each sector to monitor electrical facility usage during working hours.

COMMUNITY & INDUSTRY ENGAGEMENT

Collaboration on Energy Efficiency and Audit Initiatives between CETREE and Penang State Education Department

The Center for New Energy, Energy Efficiency, and Green Technology Education (CETREE) is collaborating with the Penang State Education Department (JPNPP) to raise awareness of Green Technology in Malaysia. The program aims to transfer knowledge on Energy Efficiency and Energy Audit to JPNPP personnel. The collaboration is seen as a pioneering effort in incorporating these practices. CETREE's Prof. Madya Dr. Mohd Wira Mohd Shafiei pledges ongoing support for a lasting impact on Green Technology education.

Green Technology Innovation Carnival

The Green Technology Innovation Carnival in Penang, Malaysia, successfully concluded with 50 selected high schools participating. Organized by various organizations, the event aimed to raise awareness and apply green technology in the education system. Around 220 participants participated in five competitions, including the Green Cooker Challenge and Solar Vehicle Challenge. Professor Dr. Md. Roslan Hashim presided over the closing ceremony and awarded winners.

Malaysian Family Youth Carnival in Tasek Gelugor, Penang

The Malaysia Family Youth Carnival in Tasek Gelugor, Pulau Pinang, was held on September 24 and 25, 2022, aimed at boosting youth aspirations and informing the local community about educational opportunities. The event featured activities such as youth, health, career, and education exhibitions, sports, and family-oriented contests. Agencies like Universiti Sains Malaysia (USM) and the Centre for Global Sustainability Studies (CGSS) contributed to the event.

TEACHING/LEARNING

Kedah STEM Grooming Camp 2022

The Kedah STEM Grooming Camp 2022, held from June 26 to 28, aimed to spark students' interest in science and STEM. Activities included a lecture on Green Technology, recyclable bag projects, and energy audit calculations. The program involved 10 Kedah schools and strategic partners like CETREE, the Kedah State Education Department, and universities. The goal is to produce more young scientists.

School Level STEM Carnival

The STEM Carnival at SMK Datuk Hj. Ahmad Badawi aimed to boost interest in STEM fields among lower and upper secondary students. The event, supported by government agencies like the Green Technology Mobile Exhibition Unit and CETREE, featured advanced technology projects, a Green Technology Urban Design competition, and hands-on simulations. The event aimed to strengthen STEM culture among the younger generation.

OPERATION (INSTITUTIONAL ARRANGEMENT)

SOLAR@USM

The second phase of the Solar PV System installation at USM's Engineering Campus illustrates the university's dedication to sustainability and environmental stewardship. USM is actively contributing to SDG 7 by harvesting solar energy and reducing carbon dioxide pollution by up to 97,000 metric tonnes over a 25-year period (Affordable and Clean Energy). This project not only demonstrates USM's commitment to carbon neutrality, but it also serves as a model for other institutions and organisations to follow in their pursuit of sustainable energy and climate change mitigation.



Northern Region Level STEM-Biodiversity Program Workshop

CETREE conducted a STEM-Biodiversity Program Adjustment Workshop for the Northern Region on April 24-25, 2022. The workshop aimed to coordinate, implement, plan development, and identify the needs for teacher workshops, student webinar series, and competitions for the four northern states and at the national level. The workshop received high commitment and cooperation from JPN representatives, facilitating the upcoming program implementation. The workshop concluded with positive remarks from participants, recognizing CETREE's efforts in promoting awareness and encouraging students in Green Technology and STEM-Biodiversity education.



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

RESEARCH/INNOVATION

OPPSTAR Technology and USM Enter a Partnership Agreement on Laboratory Building and Research

A Memorandum of Understanding (MoU) between USM and Oppstar Technology Sdn. Bhd. has been inked in order to create laboratories, collaborate on research, and work together on student training. Both Professor Dato' Gs. Dr. Narimah Samat, Deputy Vice Chancellor of USM and Oppstar's Technology Chief Operating Officer Tan Chun Chiat signed the MOU. A donation of more than RM750,000 was made to USM over the course of three years by Oppstar Technology, which assisted students in receiving industry training and exposure to industrial projects. Additionally, the programme will provide possibilities for researchers to participate in high-impact research, particularly in the design of integrated circuits. In addition, the collaboration will feature a capstone project carried out at the USM-Oppstar Centre of Development Laboratory.

KANITA International Conference on Gender Studies (KICGS)

USM and USK have signed a MoU to collaborate on regional education and research excellence. The MoU aims to strengthen the educational and research agenda in the northern region through the SAINsEd Program, allowing students, researchers, and professors to have a better learning experience on both campuses. The MoU is a continuation of ongoing cooperation between USM and USK, with researchers and teachers planning initiatives to advance regional and global sustainability. The signing was completed by Professor Dato' Gs. Dr. Narimah Samat, USM Vice Chancellor, and USK Rector, Professor Dr. Ir. Marwan.

USM, Glodon Software Joint Hands for Collaborative Research and Academic Advancement

USM has partnered with Glodon Software Sdn. Bhd. to conduct research on digitalisation in the construction industry. The partnership was signed through a Memorandum of Understanding (MoU) signing ceremony, marking a significant milestone in the university's efforts to equip future graduates with the necessary skills to navigate the industry's changes. The partnership aims to find solutions to existing barriers impeding the Industrial Revolution's digitalisation process.

USM Strengthen Collaboration, Investment, Startup, and Smart Networking with Japanese Industrial Partners

USM has received a return visit from Leave A Nest and Aerodyne Group to explore USM technology in engineering, agriculture, drone, system and IoT, algae cultivation, vector control, and pest control. Following the Japan Agritour programme, USM is looking forward to future research collaborations with Japan. The technology exhibition sparked interest from Leave a Nest, Aerodyne, and start-ups to explore research collaboration in developing USM technology into a market-fit product. USM is one of the recipients of Leave a Nest Scholarship, awarded to Muhammad Izzat Irfan Bin Rozlin Hisham from the Centre for Marine & Coastal Studies (CEMACS). The event is part of USM's strategic move to achieve collaborative, investment, and networking outcomes from regional and global partners.

Establish Spin-Off Company in Commercialising Innovative Products

USM Penang has signed a Share Sale Agreement with Bioscience International Sdn. Bhd. (BSI) for the first time, aiming to grow and commercialize innovative products from USM spin-off company Biotenova Sdn. Bhd. The event is part of USM's strategic move to become an innovation-driven nation. Biotenova is built on two postbiotic properties extracted from unique probiotic strains, both exhibiting comparable antimicrobial, anti-inflammatory, and anti-oxidant activities. USM will continue to provide assistance to Biotenova, aiming to become a pioneer in postbiotic research and development in the region.

COMMUNITY & INDUSTRY ENGAGEMENT

USM Inked MoU with Paramit Malaysia to Develop Talent

USM has signed a Memorandum of Understanding (MoU) with Paramit Malaysia Sdn. Bhd. to support skill and talent development. The partnership aims to enhance the 'People Agenda' by fostering a mutually beneficial partnership between an academic institution and an industrial participant. The collaboration will involve internship programs for undergraduates, apprenticeships for fresh graduates, participation in USM's career fairs, and certificate and upskilling programs for Paramit's existing employees. The collaboration aligns with USM's H.E.B.A.T. agenda, aiming to improve graduates' employability and encourage lifelong learning.

MoU to Collaborate on Academic and Research Development

USM and PKT Logistics Group have signed an MoU to collaborate on academic and research development, aiming to assist students in training and talent development. The partnership aims to link academics and industry, offering students part-time work and skill development opportunities. PKT Logistics Group, known for its socially responsible logistics services, aligns with SDG 17 by fostering collaboration between academia and industry.

USM Boosts Graduates' Marketability

USM is a top university in the nation, ranking among the top for Global Employability University Ranking and Survey (GEURS). Over 90% of its graduates find work. The university aims to produce high-quality graduates who succeed in the job market and contribute to their communities. It improves employability through talent development, entrepreneurship, and other programs. Special accommodations are made for students to participate in global competitions, enhance industry relations, and emphasize internships. USM offers MOOCs to improve industry-specific skills and digital competencies. The university optimizes resources and maintains educational quality to make graduates more competitive in the job market.

TEACHING/LEARNING

Students Celebrate Cultural Diversity at Fuse International Night on Campus

USM Penang held its 4th FUSE International Night, promoting multicultural diversity among international students. The event, titled 'The Floral Conquest', brought together local and international students to interact and understand each other better. The event included cultural booths, a bonfire setting, and performances by local and international students. The event was organized by USM Student Buddies and supervised by IMCC, with Director Aizat Hisham Ahmad highlighting the importance of diversity in preparing students for global citizenship.



NI ARC—Platform For Students to Gain an Innovative Learning Experience

The National Instruments Autonomous Robotics Competition (NI ARC) 2022 is a platform for students to gain an innovative learning experience in the industry. The event, held at the USM Engineering Campus, aimed to expand students' capabilities in STEM fields. The theme was 'Robots in Medical Industry: The Next Generation Savivors', with 65 students from 13 teams from eight local institutions participating. The event was supported by National Instruments and the team from SAINS@USM, Engineering Campus Director Office, School of Electrical & Electronic Engineering, Society of Electrical & Electronic Engineering.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Work from Home: USM's Strategy for Employee Well-being and Productivity During COVID-19

Economic growth and decent work. During the COVID-19 epidemic, USM effectively utilised the 'Work From Home' (WFH) practise without sacrificing staff productivity. This strategy offers employees who require it freedom and support. The approach is based on trust, with an emphasis on employee responsibility and accountability, as seen by the online attendance registration system. USM promotes a healthy work environment by properly implementing WFH, supporting both good working conditions and economic growth, particularly by guaranteeing staff well-being and participation in their roles.

Mengopi 2.0: USM's Community & Industry Engagement Subcategory Event for Entrepreneurial Growth

Following the success of Mengopi 1.0, USM sponsored Mengopi 2.0, demonstrating its commitment to community and industry interaction. Famous entrepreneurs and product inventors attended the Community & Industry Engagement subcategory event, tied to SDG 8 (Decent Work and Economic Growth), to share information and stimulate entrepreneurial growth. Dato' Haji Alias Haji Ali, Director of Jeruk Madu Pak Ali, Pengiran Muhammad Adil Awang Iskander Dzulkarnein, founder of Mokti's Ice Cream Gula Apong, and Dato' Kamarul Arifin, Founder and Managing Director of Jutawan Produk Holding Sdn. Bhd., were notable attendees. Prof. Dato' Dr. Faisal Rafiq Mahmd Adikan, USM's Vice-Chancellor, welcomed them and stressed the importance of information exchange in company success. The event supports SDG 8 by encouraging economic growth, entrepreneurship, and community engagement with approximately 500 participants.



Build resilient infrastructure, promote sustainable industrialization and foster innovation

RESEARCH/INNOVATION

Students of Architecture from USM Won all the Top Prizes in the Architalent Competition

At the 4th 'Architalent Future City Competition', three students from USM Architecture won a total of 2,000 USD in cash prizes. Their innovative ideas and futuristic designs caught the attention of the jury, earning them a spot among the top prize winners. Mohd Pirdaus Beddu's self-sustainable floating city design highlights a future that is eco-friendly and self-sufficient. Ooi Ee Ling's decentralised city centre concept aims to create a walkable community and solve the scarcity of land in every city. Muhammad Nadhir Bashyar's exceptional presentation skills earned him the best presenter award. Their hard work and passion for architecture are truly inspiring and serve as a reminder that innovative ideas can make a difference in creating a better future.

Several HBP M.Arch Students have been Awarded in International Competitions

HBP Master of Architecture students Gavin Tio Kang Hui and Muhammad Luqman El Hakim bin Mohd Amran have won two awards in the International Building Information Modelling (BIM) Competition. Their outstanding design of a smart campus was recognized with the 'Best Modeler Awards', inspiring other students to participate in local and international competitions to compete globally.

USM Researchers Achieve 100% Medal Success at MTE SDG 2022

Six researchers from USM have won medals at the Malaysia Technology Expo Sustainable Development Goals (MTE SDG) 2022. The event saw participation from the research community both locally and abroad. USM won four gold medals, a silver medal, and a bronze medal, which has helped the university maintain its 100% achievement record for overall medal wins. The 2nd edition of the Malaysia Technology Expo (MTE) 2022: SDG International Innovation Awards & Expo was held virtually from 17th to 21st October 2022. The event aimed to recognize innovations, initiatives, programs, and ideas that contribute to sustainability, eradicate poverty, improve well-being, protect our planet, and build peace and prosperity.

Researchers from USM and VANZO Asia study essential oils

USM and VANZO Asia Sdn. Bhd. have signed a Research Collaboration Agreement (RCA) to study essential oil biochemistry for environmental and medicinal applications. The alliance aims to enhance biotechnology research and cooperation. USM's INFORMM and VANZO Asia will examine chosen essential oils' cytotoxicity, immunological modulation, and active components. This agreement highlights the importance of collaboration between academia and industry to advance technology and innovation in Malaysia.



Malaysia's First Angkasa-X Earth Station Farm & Space Technology Centre

The USM Engineering Campus has been carefully selected as the optimal location for the Earth Station, as it provides the highest satellite revisit time for near-equatorial orbit. The Angkasa-X Earth Station and laboratory, situated on a 2-acre land in the heart of the campus, is a symbol of Malaysia's commitment to exploring new frontiers in satellite development, particularly in satellite communication technology. Through this station, the Angkasa-X A-SEANSAT LEO satellite constellations will be formed and operated, enabling Malaysia to establish an ecosystem for its space industry. This is an incredible achievement, and we look forward to witnessing the impact this project will have on our nation's future.

Lecturer at USM Receives the Fulbright Malaysian Scholar Award for FY2022-2023

Dr. G. Veera Singham, a senior lecturer at USM Centre for Chemical Biology (CCB), has been awarded the esteemed Fulbright Malaysian Scholar Award for the academic year 2022-2023. The award, which is sponsored by the Bureau of Educational and Cultural Affairs of the U.S. Department of State, will enable Veera to conduct research at the University of California, Riverside, USA, regarding insecticide resistance and resistance management of the tropical bed bug.

USM Co-Founded Flexilicate

Professor Dato' Faisal Rafiq Mahamd Adikan, Vice-Chancellor of USM, shared his expertise in photonics during a public lecture. He worked on UV writing optical devices on glass substrates and co-founded Flexilicate Sdn. Bhd., a spin-off company. His success in photonics can inspire others and demonstrate USM's commitment to academic excellence and photonics.

USM Partnered with SilTerra for Research in Microelectronics Technologies

For more than two decades, USM has collaborated with SilTerra Malaysia to deepen academic and research engagement in microelectronics technologies. This partnership focuses on several areas, including talent development through sponsored internship programs, skill-based training, seminars, workshops, and joint-curriculum development. The collaboration also includes consultation, corporate social responsibility (CSR) projects, and providing students with industrial training or staff industrial attachment. The primary goal of the partnership is to nurture local talents and position Malaysia as a major supplier of semiconductor components. This contribution to the industry will help with the development of research and design capabilities.

Oppstar On-Campus IC Design Incubation Programme at USM

USM and Oppstar Technology signed an MoA for the "Oppstar On-Campus IC Design Incubation Programme." The programme will establish a dedicated lab in the School of Electrical and Electronic Engineering at the USM Engineering Campus, where selected students will work on their Final Year Projects, supervised by school academics. Oppstar's staff will act as mentors, providing real-world design problems and training in IC design skills. The initiative promotes university-industry cooperation, fosters technological innovation, and enhances graduate employability.

USM Rocket Team Makes Malaysia Proud by Winning 11th Place in Spaceport America Cup 2022

USM has ranked 11th out of 153 teams in the Spaceport America Cup 2022, the world's largest intercollegiate rocket engineering conference. The team, consisting of 11 undergraduates, achieved a high score of 60 marks in entry and progress, technical report, design, flight performance, and 50 bonus marks. Their inaugural entry earned them a social media award. The team's HEBAT rocket, built at RM35, weighed 30kg and measured 3.3m in height without structural damage. USM plans to expand its team in the future, setting a benchmark for Malaysian university students in rocketry development.



COMMUNITY & INDUSTRY ENGAGEMENT

Malaysia Airlines will transport the inaugural Malaysian team from USM to the Spaceport America Cup 2022

Malaysia Airlines has provided transportation for the inaugural Malaysian team representing the engineering campus of Universiti Sains Malaysia (USM) to attend the Spaceport America (SA) Cup 2022 in New Mexico, USA. The SA Cup is the largest intercollegiate conference and competition in rocket engineering. In addition to providing 40% off round-trip airfare, the national carrier extended these perks to team members travelling to El Paso International Airport in Texas. This initiative fosters the development of young individuals and makes a positive impact on the aerospace sector of the nation. Twenty-two countries were represented in the competition, with Malaysia and Thailand making their inaugural appearances.



USM Joins International Institute of Industrial IoT for Technological Advancement and Industry-Academia Collaboration

USM will play a significant role in the newly established International Institute of Industrial IoT. This joint institute with XMUT, Oppstar Technology, and Xiamen KirinCore IoT Technology aims to foster cooperation in microelectronics and IoT. The institute aligns with SDG 9, promoting industry-academia collaboration and technological advancement. This initiative aims to be a model of Sino-foreign collaboration and contribute to economic and social development, making it a valuable addition to the Community & Industry Engagement category.

ICAP 2022 Engagement Session: USM's Commitment to Industry-Academia Collaboration for Economic Growth

The ICAP 2022 Engagement Session by USM connected academia and industry, fostering collaboration between the university and various sectors. USM's commitment to industry engagement is evident, even during COVID-19. This promotes partnerships between academic institutions and the business community, contributing to industry innovation and infrastructure development.

TEACHING/LEARNING

USM is the First University to Open a Metaverse Space—Library@IPPT

USM has introduced a Metaverse Space Library at its Advanced Medical and Dental Institute (IPPT) Bertam Campus. It offers a range of digital environments connected to the virtual world, without computers. This platform integrates all forms of information and entertainment in the 3D virtual world, improving the effectiveness of teaching and training. The IPPT library has developed a 3D Data Management System called 'VR Discovery' which transforms library information source materials into 3D format. This initiative enables users to experience immersive virtual reality technology in the library.

The Ship Campus

PKT Logistic Group Sdn. Bhd. has established the Ship Campus, a part of their Corporate Social Responsibility (CSR) initiative. The campus, located near USM, will enhance Peninsula College's campus-in-industry model, allowing graduates to acquire industry-specific skills and become quality graduates. Students will also have the chance to work part-time with industry partners, fostering collaboration and enhancing their learning experience.

USM and MAG Build FOSA System

MAG and USM have signed a MoA to create a Flight Operations Safety Audit (FOSA) system. This system will mine flight operations and threat and error management data to improve operational safety. The alliance also seeks lean operational management and information transfer through training, internships, and industry talks. FOSA can be used in operational safety-focused service industries and has an RM2 million market value. The project promotes aviation safety innovation.

USM hosts "Making the Best of LIFE" with InterVenn CEO

USM hosted a hybrid sharing session, "Making the Best of LIFE," with InterVenn Biosciences CEO and co-founder Aldo Carrascoso. Mr. Carrascoso highlighted his life and industry and startup experiences during the discussion. It was part of LIFE. USM and InterVenn Biosciences signed a Memorandum of Agreement to collaborate on the Glycoproteomics (GP) Cluster Programme and colorectal cancer biomarker studies at the same occasion. The InterVenn Apprenticeship Programme (IAP) for USM postgraduates was also created. The USM Vice-Chancellor, Deputy Vice-Chancellor, and InterVenn Biosciences representatives participated.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Reengineering Space Projects

USM is dedicated to fostering leadership and talent development through various initiatives. These include the KOPA Arena football field, which supports sport and talent development in the long term, the NEST project that provides a holistic and balanced environment for startups and enterprises, and SCIENCE@USM, which enhances the university's visibility in the golden triangle of Kuala Lumpur. Together, these initiatives represent our commitment to empowering individuals and promoting innovation.

PITCH@USM

PITCH@USM is a dynamic platform that empowers USM staff and students to turn their impact-driven business ideas into reality. The programme not only offers funding opportunities but also provides regulatory assistance to ensure success. By showcasing innovative ideas with comprehensive background study, cultivating a creative and entrepreneurial culture, and fostering technology transfer from R&D activities, PITCH@USM encourages industrial collaboration and involvement to translate research or ideas into potential commercialization prospects. The fact that three winning teams have already been awarded grants for their business start-up shows that PITCH@USM is making a real difference in creating a culture of entrepreneurship and innovation.

At IUCEL 2022, USM Secured Three Gold Medals and Three Special Awards

At the International University Carnival on E-Learning (IUCEL) 2022, USM was bestowed with three significant accolades: the Higher Education e-Learning Maestro Award, the Best Trend-Setter Award, and the Massive Open Online Course (MOOC) Award. Furthermore, USM won a number of accolades at the Invention, Innovation & Design on E-Learning (IIDELE) Competition, which included two bronze awards, nine silver awards, and three gold awards. With an emphasis on e-learning, the IUCEL event sought to promote, investigate, and exchange best practises in education and instruction.

From Challenging Background to Best Overall Cadet Officer at USM

Muhammad Badrul Amin Abd Halim, a 25-year-old from Kuala Kedah, won the Best Overall Cadet Officer title at the 'Majlis Lafaz Pengisytiharan Pentauliahah & Pemakaian Pangkat Pegawai Kadet PALAPES Darat Universiti Awam ke-39' in USM. Despite his challenging background, he excelled academically and in extracurricular activities, demonstrating strong leadership qualities that earned him the Senior Junior Officer and Overall Best Cadet Officer titles. The event commissioned PALAPES cadet officers from various public higher education institutions and was held with COVID-19 safety measures in place.

Undergraduates in Computer Science from USM Win First Place in the Huawei ICT Global Competition

Three undergraduates from USM School of Computer Sciences were honoured for achieving first place in the Huawei ICT Competition Global Final. With the intention of improving the practical knowledge and ICT competencies of students, the competition attracts entrants from universities across the globe. Through a collaboration agreement with Huawei ICT Academy, USM continues to provide funding for student-beneficial programmes.



Reduce inequality within and among countries

RESEARCH/INNOVATION

USM-PERKESO: Robotic Rehabilitation Services

USM and PERKESO have established the Neuro-Robotic and Cybernetics IPPT Clinic, a strategic partnership that includes six Cyberdyne Hybrid Assistive Limb units for treating patients with spinal cord damage, stroke, or neurological issues. The clinic is the only active rehabilitation institution in Malaysia's northern region that provides neuro-robotics and cybernetics services, a step towards making cybernetics treatment a global standard based on the integration of humans, machines, and information systems.



Award-Winning Innovation: 'MA-Pencil' to Help Autistic Children Grip a Pencil Correctly

An inventive solution known as the MA-Pencil, created by a final-year student from the School of the Arts at USM, aims to aid autistic children in maintaining proper pencil grip. By incorporating a weighted gripper into a multifunctional pencil set, the MA-Pencil assists children as they progress through the various phases of pencil grip development. There is an entertaining audio element in the design. The 'James Dyson Award 2022' and student recognition have been bestowed upon this innovation.

USM Lecturer Selected as a Mentor for the Space Programme of the United States

Dr. Norilmi Amilia Ismail, a lecturer at the USM School of Aerospace Engineering and the founder of SpaceIn, an organisation dedicated to space education and small satellite systems, has been appointed as the exclusive Malaysian mentor for the Space4Women initiative. This project is administered by the United Nations Office for Outer Space Affairs (UNOOSA). UNOOSA was founded with the intention of providing women worldwide with educational and professional opportunities in the fields of outer space and STEM (Science, Technology, Engineering, and Mathematics). One hundred participants, including Dr. Norilmi, were chosen from around the globe to share their knowledge and mentor young women (mentees) who are enthusiastic about STEM in order to help them advance in the space field.

COMMUNITY & INDUSTRY ENGAGEMENT

Coming Together is the Beginning, Staying Together is Progress, Working Together is a Success

USM's International Mobility and Collaboration Centre and International Student Society organized the Ramadhan Football Championship to bring local and international students together. 192 players from 20 countries, representing 17 schools, participated in the event, promoting inclusivity and cultural exchange among students. The championship focuses on reducing inequalities, and supports USM's internationalization efforts.

Disability Does Not Prevent Degree Earning

USM's 59th Convocation Ceremony saw PWD Muhammad Razin Salim receive his Bachelor of Engineering degree with exceptional endurance and determination. Due to its proximity to his family, Razin first studied engineering despite physical difficulties. He became interested in maths through passion. His favourite family member died in 2020, a major setback. Razin persevered and studied despite hardships. Razin wanted a USM master's degree despite his disability's employment market challenges. His experience shows how impairments shouldn't stop achievement.

USM-PDM Collaboration Highlights Dyslexic Children's Potential

At the Galeri and Tuanku Fauziah Museum, USM and the Dyslexia Association of Malaysia (PDM) Northern Branch have signed an MoU to use USM's resources and knowledge to help dyslexic children grow. The partnership will include creative learning, art therapy, fine arts, graphic communication design, industrial design, and music. The partnership will also involve commercial products, generating income and raising awareness of dyslexic children's potential.

TEACHING/LEARNING

The Festival of Ageing Well

According to United Nations statistics, by the year 2050, there will be more people aged 60 and up than children on the planet for the first time in human history. With this realisation in mind, the USM Graduate School of Business (GSB) and Bagan Specialist Centre have worked on an initiative to raise awareness of the country's ageing population. The two-day Ageing Well Festival was held concurrently at both universities, with the same goals of raising awareness about the impact of an ageing population, embracing ageing, and becoming old with dignity in society. This festival also served as a means of educating the younger generation on the importance of caring for senior folks and developing an age-friendly culture that embraces the elderly rather than isolating, dismissing, or neglecting them.



Disability Does Not Prevent Goals 2022 Student Welcome Ceremony

USM held a Student Welcome Ceremony for its 2022/2023 Academic Session, welcoming 4,283 new students and reviving the customary ceremony. The ceremony featured dancing, singing, and forming the Malaysian flag. Two students with impairments, G. Ryenaath and Norfatihah Abdul Rahim, were welcomed, expressing their excitement and support for their education. USM Deputy Vice-Chancellor Prof. Dato' Gs. Dr. Narimah Samat promoted USM programs and encouraged resilience.



USM's Empower NCER-Academic Programme Changes Families—Participants Perform Well

The empowerNCER-Academic programme, financed by the Northern Corridor Implementation Authority (NCIA), is enhancing the academic performance of impoverished B40 households at USM. The program, run by the USM Division of Industry and Community Network (BJIM) and USAINS Holding Sdn Bhd, aims to improve academic achievement, skills proficiency, and personal and emotional growth through engaging teaching and learning. 99.3% of 993 students passed the SPM test.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Staff Well-Being Constantly Requires Priority

USM prioritizes the welfare of its community, including staff. The institution is implementing measures to support staff, including incorporating their children into the support group. Credit Counselling and Management Agency (AKPK) provides guidance on personal financial management. USM has established accessible financing programs and welfare funds to support faculty and staff, especially those with disabilities. These funds also aid those in need of educational advancement and provide opportunities for talent development through the sports academy. Additionally, USM plans to construct staff housing near the University Recreation Park, allowing employees to save for their own residences.

We're All Flawed, which is OK

Mahavithia Arumugam and Harmel Kaur Gill, two remarkable graduates, received their Bachelor of Arts degrees during USM's 59th Convocation Ceremony. After being sight challenged since infancy, Mahavithia continued her schooling in special education. She had trouble attending lectures, but her friends helped her get there every day. She credits her accomplishment to her commitment to offer pleasure to her childhood carer, her cousin. Born with monoplegic cerebral palsy, Harmel Kaur has one limb damaged. In 2017, she almost lost her ability to walk and needed help. Despite a year of rehabilitation, she persisted. Harmel Kaur encourages other kids in similar situations to think they can accomplish what others do and better if they believe in themselves. Both graduates say their limitations are blessings that have prepared them for future difficulties.

The USM+1 Programme

The USM+1 student intake alternative allows students not admitted via UPU to apply for 49 study programs across various disciplines during the April and October 2022 intake periods. This program is designed for students with outstanding academic credentials and is operated on a full fees basis without subsidies. Applicants must understand the admission terms and conditions before submitting their applications.



Make cities and human settlements inclusive, safe, resilient and sustainable

RESEARCH/INNOVATION

USM-CUG will Enhance Cultural, Educational, and Scientific Research Exchange and Cooperation Through a MoU

China University of Geosciences (CUG) and USM have entered into a Memorandum of Understanding (MoU) with the aim of fostering collaboration and knowledge sharing in the fields of science, education, and culture. The purpose of this agreement is to capitalise on the respective capabilities of both institutions in a range of critical and developing academic disciplines, all while advancing the cause of sustainable development. It is anticipated that the collaboration will have a positive impact on educational progress and strengthen diplomatic ties between China and Malaysia, while also promoting research endeavours aimed at tackling current challenges and concerns.

Earth Material Characterization Laboratory Offers the Most Advanced Archaeological Research Analysis Facilities

The Earth Material Characterisation Lab (EMCL), inaugurated by the Secretary-General of the Ministry of Higher Education, Dato' Seri Abdul Razak bin Jaafar, is Malaysia's only and Southeast Asia's best archaeological research lab. Famous institutions including Harvard, Cambridge, and Tokyo have comparable laboratories. The EMCL has high-end archaeological instrumentation and was ISO17025-accredited by SAMM in March 2022. It can analyse field-collected artefacts and geological materials to determine chemical compositions and mineral origins. It can also date artefacts and serves USM and non-USM scholars and students. The lab's SEM, ICPMS, XRF, XRD, and OSL TL support a variety of archaeology and related research.



COMMUNITY & INDUSTRY ENGAGEMENT

USM Offers Prayers for the Victims of the Floods in Pakistan

In solidarity with the nation, USM coordinated supplications for the victims of the floods in Pakistan, which was one of the most devastating natural calamities to strike the country. The severe flooding resulting from the most severe monsoon season in over a decade has claimed the lives of over 1,100 individuals and affected 33 million others. Life, infrastructure, and crops have been impacted by the floods, which has exacerbated the preexisting food crisis.

Partnership with Digital Penang for Powerful Digital Economy

The USM-Digital Penang Collaboration Agreement is a crucial step towards digital economic growth. Digital Penang, a government-owned firm, supports USM's PITCH@USM programme with RM50,000 to encourage students and staff to think creatively and innovatively. USM faculty and students may propose innovative ideas and breakthroughs in entrepreneurship, "deep technology" products, and social business solutions at PITCH@USM. This relationship empowers the digital community and promotes creativity, sustainability, and influence.

USM Sends Volunteers to Baling Flood Victims, Kedah

Student volunteers from USM are helping Baling, Kedah flood victims. The USM Division of Student Development and Alumni Affairs (HEPA) is organising student volunteers to help flood victims. Prof. Dr. Azlinda Azman, USM's Deputy Vice-Chancellor for Student Development and Alumni Affairs, said they're assessing flood victims, especially students and university members, and student volunteers are collecting money. The USM Volunteer Secretariat and Universiti Sains Malaysia's Kedah Students Group are collecting. A representative from USM's Disaster Management Nerve Centre (PPBNC) has also arrived to examine the situation and distribute personal hygiene kits and face masks to prevent illness transmission.

TEACHING/LEARNING

Seven Officers are JBPM's First Fire Safety Engineering Science Graduates

USM is the first public institution in Malaysia and Southeast Asia to provide a Master of Science in Fire Safety Engineering, advancing fire safety engineering skills. The first seven JBPM officers graduated at USM's 60th Convocation Ceremony's third session. A Memorandum of Understanding facilitates fire safety engineering knowledge transfer and skill sharing. Graduate fire officers will have access to research facilities and serve vital responsibilities as fire safety officers in buildings and industries. JBPM's ambitions to implement an act requiring fire safety officers in every premise and to demand safety officers for at-risk institutions or sectors make this endeavour significant.

The Life Programme at USM Teaches Students about UNESCO World Heritage

Life: Discovering Labs@Archeo was held at the USM Archaeological Field Centre in Lenggong, Perak. To introduce 51 undergraduates to archaeology. Academics from different fields participated in excavation, site visitation, and artefact examination. They also cleaned up the spot together. This direct contact to archaeology helped students understand the importance of maintaining places, especially the Lenggong Valley UNESCO World Heritage site. The event opened their eyes to prehistoric human life for students from several fields. Archaeology helps comprehend and preserve cultural heritage, they realised. Even if archaeology isn't their major, such programmes help students appreciate and protect Malaysia's ancient treasures.



OPERATION (INSTITUTIONAL ARRANGEMENT)

USM Architecture Students Do the University Proud, Swept Top Prizes in Architalent Competition

The Architecture students of the School of Housing, Building, and Planning (HBP) at USM performed exceptionally well in the fourth "Architalent Future City Competition" for Architecture Students. All participants were awarded a cash prize totaling \$2,000; Mohd Pirdaus Beddu emerged victorious with a \$1,000 grand prize for his innovative concept of a 'Loop Linear Autogenic City.' The 'Aquascraper' entry submitted by Ooi Ee Ling placed her in first place, while Muhammad Nadhir Bashyar was named the recipient of the finest presenter award. The objective of this competition was to assess students' aptitude for conceptualising future cities and communicating their ideas.

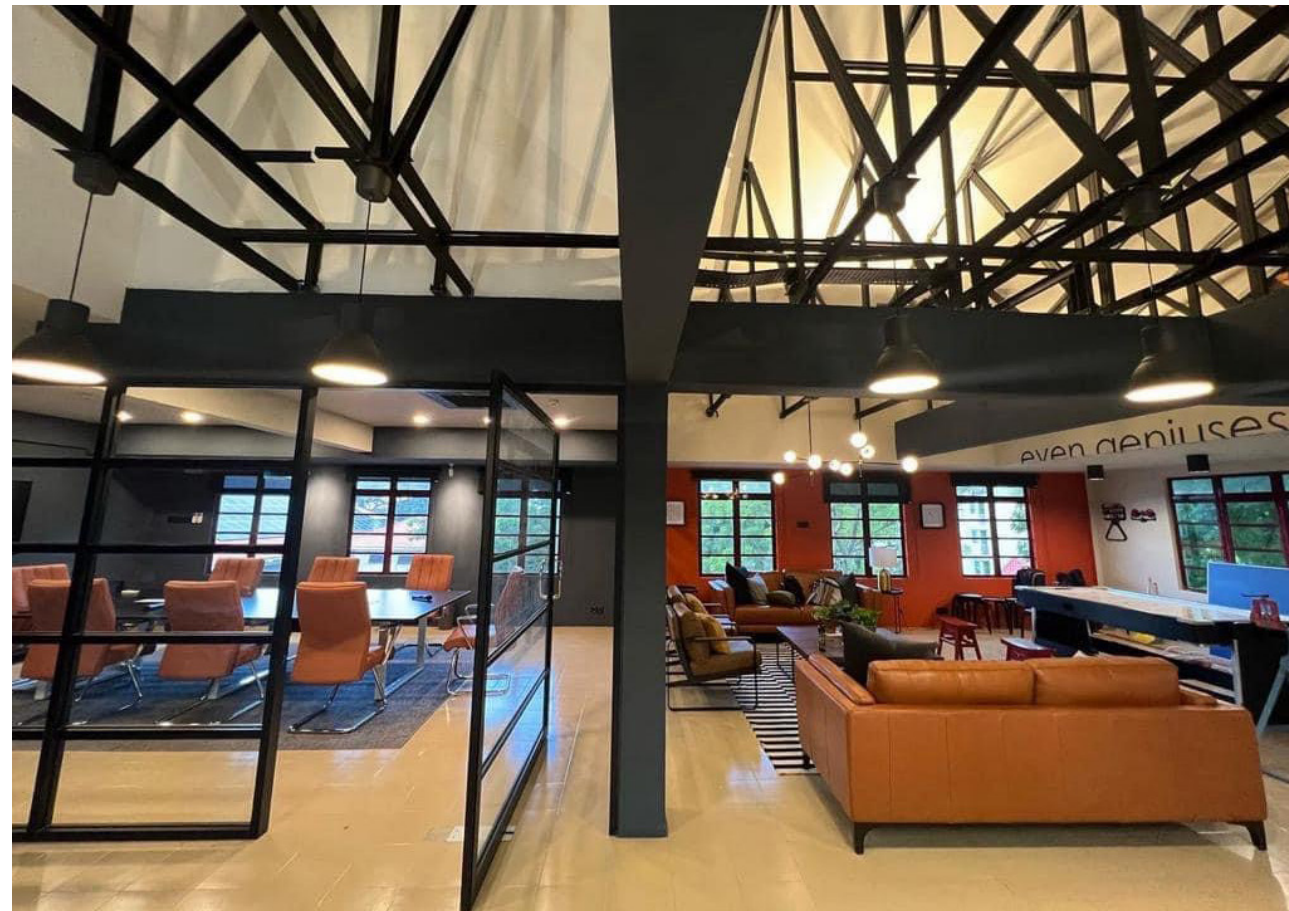


Mapping Disaster-Affected Students and Staff

The Nerve Centre, a Disaster Management Centre at USM, maps students and staff affected by catastrophes like floods nationwide. This effort improves university disaster response and recovery. The Nerve Centre, founded during the COVID-19 epidemic, locates USM members during crises for organised and fast aid. It prioritises disasters, emergencies, disease outbreaks, mental health, and volunteering. Training and courses aim to improve disaster and crisis response preparedness and competence. University students and staff need skilled volunteers and staff guidance. The Nerve Centre improves university community well-being and sustainability.

The Nest for Student Idea, Technological Creativity, and Innovation

USM created "The Nest," a physical environment for student-led technical and creative product creation, to encourage creativity and entrepreneurship. This is a "Research & Innovation" project. Through programmes like Pitch@USM, "The Nest" encourages students to interact, discuss, and express their creativity. Students may work on projects in The Nest from 8:00 AM until 12:00 AM. With access cards and security, the facility should run 24/7. "The Nest"'s design and interior reflect its inventive mission, emphasising the need for innovation and uniqueness in ideation.



Ensure sustainable consumption and production patterns

RESEARCH/INNOVATION

Effect of Kenaf to Glass Fiber Ratio on the Properties of Hybrid Pultruded Composite

The study examined the effect of kenaf to glass fiber ratio on the properties of hybrid pultruded composite. Glass and kenaf fibers were tested using a miniature tensile machine, and rod-shaped samples were created. The hybrid PKGRC samples were compared with a commercial PKRC sample. Compression and flexural tests were conducted to determine the best fiber combination for maximum mechanical strength. A water absorption test was conducted to study aging effects on compressive strength. Thermal stability was also studied after adding glass fibers..

Bioprocess Tech Research at School of Technology Industry

Bioprocess is a specific process that uses complete living cells or their components (e.g., bacteria, enzymes, chloroplasts) to obtain desired products. Transport of energy and mass is fundamental to many biological and environmental processes. Bioprocess technology involves the technique that produces biological materials, such as a genetically engineered microbial strain for commercial use, and the production of a commercially valuable chemical or fuel by a biological process, such as microbial fermentation or degradation.

COMMUNITY & INDUSTRY ENGAGEMENT

Green Ambassadors Are Recognised by USM for Promoting Environmental Sustainability

Students who were selected as Green Ambassadors (GAs) at USM in recognition of their endeavours to advance environmental sustainability and sustainable development were feted and honoured. The GAs, an organisation headed by students, have implemented recycling initiatives and activities on campus with the intention of motivating the USM community to adopt sustainable behaviours. The GAs were honoured for their contributions at the ceremony and were motivated to further their endeavours in promoting environmental protection and sustainability.



Youth to Celebrate Cultural Heritage and Diversity at USM Culture and Arts Festival 2022

After two years of COVID-19 restrictions, the USM Cultural and Arts Secretariat staged the USM Culture and Arts Festival 2022. Over 3,000 spectators watched Penang Chief Minister Chow Kon Yeow launch the event at the USM Parade Ground. With the subject 'Retro Memoir' and the fundamental principle 'Uphold the Colours of Culture', this year's festival encouraged youth to embrace different culture and remember and inherit the unique culture of many races. USM supports student involvement in such programmes to develop H.E.B.A.T., which boosts employability and self-identity. Students can also learn tolerance and solidarity through these programmes. Traditional USM Adikarma Art Troupe dances were among the event's enthralling cultural presentations. The festival was attended by USM officials, including Cultural Centre Director Ramnah Ramli.



TEACHING/LEARNING

The Malaysian Skills Certification Programme for Solid Waste Management and Public Cleaning was pioneered by USM

Malaysia's first solid waste and public cleaning management skills certification programme is at USM. USM's School of Civil Engineering offers Level 3 Solid Waste Collection Operations certification. USM, SWCorp, and the Skills Development Department collaborate. USM Vice-Chancellor Prof. Dato' Dr. Faisal Rafiq Mahamd Adikan stressed the university's role in waste management skills and sustainability. He stressed waste reduction and recycling to reduce pollution. Professor Dr. Mohd Suffian Yusoff, Dean of the School of Civil Engineering, said this certification programme enhances students' education. Major stakeholders attended the programme launch.

USM, SWCorp Collaborate to Improve Solid Waste Management

USM and SWCorp Malaysia have partnered to train future solid waste management professionals. This partnership created the Solid Waste Training Centre (SWTC) North Region at USM's Engineering Campus in Nibong Tebal. Training 1,000 USM graduates in allied disciplines is the goal of this effort. Students will get a Bachelor's degree in their majors and a Malaysian Skills Certificate (SKM) Level 3 from the National Dual Training System. This partnership helps Malaysia's TVET implementation, boosting the solid waste management sector and improving graduates' employability.

OPERATION (INSTITUTIONAL ARRANGEMENT)

USM Honours 5-Star Asset Management Units

32 asset management Responsibility Centres at USM received five stars. This recognition helps USM prepare for Phase 3 of University Asset Management in October 2022. The Vice-Chancellor, Professor Dato' Dr. Faisal Rafiq Mahmd Adikan, thanked all asset officers for their invaluable contributions and suggested that five-star officers be prioritised for staff training programmes, including the Administrative Outreach Programme (AOP), which offers overseas training as an incentive. Asset management requires responsibility and trust, according to Deputy Vice-Chancellor for Sustainability and Institutional Development Professor Dr. Md. Roslan Hashim. USM wants all Responsibility Centres to be five-star asset managers by January 2023. Five-star performers will help four-star performers.

USM Received RM100,000 to Increase Entrepreneurship

USM received RM100,000 from the Penang State Government under the "Entrepreneurship: A Cultural One" initiative to boost its entrepreneurship programme. This year-long project, launched by Executive Councillor for Trade, Industry, and Entrepreneurial Development YB Dato' Haji Abdul Halim Hussain, runs from August 1, 2022, to June 30, 2023, with possible extensions until 2030, to promote entrepreneurship in Penang. MSMEs boost regional economic development, according to it. The Penang2030 vision emphasises entrepreneurship's role in economic development and family income. The campaign gives USM RM100,000 to improve its university entrepreneurial programmes, which supports the institution's aim to nurture students and entrepreneurs.





Take urgent action to combat climate change and its impacts

RESEARCH/INNOVATION

USM Academic Honoured for Antarctic Research

Dr. Faradina Merican’s achievement of being awarded the 2021 SCAR Visiting Scholarship in the “Research & Innovation” category is truly remarkable. Her research on antibiotic resistance in eukaryotic algae in the Antarctic is a testament to her commitment towards understanding and addressing the environmental impact of climate change and its effects on ecosystems. By aligning her work with Sustainable Development Goal (SDG) 13: Climate Action, Dr. Faradina’s research has the potential to make a significant impact towards promoting scientific collaboration and capacity-building that will contribute to advancing Antarctic research and addressing climate-related challenges.

USM-PETRONAS Collaborates to Provide Carbon Dioxide Mitigation Solutions

USM and Petronas Research Sdn Bhd have partnered to develop a research project aimed at reducing carbon dioxide emissions. The project aims to convert CO2 into valuable fuel gases like syngas and carbon monoxide using microwave heating technology. The initiative also acknowledges the abundant petcoke supply and aims to incorporate it into the valorization process for future applications. This partnership aligns with Sustainable Development Goal 13.

Solar Energy as the Foundation for USM’s Sustainable Campus: Embracing Climate-Friendly Initiatives

USM is embracing sustainability by partnering with Sunway Engineering Sdn. Bhd. and Ditrolc Energy Solutions to implement a Solar Power Purchase Agreement (SPPA). This initiative has reduced the monthly utility bill by 30% and has led to roof restorations and a RM30 million solar panel installation. This aligns with Malaysia’s goal of achieving carbon neutrality and aligns with Sustainable Development Goal 13: Climate Action. The initiative aims to create a more sustainable campus environment, inspiring communities, organizations, and students to contribute to net-zero carbon emissions and demonstrating how higher education institutions can lead in addressing climate change.

COMMUNITY & INDUSTRY ENGAGEMENT

Fostering Innovative and Practical Understanding among Students

The LIFE programme, developed at USM, is an educational initiative that integrates experiential learning to provide students with a comprehensive understanding of life. The program aims to cultivate students’ USM DNA, promoting self-exploration, societal comprehension, and a global perspective. It covers environmental sustainability, financial stability, and sustainable health. The programme offers modules on digital financial literacy, nature preservation, innovative thinking, aging, resilience, and sustainability. It equips students with the necessary resources to secure a sustainable future, fostering individuals capable of affecting positive change on society and the environment.



TEACHING/LEARNING

Academic Programmes

Our intrepid students are actively confronting the matter of climate change in a broad spectrum of undergraduate and graduate-level courses. Master of Technology (Honours) (Environmental) is a dynamic, three-and-a-half-year programme designed to impart a comprehensive understanding of the technology utilised to mitigate pollution and address environmental issues. Environmental technology is applicable in a wide range of contexts, including the public and private sectors, at the local and international levels. This all-encompassing curriculum is structured around three fundamental and interrelated fields: management, science, and technology. You will be equipped with a comprehensive education that enables you to make significant contributions across multiple sectors. Furthermore, pupils are provided with opportunities to encounter and are motivated to acknowledge the complex obstacles that are linked to economic, environmental, and social sustainability. Usm.my is Environmental Technology.

A Month-Long Embracing Sustainable Practises Journey Towards a Greener Future

USM has organized “Environmental Sustainability & Solid Waste Management” during Sustainability Month, aiming to promote sustainable practices and contribute to sustainable development. Activities include webinars, a community project, and a coast clean-up. The aim is to cultivate sustainable lifestyles, promote sustainable practices, diversify sustainability-related endeavors, and instill accountability for sustainability in everyday life. This aligns with Sustainable Development Goal 13 and promotes environmentally responsible conduct. Sustainability Month also allows individuals to explore the complexities of waste management, recycling, and disposal, enhancing their understanding of sustainability.

OPERATION (INSTITUTIONAL ARRANGEMENT)

Pathway of Carbon Footprint at USM

The USM Low Carbon City Blueprint Implementation Document outlines a strategy to transform the USM into an environmentally conscious and sustainable institution. It focuses on four critical components: Electricity, Mobility, Waste, and Water. The blueprint aims to reduce energy usage by 2030 and increase renewable energy generation on campus. It also promotes sustainable transport, cycling, walking, waste management, and water management. The document aligns with the UN's Sustainable Development Goals and emphasizes USM's commitment to responsible resource management and environmental sustainability.



Conserve and sustainably use the oceans, seas and marine resources for sustainable development

RESEARCH/INNOVATION

The USM CEMACS-Led Team won the Digital Ocean Data Challenge

The 7th Ocean Hackathon was won by a group of eight students representing Universiti Kebangsaan Malaysia and Universiti Malaya. Their innovative solution for forecasting jellyfish outbreaks along the Penang coast was implemented as a mobile application in Kuala Lumpur, Malaysia. By utilising citizen science and the long-term surveillance of USM Centre for Marine and Coastal Studies (CEMACS), the application offers first aid guidelines for injuries caused by jellyfish. The team's pioneering marine conservation solution is exemplified by their exceptional problem-solving capabilities, which are evident in their inventive approach.

USM's Demonstration of Unwavering Dedication to Marine Sustainability

USM, led by Dr. Chee Su Yin, attended a IMDC event in Antwerp to promote cooperation and information exchange on marine and coastal sustainability. The event aimed to align with UN Sustainable Development Goal 14—Life Below Water. The exchange of ideas and knowledge between USM and IMDC, the Royal Netherlands Institute for Sea Research and the University of Antwerp, has potential for future partnerships to address environmental hazards and sustainable water resource management.

French Ambassador, Former USM Dean Visit CEMACS

Former Dean of the USM School of Chemical Sciences and President of the Academy of Tropical Agricultural Sciences Association (ATAS) Tan Sri Emeritus Professor Datuk Dr. Augustine Ong Soon Hock visited the USM Centre for Marine and Coastal Studies with French Ambassador Roland Galharague. They examined CEMACS' marine science, training, and research programmes. Discussions focused on France-Malaysia cooperation.



COMMUNITY & INDUSTRY ENGAGEMENT

(SEAS) Camp

On World Environment Day, 2022, Water Watch Penang and the Centre for Global Sustainability Studies at USM organized SEAS Camp 2022, involving 28 secondary school students aged 13-17. The event covered various aquatic sciences-related topics, including water quality testing, marine conservation implementation, microplastic detection, and an informative card game. The camp was funded by PBAPP and demonstrated the organization's commitment to promoting environmental consciousness and aquatic education. The event was attended by educators, postgraduates, research assistants, and interns.

2022: International Coastal Cleanup

The Centre for Marine and Coastal Studies at Universiti Sains Malaysia appreciates the participation of 19 groups and 508 individuals in the International Coastal Cleanup Month 2022. The month-long campaign has collected 12,256 items, with cigarette remnants, plastic straws/stirers, and food wrappers being the most frequently collected. The Centre thanks partners and the public for their support and encourages participants to include their identification information in group data.

TEACHING/LEARNING

CEMACS's LIFE Programme: Expanding Education Beyond the Classroom

The LIFE Programme at CEMACS, part of Universiti Sains Malaysia's LIFE Programme, involved 30 students in a two-day, one-night investigation at the country's oldest marine research station. They lived in the dormitory and engaged in experiential learning, pushing the boundaries of traditional schooling. The program will continue with visits to the River Engineering and Urban Drainage Research Centre and the archaeological site.

USM Vice-Chancellor Receives Visit by Marine Scientists from CEFAS UK

USM welcomed delegates from the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), United Kingdom, with the purpose of exploring prospective collaboration and deliberating on areas of expertise in the field of marine science. The purpose of the visit is to strengthen marine science research and innovation collaborations between Malaysia and the United Kingdom. During their visit, the CEFAS crew additionally engaged in a workshop at the Centre for Marine and Coastal Studies (CEMACS) of USM.



Aquatic Biology: Available Courses

Aquatic biology is an applied biology discipline that investigates and analyses the ecosystems and biology of freshwater, brackish, and marine environments from a multidisciplinary perspective. In light of the fact that water covers an estimated 71% of the Earth's surface, aquatic ecosystems predominate across the planet. Because of this, aquatic biology and environmental biology are intricately intertwined. Academic staff members affiliated with the School of Biological Sciences supervise doctoral candidates who are engaged in research pertaining to environmental biology in addition to aquatic biology. Consequently, the domains of Aquatic Biology and Environmental Biology are consolidated within the AQEN Bio (Aquatic & Environmental Biology) division, which is overseen by the identical Programme Chairperson.

Webinar on Cockle Farming: The FAO and USM Collaborate for Insightful Discourse

The Food and Agriculture Organisation of the United Nations (FAO) and USM are collaborating to present the Cockle Farming webinar. The initial day of this online event is devoted to an analysis of the current status of cockle cultivation and management in the Philippines, China, Indonesia, Malaysia, and Thailand. The subsequent day will see a transition in focus to the prevailing concerns and obstacles encountered in cockle cultivation throughout Asia. Emphasising USM's substantial involvement in co-organizing this enlightening webinar demonstrates the institution's dedication to promoting the exchange of knowledge and addressing relevant issues in aquaculture.

OPERATION (INSTITUTIONAL ARRANGEMENT)

A Collaborative Guide to Mitigating Jellyfish Sting Risk in the Western Pacific and Adjacent Regions

Due to the increased susceptibility of the Western Pacific region to jellyfish attacks, nations have embarked on a collaborative endeavour. USM, or Universiti Sains Malaysia, is at the forefront of this initiative. Notwithstanding the peril, the area lacks standardised protocols for handling jellyfish-related injuries, and coastal communities frequently exhibit a deficiency in first aid expertise. The objective of a comprehensive manual, "General Management Guide for Harmful Jellyfish Stings in the Western Pacific and Adjacent Areas," is to encourage preventative measures and raise public awareness.

SEAGRASS and USM: Raising General Regional Awareness of Seagrass in South East Asia

A workshop titled "Best Practises of Seagrass Monitoring" was organised by the Centre for Marine & Coastal Studies (CEMACS) in collaboration with Ocean Best Practises Systems (OBPS), on October 7, 2022. The primary objectives of the workshop were to acquaint attendees with seagrass monitoring protocols and establish a uniform structure for optimal practises in the oceanic domain. Thirty participants from diverse regions and countries attended the workshop where they deliberated on the possibilities presented by a standardised network for monitoring seagrass. The notion of a "Community of Practises" was deliberated, with the participation of both scholars and members of the general public. Seagrass ecosystems are essential for adaptation and climate resilience. The research findings of undergraduate students from Universiti Sains Malaysia were presented at the 6th International Congress of Fisheries and Aquatic Research.



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

RESEARCH/INNOVATION

Researchers from USM and Japan Develop a Method to Produce Products from Palm Oil Waste in Order to Improve the Economy

Professor Dr. Kosugi Akihiko of the Japan International Research Centre for Agricultural Sciences (JIRCAS) and Professor Dr. K. Sudesh Kumar of the School of Biological Sciences, Universiti Sains Malaysia (USM), have successfully produced products from the branches, fronds, and trunks of palm oil waste for industrial use. The study, titled "Project on Sustainable Replantation of Oil Palm by Adding Value to Palm Oil Trunk Through Scientific and Technological Innovation," is a research project supported by the Japan Science and Technology Agency and Japan International Cooperation (JICA), and is supported by Malaysian and Japanese authorities and agencies, as well as the industry sector.

DoA and USM are Working Strategic Collaborators to Manage Highland Agricultural Activities

The Department of Agriculture Malaysia (DoA) and USM have entered into a Memorandum of Understanding (MoU) in an effort to control sedimentation and erosion in highland agricultural regions. During the signing ceremony that took place at the USM Engineering Campus on March 30, 2022, the Director-General of Agriculture, Dato' Zahimi Hassan, declared that this endeavour will additionally encompass water conservation management endeavours in the impacted regions, including those designated as Special Management Areas (SMA). Another objective of this MOU is to forge a strategic alliance between the two entities encompassing domains such as information, infrastructure, technology, and specialised knowledge, among others. Furthermore, USM will offer educational and training modules at the foundational course levels, as well as specialised knowledge in cooperative disciplines at diverse scholarly tiers, including doctoral, master's, and undergraduate degrees (USM News, n.d.).

Research Expedition to the SEKAR Imej Conservation Area in Sabah

In late September 2022, an expedition of two weeks was initiated by an estimated sixty academics representing Universiti Sains Malaysia, Universiti Malaysia Sabah, and the South East Asia Rainforest Research Partnership (SEARRP), an enduring conservation partner of Wilmar. The purpose of this expedition was to conduct research in the Sekar Imej Conservation Area (SICA). Wilmar and SEARRP extended invitations to Eco-Business and multiple media entities to visit the site near the culmination of the expedition, which was attended by a total of 48 scientists. The objective of this research undertaking, which was to collect initial data on critical species in SICA, has generated enthusiasm among scientists to delve deeper into the restoration and resurgence of other formerly deforested areas.

COMMUNITY & INDUSTRY ENGAGEMENT

RSY Sejahtera Youth USM Creates Children's Reading Materials for Future Sustainability

The student organisation RCE Sejahtera Youth (RSY) recently published several publications on the importance of understanding and caring for the environment. The student association is part of the Centre for Global Sustainability Studies (CGSS) at the USM, and is sponsored by the Regional Centre of Expertise (RCE Penang). Children's storybooks were created by 11 students under the supervision of two lecturers from the School of Educational Sciences (PPIP), Dr. Rohaya Abdullah and Associate Professor Dr. Aswati Hamzah, who are also RCE Penang Affiliate Fellows. These books were created with the intention of increasing awareness and serving as a resource, particularly for the general public, regarding the importance of environmental conservation activities.

Dr. Lim Boo Liat, a Graduate of USM, Honoured by Google Doodle for His Expertise in Zoology

Google Doodle commemorated the life and contributions of Dr. Lim Boo Liat, an esteemed Malaysian zoologist renowned for his knowledge of the biological diversity of Malaysia, on June 21, 2022. Lim obtained his doctorate in zoology from Universiti Sains Malaysia in 1977. Subsequently, he assumed a critical position within the World Health Organization's Vector Biology Control Research Unit. His extraordinary contributions to the fields of zoology and biodiversity have inspired a new generation of Malaysian scientists.



World Environment Day 2022: Mangrove Tree Planting Programme

The Malaysian Green Technology and Climate Change Corporation (MGTC) and Kelab Belia Prihatin Malaysia organised a programme at the Sungai Acheh Mangrove Forest Education Centre in observance of World Environment Day 2022. A total of 235 young individuals hailing from Malaysia participated in the event, including students from USM and members of the local fishing community. Diverse groups, including local fishermen, have planted 180,000 mangrove trees in the Sungai Acheh Centre region over the past two decades.

TEACHING/LEARNING

Let's Travel to Penang for the Malaysia Biodiversity Short Term Programme!

A two-week programme offered by the International Mobility and Collaboration Centre at USM that provides participants with the opportunity to experience the majesty and complexity of some of the world's most biologically diverse and imperilled ecosystems while exploring tropical biodiversity. This programme examines "Species diversity" and "Genetic diversity" in George Town, the UNESCO.

USM to Host 14th IMT-GT UNINET Bioscience International Conference in 2024

USM will host the 14th Indonesia Malaysia Thailand Growth Triangle University Network (IMT-GT UNINET) Bioscience International Conference in 2024. The 13th IMT-GT UNINET Bioscience 2022 International Conference in Thailand ended with the announcement. Researchers and students presented their biological research at the conference. USM is excited to host the 2024 Penang event.

All Parties in Proper Planning Can Empower Community

USM's LASER programme aimed to empower communities through technology and creativity. Deputy Vice-Chancellor for Research and Innovation, Profesor Dato' Ir. Dr. Abdul Rahman Mohamed, highlighted Malaysia's focus on supporting and cultivating rising talent, not infrastructure. He warned of overspending and the importance of careful planning. The event, organized by USM's Division of Industry and Community Network, brought together 40 Registrars, Directors, Deputy Registrars, Deputy Directors, and officials to strengthen academic-society relationships and higher education leadership.

Malaysia ROBOCON 2022

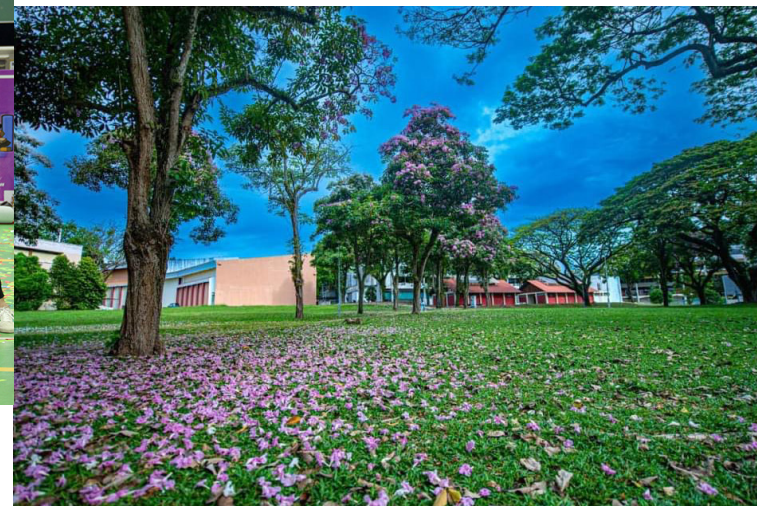
At ROBOCON Malaysia 2022 at USM, UTM B defeated UTM A to win. The competition, "Lagori: Tuju Tin" with the motto "Merempuh Cabaran, Membina Impian," encouraged innovation and robotics technology and gave kids a chance to show off their robot-building talents, originality, and invention. The USM Apex Team, the 2019 ROBOCON Malaysia winner, placed third after a strong group stage. For showing the greatest robot building engineering concepts, they won the Special Award for greatest Engineering. Minister of Higher Education Datuk Seri Dr. Noraini Ahmad launched ROBOCON Malaysia 2022, but he couldn't attend. ROBOCON promotes engineering and high-tech education in Malaysia by hosting a robotics competition and encouraging students to study these subjects. The tournament included 24 teams from different higher education schools, with UTM B winning. The Asia-Pacific Broadcasting Union (ABU) regional robotics competition ROBOCON, started in Malaysia in 2002, has become a popular forum for students to improve their technical and creativity abilities.



OPERATION (INSTITUTIONAL ARRANGEMENT)

LO and Behold, It's 'Sakura' Season Again at the USM Campus

The blooming Tecoma trees, also known as "sakura" trees, at USM campus are a captivating natural attraction that contributes to the cheerful ambiance of the campus. These flowering trees have gained popularity on social media for photography and serve as a reminder of the beauty of nature. Appreciating and conserving these beautiful flowering trees can inspire us to preserve and protect the natural world around us and contribute towards achieving SDG15. A website's Top 20 list of places to observe 'sakura' trees on both the mainland and Penang island included USM on the list. On the premises of the USM Main Campus, ten of these trees are situated. On the mainland, the USM Engineering Campus in Seri Ampangan, Nibong Tebal also features 'sakura' trees. On certain occasions, Instagram-savvy 'Flower Rangers' groups will be present to document the moment with the 'sakura' trees.



Learn More About Our Malaysian Primates, Who are Now 'Primed' at USM MGTF

USM MGTF has organized a hybrid exhibition called 'Projek Monyet', featuring Peter Ong's photographic journey of Malaysia's primates. The exhibition, in collaboration with the Malaysian Primatological Society, Roots & Shoot Malaysia, and Projek Monyet, aims to raise awareness about Malaysia's biological heritage and arts, with the main exhibition at Penang State Museum.





Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

RESEARCH/INNOVATION

Cyberbullying on Social Media under the Influence of Covid-19

Researchers at USM conducted a study on the COVID-19 pandemic's impact on social media usage and its correlation with increased cyberbullying incidents. Findings showed a significant correlation, but no evidence suggested gender moderates this relationship. The study contributes to understanding cyberbullying prevalence in Malaysia and may be useful for future research.

Six USM's Young Scientists at the 71st Nobel Laureate Meeting in Germany

A six-member Malaysian delegation, led by four young academics from Universiti Sains Malaysia (USM), participated in the 71st Nobel Laureate Meeting in Lindau, Germany. Young scientists were afforded an interdisciplinary forum at this conference to network with Nobel laureates and deliberate on their respective research endeavours. Since 2004, Malaysia, via the Academy of Sciences Malaysia (ASM), has dispatched young scientists to participate in this esteemed occasion.



COMMUNITY & INDUSTRY ENGAGEMENT

Human Rights and Peace: The Sixth Regional Teacher Workshop

The 6th Regional Teacher Workshop on Human Rights and Peace was held in Malaysia, involving 20 faculty members from Indonesia, the Philippines, Vietnam, Myanmar, and Thailand. The workshop aimed to improve understanding of peace theories, establish a connection between human rights and peace, provide peace teaching skills, and introduce peace education resources. The NCHR-approved textbook, "Peace and Conflict Transformation in Southeast Asia," was distributed to participants, focusing on theoretical and practical teaching techniques. All instructors were experts in their respective regions.

"Remaja-Isu dan Cabaran dan Jenayah" Discussion at Town Hall

USM and the police coordinated a town hall meeting to address the issue of adolescent delinquency. Ansari Mohd Shuhaily Mohd Zain, chief of the Penang State Police, Mohamed Hanafiah Malek, an authority on motivation, and Dr. Abdul Rashid Mohamad, an associate professor at USM participated in the panel discussion.

USM Vice-Chancellor Urges Campus Community to Self-Reflect and Embrace Justice in Welcoming the Islamic New Year

USM Vice-Chancellor, Professor Dato' Dr. Faisal Rafiq Mahamd Adikan, has urged the community to engage in introspection during Hijrah 1444. He highlighted the importance of justice in the Islamic faith and encouraged attendees to critically evaluate their conduct and treat others. Rafiq urged the community to care for the needy, avoid wrongdoing, and advocate for justice on behalf of humanity, the institution, and the nation. He also urged all members of the USM administration, faculty, staff, and students to uphold justice in their interactions with students and the community.

USM Promotes Cohesion and Unity on the Occasion of Malaysia's 65th National Day

The USM community is encouraged to maintain unity and support each other in the face of challenges. Vice-Chancellor Professor Dato' Dr. Faisal Rafiq Mahamd Adikan emphasized the importance of unity and dedication to the country's service. He appreciated the dedication and collaboration of the USM staff in advancing the institution and contributing to national higher education discourse. On Malaysia's 65th National Day, citizens can demonstrate patriotism and understand the true meaning of independence.

MoU Signed Between USM and Hotayi Electronic (M) Sdn. Bhd. to Strengthen University-Business Cooperation

A Memorandum of Understanding (MoU) has been executed between USM and Hotayi Electronic (M) Sdn. Bhd. with the aim of enhancing collaboration between the two organisations. The objective of the MOU is to foster cooperation and investigate potential avenues for joint research, educational, and training initiatives. The partnership will involve the School of Materials and Mineral Resources Engineering, School of Computer Sciences, School of Mathematical Sciences, and School of Electrical and Electronic Engineering, among others. In addition to training programmes and research, the collaboration will involve graduate recruitment, internships for students, and internships.



TEACHING/LEARNING

Five USM Academics Selected for YSN-ASM

Five USM academics have been selected for the Young Scientists Network-Academy of Sciences Malaysia (YSN-ASM) for a three-year period from December 16, 2022, to December 31, 2025. Our top management applauded them, and we anticipate them to thrive at USM, nationally, and internationally.

OPERATION (INSTITUTIONAL ARRANGEMENT)

One-Stop Portal on Preventing and Countering Violent Extremism Launched

For the purpose of providing resources pertaining to the prevention and countering of violent extremism (PCVE), mycveguide.com was established in 2022 as a comprehensive portal. This collaboration brings together the Malaysian Press Institute (MPI), International Islamic University Malaysia (IIUM), South-East Asia Regional Centre for Counter Terrorism (SEARCCT), Universiti Sains Malaysia (USM), and the US Embassy in Kuala Lumpur, as announced by the International Institute Of Islamic Thought And Civilisation (ISTAC). Accessible from local, regional, and global sources, this one-stop portal connects users to primary and secondary content on PCVE, including news, commentary, training, webinars, and research.

USM Graduate School of Business Dean Joins AACSB Board

The Association of Advanced Collegiate Schools of Business (AACSB) Board of Directors includes USM Graduate School of Business Dean Professor Dr. Azlan Amran. This appointment runs from July 1, 2022, to June 30, 2025. Tampa, Florida, is home to AACSB, a prestigious business school certifying agency. Dr. Azlan's board duty is to broaden business education and contribute to the organization's strategy. He will represent USM and focus on business education's future.

USM Deputy Vice-Chancellor Named President of ASEA-UNINET Network

Professor Dato' Gs. Dr. Narimah Samat, USM Deputy Vice-Chancellor for Academic and International Affairs, has been bestowed with the presidency of the ASEAN European Academic University Network (ASEA-UNINET) for the academic year 2022-2023. The ASEA-UNINET network comprises universities hailing from Europe and South-East Asia, with the primary objective of fostering collaborations in research and international education. The network, which was founded in 1994, comprises more than eighty universities spanning across eighteen countries. Its primary objective is to foster ongoing internationalisation in both research and education.



Strengthen the means of implementation and revitalise the global partnership for sustainable development

RESEARCH/INNOVATION

Mou Signed by USM and Nextglass: University-Industry Partnership Strengthen

An MOU has been established between Universiti USM and NextGlass Technologies Sdn Bhd (NGT) to investigate the possibility of university-industry collaborations in the field of cutting-edge technology. The purpose of this partnership between USM and NextGlass is to facilitate research, education, training, and the exchange of personnel and students. The collaboration aims to create a USM-NextGlass Research Centre, which will advance smart glass technology research for the benefit of academia, students, and the business sector. NextGlass Technologies is an industry leader in smart films for glass, including EC film and PDLC smart film, which are utilised in advertising, green buildings, automobiles, electronic devices, and solar panels.

USM Forms a Spin-off Company with Biotenova and Bioscenergy to Commercialise Innovative Products

USM has partnered with Bioscenergy International to develop and market innovative products from Biotenova Sdn. Bhd., a spin-off company of USM. The partnership aims to foster entrepreneurial skills and support high-impact ventures, aiming to establish Biotenova as a regional leader in postbiotic manufacturing and R&D. The USM Centre for Innovation and Consultation is strategically formed to facilitate this partnership.

USM and UR Clinic Partner to Advance Medical Biology and Aesthetics

USM and UR Clinic Sdn. Bhd. have joined forces to make a difference in the field of medical biology and aesthetics. Their collaboration emphasizes research, innovation, and knowledge-sharing, with a focus on achieving breakthroughs in R&D – particularly in the vital areas of women's health and aesthetics. This partnership reflects USM's core values and vision of creating a sustainable future by fostering industry-academic cooperation, which not only benefits USM students but also contributes to SDG 3 and SDG 17. Together, USM and UR Clinic Sdn. Bhd. are committed to making a positive impact on the healthcare industry.

Micron Technology and USM Partner to Drive Innovation and Growth in Tech Manufacturing Sector

Micron Technology and Universiti Sains Malaysia have formed a strategic partnership to drive innovation and growth in Malaysia's tech manufacturing sector. Micron's RM1 million investment is dedicated to R&D projects and collaboration with local universities, aligned with Malaysia's National Fourth Industrial Revolution policy and national development plans. The partnership showcases Micron's commitment to corporate social responsibility, sustainability, and employee well-being, reinforces Penang's status as an electronics and electrical industry hub, and bolsters Malaysia's competitiveness in the semiconductor sector.

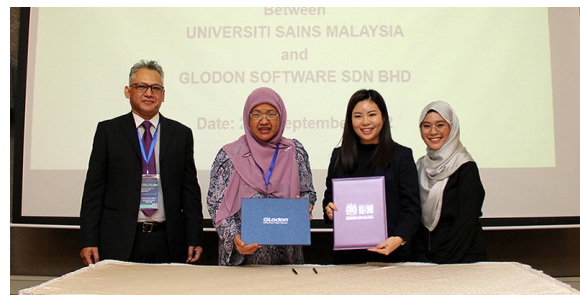
COMMUNITY & INDUSTRY ENGAGEMENT

The USM-PARAMIT Sealed MoU for Collaboration on the Development of Skills and Talents

Paramit Malaysia Sdn. Bhd. and USM have entered into a Memorandum of Understanding (MoU) regarding the development of talents and skills. The collaboration endeavours to establish a connection between academia and industry through the provision of internship and apprenticeship opportunities for students and recent graduates of USM. It also provides Paramit employees with opportunities to attend career fairs and participate in certificate and upskilling programmes. The partnership is consistent with USM's initiatives to improve the employability of its graduates and offer prospects for continuous education.

Glodon Software Helps USM Advance Research and Education

USM's School of Housing, Building, and Planning (HBP) has signed an MoU with Glodon Software Sdn. Bhd. to work on construction sector digitization research. The alliance seeks to overcome construction industry digital transformation challenges, particularly in Industry 4.0. Deputy Vice-Chancellor (Academic and International) Professor Dato' Gs. Dr Narimah Samat and Glodon's Country Manager Joyce Chan signed the MoU as representatives of their organisations. This relationship promotes academic and research achievements by connecting academia and industry.



USM Strengthens Partnership with Toyohashi University of Technology

By virtue of the signed Memorandum of Understanding (MoU) and Supplemental Agreement of the Research Collaboration Agreement (RCA), USM and Toyohashi University of Technology (TUT), Japan, have enhanced their collaboration. An ongoing Nanomaterials Research project and an Urban Farming Research project will be the focus of this partnership. Research programmes, joint degree programmes, student exchanges, industrial placements, staff development, and community engagement are all components of the enduring partnership between USM and TUT.

USM and Boston Scientific Medical Device Partner to Advance Medical Engineering Research and Innovation

USM and Boston Scientific Medical Device (M) have a long-standing partnership. Boston Scientific recently donated research equipment worth over RM6 million to USM, including the Thermal Laboratory: Differential Scanning Calorimeter (DSC). This equipment is important for research and talent development in medical engineering. The partnership supports SDG 9 by promoting research and innovation in medical engineering, and SDG 17 by encouraging collaboration between academia and industry.



Photographic Images and Matter: Japanese Prints of the 1970s Exhibition at Tuanku Fauziah Museum and Gallery, USM

The Tuanku Fauziah Museum and Gallery (MGTF) at Universiti Sains Malaysia collaborated with the Japan Foundation Kuala Lumpur to host an exhibition titled 'Photographic Images and Matter: Japanese Prints of the 1970s.' The exhibition showcased the work of 14 Japanese artists who expanded the print medium through photographic images and matter, a revolutionary movement in Japan during the 1970s. The exhibition contributed to SDG 4 (Quality Education) by inspiring creativity and broadening horizons, and aligned with SDG 17 (Partnerships for the Goals) through international collaboration.



TEACHING/LEARNING

Malaysian Universities Seeking Global Post-Pandemic Higher Education

The post-pandemic difficulties and potential of higher education are highlighted. Offshore programmes and remote learning attract international students, emphasising the role of technology in education. USM collaborates with global institutions to offer different academic programmes and promote research and innovation, according to the report. It emphasises providing a favourable atmosphere, offering competitive programmes, and supporting Malaysia's 250,000 foreign student objective.

Microsoft Malaysia and USM Partner to Digitise Education

USM and Microsoft Malaysia inked an MoU to boost professors' digital skills and students' digital learning experience. The collaboration will use 'Microsoft Learn' to train teachers and students. USM wants to become a global educator digital training hub using Microsoft's capabilities. The cooperation aims to digitalize Malaysia's educational ecosystem and make education more accessible and inclusive.

USM's GSB to Participate in Future of Capitalism Program for International Collaboration and Business Insights

USM's GSB will participate in the 'Future of Capitalism' program. The three-month initiative, in collaboration with 11 other leading business schools, aligns with SDG 4 and SDG 17. Students will interact with top executives, policymakers, and academics, gaining insights from various perspectives.

USM and ITIDA Partner to Train Professionals for Digital Egypt Builders Initiative (DEBI)

USM has partnered with the Egyptian Government's Information Technology Industry Development Agency (ITIDA) to train professionals and graduates for the Digital Egypt Builders Initiative (DEBI). The Master of Business Analytics program, focusing on the Financial Technology track, will provide training in business, management, statistics, and programming skills. The initiative aligns with SDG 4 (Quality Education) and SDG 9 (Industry, Innovation, and Infrastructure), promoting digital skill development and strengthening the bond between Malaysia and Egypt.

OPERATION (INSTITUTIONAL ARRANGEMENT)

USM VC Appreciates 'Life' Programme Coordinators 'Hardwork and Foresight'

The 'LIFE' (Living an Inclusive Fulfilling Experience) Programme workshop at USM included university leaders. The goal was to improve the program's curriculum, engagement, evaluation, and industry involvement, which gives students practical skills and networking possibilities. USM's Vice-Chancellor commended the program's directors' dedication and forethought. The programme breaks away from classroom instruction to teach pupils principles like belonging and sustainability.

USM Signs MoU for Education, Research, and Industry Cooperation

USM signed an MoU with Guilin University of Electronic Technology and Asia China Education and Culture Association to foster cooperation in education, research, and industry under "Community & Industry Engagement". The agreement includes student and faculty exchanges, joint research, academic meetings, symposiums, and cross-cultural programs. This partnership has the potential to promote USM programs internationally and aligns with various Sustainable Development Goals.

Tuanku Fauziah Museum and Gallery Showcases 3D Holography Projection 'AL-HILAL' for Unique Audience Experience and Well-being

The Tuanku Fauziah Museum and Gallery at USM showcased a 3D holography projection called 'AL-HILAL.' It projected 'The Reckoner' short film on an exterior wall, creating a unique and captivating experience for the audience. This initiative fosters connections and well-being among students and aligns with SDG 4 and SDG 17.



