

UNIVERSITI SAINS MALAYSIA
SUSTAINABLE
DEVELOPMENT GOALS

2020 REPORT



 SUSTAINABLE DEVELOPMENT GOALS



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FOREWORD

Assalamu'alaikum warahmatullah/Salam sejahtera and warmest greetings.

As this text is being prepared, there is also a similar gathering being finalised on the other side of the world, and on a much bigger scale.

The COP26 2021 United Nations Conference on Climate Change to be held in Glasgow, Scotland in November will see delegates from countries around the world converge to deliberate, debate and decide on initiatives for the planet's wellbeing in the future.

Closer to home, Universiti Sains Malaysia (USM) has succeeded in managing the Covid-19 pandemic on the home front, with collective efforts from the staff and students in the setting up of a Covid Nerve Centre, abiding by the SOPs as well as in performing the role as a Vaccine Delivery Centre (PPV) for the community, in addition to other health and wellbeing-related activities.

At the same time, the university has chalked another first in the country, sustainability-related milestone, by embarking on a project to harness the power of the sun for its own future energy needs on campus, which will lead to financial sustainability, as among the continued efforts to promote the idea of sustainability in daily practices and in a wider context.

The pursuit of sustainability is an ongoing, interconnected agenda. For USM to continue with the tagline 'We Lead' as the APEX-acknowledged institution will now be even more challenging in the new normal.

As we continue to invest in our campuses, we should put sustainability as a key component in all our developments to ensure the environmental impact of our operations and establish our campuses as exemplars of environmental best practice.

Thank you.

PROFESSOR DATO' DR. FAISAL RAFIQ BIN MAHAMD ADIKAN, FASc
Vice-Chancellor
Universiti Sains Malaysia



PREFACE

It has been a few years that Universiti Sains Malaysia (USM) has been involved in the sustainability rankings, although as an APEX university, more than two decades have passed.

It is not so much as a chest-thumping gesture, but rather more as means to continuously evaluate and assess the university's performance, in relation to the sustainable measures met.

In the post-Covid-19 new normal environment, the challenges will surely take different forms and will thus require different measures and solutions to overcome them. It is no longer appropriate to solely become 'armchair activists' and present short-term theories and ideas. There is now the need to produce more practical and workable solutions in facing the ever-changing global landscape, now facing issues from plastic waste to carbon capture to climate change.

The world now is much more filled with a myriad of mankind's pursuit for convenience over conscience, indulgence over realisation, leading to negative impacts on the planet. There is the need to put emphasis on sustainability justice, for everyone and nature to be treated fairly and equitably.

The 17 SDGs will surely provide the university with multiple perspectives that can serve as starting points for the university to work on, providing improvements that will lead to a more sustainable tomorrow, be it in higher education or in other aspects of life on this planet.

PROFESSOR DR. MD ROSLAN BIN HASHIM
Deputy Vice-Chancellor
Sustainability and Institutional Development

INTRODUCTION

2020 is a rather challenging year with the advent of the Covid-19 pandemic—the coronavirus disease 2019 (COVID-19) emerged in Wuhan, China at the end of 2019. Since then, it has spread to 200 countries and has been declared a global pandemic by the World Health Organization (WHO). Malaysia is no exception to being infected with the Covid-19 pandemic. The first case of COVID-19 in Malaysia was detected on 25th January 2020. Malaysia's economy has been adversely affected by COVID-19 and the subsequent mobility restrictions implemented to flatten the curve of the pandemic. COVID-19 is presenting unexpected and extreme challenges for organizations of all sizes and sectors across the world. Institutions of higher learning such as USM are not spared either. USM, being one of Malaysia's premier higher educational institutions, continues to implement and reinstate certain measures in its efforts to cushion the impact of COVID-19 on its community members and stakeholders. Among the steps that have been taken were to limit movement of staff and students, opening only specified entrances to the campus; staff were encouraged to work from home (WFH) especially those who are staying in high-risk areas/zones; ensuring the availability of financial assistance to staff and students; policies regarding third parties, such as cafe operators, banks, and mosque congregation members among others. Due to the mobility restrictions, most of planned activities in university were postponed. Some activities were continued with strict guidelines and standard operating procedures and alternatively through Online activities.

Vice-Chancellor, Professor Dato' Dr. Faisal Rafiq Mahamd Adikan, has shared his 'to-do' list for 2020—some initiatives that he hoped will bring some changes for the betterment of the university and its community.

The Vice-Chancellor wanted everyone to be aware of how critical situation is, reminded everyone on the importance of changing the way we operate and the need to work together as a team, should we want to shape a better tomorrow. "Success is a journey, not a destination. The doing is often more important than the outcome." (Arthur Ashe, American tennis).

USM remained its position as the top university in Malaysia in the Times Higher Education Impact Rankings 2020, that assess universities against the United Nations' Sustainable Development Goals (SDGs)—ranked 65th in the world out of 766 institutions that participated in the rankings. USM participated in the evaluation of all the 17 SDGs compared to just 11 SDGs in the previous year. The commitment shown by the staff and students which have been embedded with the realization on the importance of creating impact to society at large. Prior to the introduction of the SDGs, USM has started working on matters of impact since 2002 and this is a testament that the APEX agenda is critical in positioning the country as a nation of impact.

USM believes that quality education can act as an agent of change that not only able to uplift the economic status of the society but also bring equality to the people of the world. However, we have to work together to ensure the impact is being felt by many and opportunities are being shared equally without having anyone marginalized.

8 USM INITIATIVES



How COVID-19 changes our daily life....





End poverty in all its forms everywhere

USM Support

As a sign of concern, USM's initiated several assistance programs to help students, especially from the B40 group. Among the ongoing programs are (i) Student & Alumni Development Affairs Division Loan Assistance which offers long-term and short-term loans active students; (ii) Subsistence/ Monthly Zakat Assistance Scheme or known as Zawain also available to active students; (iii) Yayasan USM which offers assistance to active USM students and does not receive any financial assistance from any party—specifically to B40 students. Under USM Prihatin, many more assistance can be obtained by students such as, scholarship contributions, student welfare contributions, industrial training incentives, tuition fee cuts, welfare and facilities fee cut, Online learning assistance and student entrepreneurship incentives.

300 Free Tablets for SPM Candidates From Poor Families in Penang

Some 300 Form 5 students from low-income families (B40 category), who will be sitting for their Sijil Pelajaran Malaysia (SPM) in early January 2021, received free tablets under the empowerNCER-Academic programme. USM is the service provider appointed by Northern Corridor Implementation Authority (NCIA) to implement the empower NCER-Academic programme in Penang.

Welfare

USM has successfully raised RM3,880,428.31 (as of 17 April 2020) for its Special COVID-19 Fund to be used to address the welfare of the students who are residing on and off Campus as well as the needs of the staff especially those serving as front-liners and for equipping and upgrading the medical facilities during the Movement Control Order (MCO) period. A total of RM2,000,506.83 from the amount collected has been utilized to provide food coupons for students, for medical expenditure, procurement of medical equipment (for COVID-19 testing, breathing support, resuscitation, medication infusion and heart monitoring), and other related purposes.

The Islamic Center reported that zakat assistance received by USM students in 2020 amounted to RM1,130,900.00.



USM continues its agenda in ensuring that the welfare of the needy is provided for by making a visit to Umairah Batrieysa Abd. Aziz, 7, a Cerebral Palsy patient and handed over a specially modified wheelchair. It is hoped that the wheelchair would bring ease in caring for Umairah and also improve the quality of life of the family. The Wheelchair Special Modifications Project is a collaborative project between USM and Rajanagarindra Institute of Child Development (RICD), an initiative by the Division of Industry and Community Network (BJIM) USM. Having Cerebral Palsy (neurological disorder) since birth, Umairah is dependent on a wheelchair in her daily life. Life became harder as her father works as a school gardener and her mother who used to work at the school canteen, lost her job due to the COVID-19 pandemic.



Education Financial Aid

USM was among the 13 public and private universities that have been chosen to receive the early education financial aid, contributed by the Yayasan Bank Rakyat. The distribution of financial aid to public and private universities is an initiative to lighten the burden of students who are less privileged, especially those from B40 families—each student will receive a one-off RM1,000 payment.

Sponsorship

Two USM undergraduates from School of Computer Sciences—Muhammad Amal Syahmi Sabudin and Siti Farah Haida Raklan Alhadad—were among the first batch of 14 students shortlisted to undergo the Artificial Intelligence Graduate Employability Training (Ai-GET) at the Skymind City Campus. They attended a 20-day training programme specifically designed by Skymind Holdings Berhad which started on 12 October 2020. The aim of the programme is upskilling graduates from all over the nation into AI-ready talent, hence ensuring a continuous supply of highly-skilled AI talents for the ever demanding job market.



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

MCO: Students Well-Cared For

USM is fully committed in ensuring the safety and wellbeing of its students in all of its campuses, more so during the current Movement Control Order (MCO) period. In order to cater to the students' needs during this challenging time, the university is taking all possible measures in assisting and providing students with much needed resources. USM has received a total contribution of RM528,000 from the Ministry of Higher Education Malaysia, from which they are distributing a daily amount of RM15 to around 3,500 students on campus. University also provide an e-counselling service to students who are facing difficulties and feeling the pressure during this MCO period, as they have to stay put and be in their rooms most of the times.

USM Extends Aid

USM continues its mission in handing out aid to those affected due to the current Movement Control Order (MCO) which resulted from the COVID-19 pandemic outbreak. The aid which comprised of daily necessity items were meant to lessen the burden in their daily struggle—known as the Maidaturrahman Kit, were prepared by the USM Islamic Centre, and contained basic essentials such as rice, cooking oil, sugar, salt, soy sauce and ketchup among others, were distributed by staff volunteers overseen by the USM COVID-19 Nerve Centre. To start off, two separate teams have started distributing the aid to the students and staff members belonged in the B40 group residing within the vicinity of USM—Sungai Dua and Jelutong.



USM Bikers Provide for the Needy

30 members of the USM Bikers donated RM1,130 and items of daily needs such as disposable diapers, milk and Maidaturrahman (daily sustenance) Kits to Umairah. According to the President of USM Bikers, Zulkifli Che Hussin, the setting up of USM Bikers was for a good cause, to serve as a team that could conduct charitable activities which would indirectly project the university's contributions to society and reduce their burdens in life. He added that the involvement of staff members in such programme could bring a social impact to the community and society, and the staff would even feel better appreciated when it comes to channeling assistance.

Foodbank

In ensuring that students get adequate food during Covid-19 MCO, Desasiswa Restu has taken the initiative to create a 'food bank' that is operated through the concept of donations. Individuals, companies or organizations can donate food or cash. Food items such as bread, milk, tea, biscuits and so on can be placed in the provided room. Students and those in need can take necessities according to their needs.



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PUBLICATIONS
IN SCOPUS
2020



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

Due to Covid-19, USM established USM Nerve Centre—a dedicated centre designed for planning, coordinating, operating and monitoring the current state of affairs in relation to the Covid-19 pandemic and the implementation of the Movement Control Order (MCO) for USM. Among the roles are:

1. To plan, operationalise and monitor the progress in current developments regarding cases of COVID-19 and the Movement Control Order (MCO).
2. To facilitate the flow of all information as a Centre of Responsibility (PTJ) with regards to the control and prevention of pandemic crisis.
3. To manage request of entry and exit of staff/students/ third-party contractor concerned during the MCO and the National Recovery Plan (NRP).



SOP in Preventing Spread of Covid-19

USM is constantly aware of the latest development regarding the current issue on the spread of Covid-19 and has identified the standard operating procedures (SOP) to prevent the spread of the virus, especially at the USM campuses. Among the steps had been taken includes advising the staffs and students who plan to go to China to postpone their trip, apart from being ready to undergo thorough screening for those returning from China, whether coming back from the semester holidays or new arrivals to Malaysia. Students who are returning from their semester holidays or new students arriving from China are required to undergo localised screening tests before continuing with their activities. The students would be provided with a Health Alert Card/Leaflet to facilitate monitoring at their place of residence.



USM Introduced a Dedicated Covid-19 Website

Coronavirus Disease 2019 (COVID-19) is presenting unexpected and extreme challenges for organizations of all sizes and sectors across the world. Institutions of higher learning such as Universiti Sains Malaysia (USM) are not spared either. In order to provide authoritative, authentic and trustworthy as well as the most recent information to our stakeholders, USM introduces a dedicated COVID-19 website, which is a voluntary effort from its staff.

SUPPORT TO FRONT-LINERS

One initiative by USM to support the front line COVID-19 medical workers in the midst of the pandemic is the production of intubation boxes especially for anesthetists in dealing with COVID-19 patients. The project was initiated based on requests from various healthcare facilities on and around Penang Island that require the use of an intubation box as an additional personal protective equipment (PPE) when medical personnel intubate a COVID-19 patient. This is an industry-collaborated project, initiated with technical and funding support from the USM Division of Industry & Community Network (BJIM), in collaboration with a private company, Carsion Advertising Enterprise. Beside the funding support from USM, the team has also successfully initiated a fundraising campaign in relation to the production of these intubation boxes through various platforms.

In the mean time, USM is gathering its resources to provide assistance in various forms to the society. USM has been coordinating efforts in producing 3D-printed face shields, which are much needed as part of the Personal Protective Equipment (PPE) for healthcare front-liners. The face shields were supplied to front-liners in USM, such as the healthcare personnel in Pusat Sejahtera and also in the Security Department, as well as to others who involved directly in dealing with COVID-19 related matters.

As a renowned research university, USM has a significant international student population. Amidst the current COVID-19 outbreak, the international student community at all USM campuses have been equally affected. Students' welfare and wellbeing have always been among USM's top priorities. The university would ensure that the international students are well-cared for during this Movement Control Order (MCO) period, alongside the local students. The university strongly encourages the international student community to remain on campus until the end of the semester. This is to avoid any unnecessary risk of being affected by the outbreak of COVID-19, and in turn affecting their studies.

In the fight against the spread of COVID-19, there is a surge in demand for hand sanitisers all over the world including Malaysia as a hand sanitiser is a supplement or alternative to hand washing with soap and water. This has prompted the School of Pharmaceutical Sciences, USM to take the initiative to formulate and prepare its own hand sanitisers that fulfil the specified standards recommended by the World Health Organisation (WHO). What makes it unique is that kaffir lime is added as one of the ingredients in the formula to give the sanitiser the pleasant fresh feeling and fragrance. It is also less sticky, and is enriched with a moisturising agent to prevent dryness of the skin when used frequently. Over 140 litres of hand sanitiser have produced to be distributed to the USM community to promote good personal hygiene practices and to protect against COVID-19.

USM Health Campus in Kubang Kerian received a shipment of personal protective equipment (PPE) and hand sanitisers contributed by the USM Main Campus on Penang Island and the Engineering Campus in Nibong Tebal. The contribution, comprising of 1,500 face shields, 15 aerosol boxes, cartons of hand sanitisers and transparent plastics in meeting the needs of the healthcare workers working tirelessly on the front lines at the Hospital USM.

USM also received a lot of donations from various organizations in the form of face masks and PPEs. Yangtze Normal University (YZNU), one of its partner academic institutions in China in response to the COVID-19 pandemic had couriered some 2,000 pieces of face masks to the USM COVID-19 Nerve Centre. USM received a supply of another 2,000 pieces of disposable face masks from The Association of Global Industry Academia Collaboration Malaysia (AGIACM) to help fight the spread of COVID-19 locally. Another 2,000 masks were donated by the Consulate General of the People's Republic of China in Penang, while Western Digital (Malaysia) Sdn. Bhd donated 1,000 unit of personal protective equipment (PPE) and 5,000 units of face shields to the USM Advanced Medical and Dental Institute (IPPT).



RECOGNITION

The Microbiology and Parasitology Laboratory of Hospital USM which has similar advanced facilities as those at the Institute for Medical Research (IMR), has been selected among the ten public university managed labs in Malaysia to conduct the COVID-19 detection test. This is due to the increase in COVID-19 cases and the Ministry of Health (MOH) needs all the support that they could get from various parties to help increase the country's daily testing capacity for COVID-19.

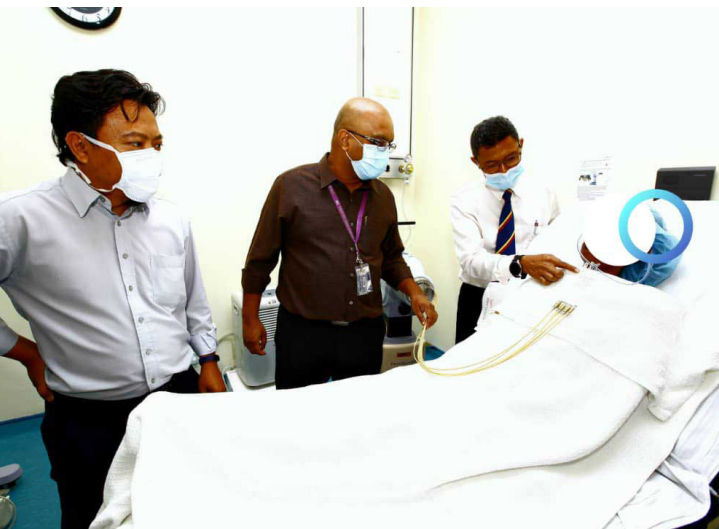
Khazanah Research Institute (KRI) released a discussion paper on 1 May 2020 presenting projections of COVID-19 transmissions post-MCO, and summarises possible public health interventions to be taken to prevent a third wave of COVID-19 infections and deaths. The study entitled "Dancing with COVID-19: Public Health Precautions Beyond the Movement Control Order", was conducted by KRI Deputy Director of Research, Aidonna Jan Ayub and KRI Research Associate, Gregory Ho Wai Son, in collaboration with two senior lecturers from Universiti Sains Malaysia (USM), Dr. Khayriyyah Mohd Hanafiah and Dr. Muhammad Hafiz Wan Rosli.

ACHIEVEMENT

Academic and non-academic staff from several Schools and Research Centres in USM teamed up to produce face shields for medical personnel and other front-line workers in the fight against the dreaded COVID-19 pandemic outbreak. The initiative not only contributed towards the demand for protective gear, but also highlighted the expertise of USM researchers in 3D printing and laser cutting technology being put into good use, with the help of the non-administrative staff and postgraduate students with support from USM Division of Industry and Community Network (BJIM) for providing the initial funding.

USM released a document on the guidelines and action plans in response to the COVID-19 pandemic and other possible infectious disease outbreaks in the future. Entitled 'Response and Readiness Plan for COVID-19 Pandemic and Other Infectious Disease Outbreaks', this document provides a general guidance on the preparedness, response and communication that are urgently needed against COVID-19 pandemic and other infectious disease outbreaks relating to public health emergencies within the context of the University.

First Successful Bone Marrow Transplantation for Chronic Granulomatous Disease as a Result of Early Diagnosis in IPPT—A Paediatric Immunologist at the USM Advanced Medical and Dental Institute (IPPT), Dr. Intan Juliana Abd. Hamid received a baby boy whom was referred to her when the baby was in utero at 32 weeks of gestation. Based on family history and some other medical indications, a member of the IPPT Primary Immunodeficiency Disease (PID) Research Group, Dr. Zarina Thasneem Zainudeen performed a flow cytometry-based oxidative burst assay (test) on day 7 after the baby boy was born. The results from the assay showed that the baby boy has CGD. The baby boy was later referred to the Paediatric Bone Marrow Transplant Unit at Hospital Tunku Azizah in Kuala Lumpur. This has led to a successful allogeneic haematopoietic stem cell transplantation (HSCT) from an identified matched sibling donor, performed on 17th March 2020.

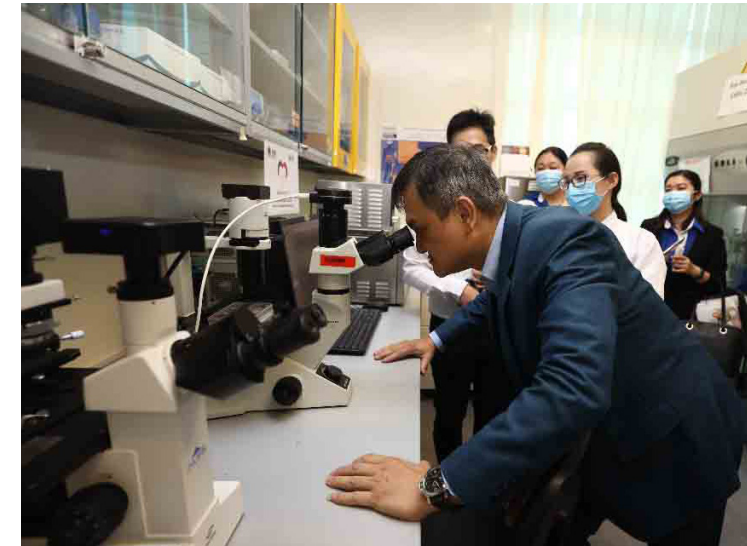


USM continues to be at the forefront in science and technology innovation as it has successfully developed a new, pioneering technique to treat tongue cancer, named HyBIRT that can cure tongue cancer without the need for surgery or the removal of infected parts. The brainchild of a multidisciplinary team of cancer experts from the USM Advanced Medical and Dental Institute (IPPT), HyBIRT or 'Hybrid Barchytherapy-Intensity Modulated Radiotherapy' is a modified technique comprising of two existing methods of cancer treatment, namely External Radiotherapy (IMRT) and Brachytherapy. The HyBRIT Team has successfully treated the first two tongue cancer patients who had undergone HyBIRT treatment for 6 months with the function of their tongue almost completely restored (as shown in the Magnetic Resonance Imaging, MRI test results).

Well-equipped with state-of-the-art medical facilities and with the available expertise of its staff, the USM Advanced Medical and Dental Institute (IPPT) now opens its Executive Polyclinic 24 hours to the public. Services provided comprised of outpatient care and specialist clinic services (catering to certain areas of medicine/specialties) and fully-paid services.



Hospital Universiti Sains Malaysia (HUSM) is the first public hospital in the country to offer a 3D Ultrasound or Volumetric Breast Ultrasound (VBS) machine for breast cancer diagnosis. VBS is the state-of-the-art technology in carrying out diagnosis for breast cancer, a disease which is showing an increase in cases over the years. VBS is a solution to the problem of dense breast gland among Asian women and research shows that mammography with VBS is more effective in detecting cancer than mammography with 2D Ultrasound. With the availability of the modern devices, more women should come forward for early screenings of breast cancer to reduce the mortality rate due to the disease. Breast cancer is the most common form of cancer affecting women in Malaysia. According to Cancer Research Malaysia, about 5,000 women in Malaysia are diagnosed with breast cancer every year. Until today, it is still the world's leading cause of cancer mortality in women.



USM took another step forward with the launch of two facilities in further improving the quality of delivery of health services to the university community at the main campus, namely the Pharmacy Drive-Through Counter and the Isolation Cubicle at the USM Pusat Sejahtera (Health Centre). By having a drive-through counter, patients no longer need to enter buildings, no longer need to look for parking spaces, and need not experience long waiting hours to obtain their continued medication, at the same time reducing risks of immediate infections while waiting at the dispensary.

A Medical Physics lecturer at the USM Advanced Medical and Dental Institute (IPPT), Dr. Rafidah Zainon, has been announced as one of the co-investigators of a prestigious Kingdom of Saudi Arabia International Collaboration Grant. Apart from USM, the other two institutions in this three (3)-year collaborative partnership are Imam Abdulrahman bin Faisal University, Dammam, Saudi Arabia (led by Principal Investigator, Dr. Mahbubunnabi Tamal) and Katholieke Universiteit Leuven (KU Leuven), Belgium. The total amount of this international grant is \$1.68 million where USM will receive RM522,044.30 for the said project, which commenced in February 2020 following a signing ceremony between all the parties involved held in Saudi Arabia.

USM Advanced Medical and Dental Institute (IPPT) received a major boost for cardiac research with the setting up of a joint-laboratory in collaboration with ALPS Global Holding Berhad, a fully-integrated biotechnology research, medical and wellness services company. The idea of having this joint laboratory with ALPS is that, amid the financial limitations we face and with a shortage of funds for equipment, ALPS will station their high-end equipments in IPPT and in return, IPPT helps them to build profiles relating to heart research. Such collaboration provides an excellent platform for industrial players and our academics to work together by matching and consolidating all resources which both sides have in common to achieve more with less, in order to innovate treatments for this killer disease.

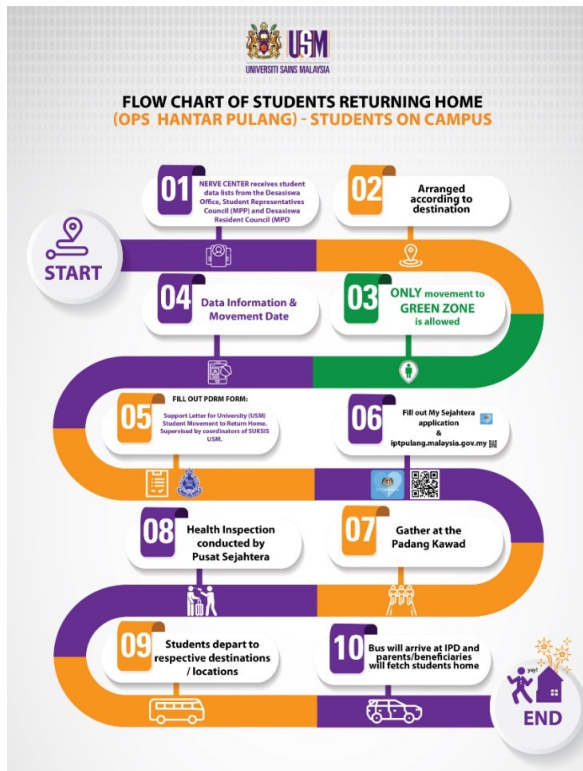
USM Prioritize the Wellbeing of Student during MCO

Amidst the current COVID-19 outbreak, the international student community at all USM campuses have been equally affected. Students' welfare and wellbeing have always been among USM's top priorities. The university would ensure that the international students are well-cared for during this Movement Control Order (MCO) period, alongside the local students.

USM is constantly monitoring and giving priority on the situation of its students who are currently undergoing the USM-KLE International Medical Programme in Belgaum, India during this Movement Control Order (MCO) period due to the outbreak of the COVID-19 pandemic in India. USM via its COVID-19 Nerve Centre is in discussions almost every day, looking at all aspects of health, welfare and safety of students in all of its campuses, including the KLE offshore campus during this difficult time.

Abide by USM Procedures when Undergoing Process of Returning to Hometown In Stages

The government has announced that students in higher educational institutions (IPT) who are staying on campus or renting off-campus will be allowed to return to their homes in stages, beginning 27 April 2020. However, USM was layout the procedure for students to follow.



USM Gearing up to Facilitate Exodus of Students Leaving Campus for Hometowns

Universiti Sains Malaysia (USM) is in the midst of making thorough preparations to facilitate its students who have decided to leave the campus to return to their hometowns, where they will be able to spend the rest of the Movement Control Order (MCO) period at home with their family members and loved ones. USM has more than 4,500 students staying in Desasiswa at its three campuses.

All students undergo screening for symptoms by personnel from USM Pusat Sejahtera before boarding the buses and will be provided with packed food (for 'sahur' by the Division of Student Development Affairs & Alumni and USM Islamic Centre), face mask (by Pusat Sejahtera) and hand sanitizer (produced on-campus by the School of Pharmaceutical Sciences).





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

MOOC@USM

During the COVID-19 pandemic, Centre for Development of Academic Excellence (CDAE) has proposed numerous programmes to aid quality online learning for the university on of it is MOOC Challenge 2020. Programmes is to improve skills among the academicians. Massive Open Online Course (MOOC) is a structured online course, targeted for mass participation (unlimited) and accessible for free via the Internet. MOOC provides a platform to disseminate information and knowledge to anyone motivated to learn. MOOC combines traditional and modern course / teaching materials such as videos, readings, assignments and other learning activities. MOOC also provides interactive user forums that help build communities for students and educators



Panopto

In 2020, Universiti Sains Malaysia has fully launched Panopto on eLearn@USM. Panopto is a platform to gather all your videos in an online platform to assist teaching and learning experience. This tool allows academicians to:

1. Record, upload, manage, store, and search video content securely across campus
2. Capture lectures, flipped classroom, student assignments, faculty training
3. Build in-video quizzes and sync student marks back to the eLearn@USM gradebook
4. Record from any laptop and with any camera
5. Provide analytics on student video usage and engagement trends



Micro-credential USM

The university's Centre for Development of Academic Excellence (CDAE) has launched its micro-credential programme to encourage academicians to share their knowledge and expertise by creating short videos. Micro-credentials are a digital form of certification (also known as digital badges) indicating demonstrated competency in a specific skill (or set of skill) and acquisition of specific knowledge. USM and OpenLearning Global (M) Sdn Bhd have teamed up to create a micro-credential competency-based learning platform – the first of its kind in Malaysia that enables any individual to learn recognition for skills and competencies they have learned throughout their careers and their life.

LEARN ON DEMAND

The concept of learning just-in-time, just enough and just-for-me (personalised).

Learn in bite-size module and earn the digital badge

Collect your digital badges, bundle them and get a higher qualification.

TAKE CHARGE OF YOUR LIFE
JOIN OUR MICRO-CREDENTIAL PROGRAM

Professional Courses in Industry and Sustainability for Life-Long Learners

The USM Science and Art Innovation Space, SAINS@ALOR SETAR and the National Institute of Occupational Safety and Health Certification (NIOHCERT) has developed a professional development series course in industry and sustainability, in response to an ever-increasing demand for such a course. It was specially developed as a life-long learning initiative to cater for fresh graduates, young executives and educators at all levels who want to enhance their career performance objectively and systematically to drive the sustainability agenda in their organisations and communities. Six module are available:

1. Business Analytics
2. Finance and Accounting Essentials
3. Business Continuity Management
4. Occupational Safety and Health (ISO45001:2018)
5. Environmental Management System (ISO14001:2015)
6. Life Cycle Assessment (ISO14040:2006)

Universiti Sains Malaysia (USM) through the School of The Arts has reached another milestone in expanding its academic programme when it inked a Memorandum of Agreement (MoA) with Equator College Penang. Both parties agreed to collaborate in the offering of USM's Bachelor of Fine Arts (Hons.) (Graphic Communication) as an offshore undergraduate programme in Equator College, leading towards the award of a degree by USM. This is the second collaboration between USM and Equator College in the offering of degree programmes, after the success of the first collaboration in March 2018 involving the School of Housing, Building and Planning. This is a very strategic collaboration for both long- and short-term, as it is in line with the University's agenda in contributing our expertise to the country and in enhancing the marketability of the graduates in the field of fine arts and design.

USM Online Learning

Making a move to online learning throughout the Movement Control Order (MCO) period at Universiti Sains Malaysia (USM) has become more favourable and receiving positive responses from both lecturers and students. USM reached the decision to restart the second semester via Online in early April, responding to the current situation resulting from the COVID-19 pandemic. Statistics for the second week of the learning session beginning 12 April until 17 April showed a total of 1,421 courses were conducted Online involving more than 16,000 students, which is translated into 89.24 percent of participation (Online).

Due to MCO, USM is privileged to be selected by YTL Foundation as the first public institute of higher learning (IPTA) to extend its Learn From Home Initiative. Under this initiative, until 31 May 2020, up to 30,000 USM students and some selected USM staff members are expected to benefit from programme. This initiative is the result of a recent collaboration between USM and YTL Foundation and is extended to support the Online teaching and learning activities carried out by USM during this period of the COVID-19 outbreak.

The Ministry of Higher Education (MOHE) has recently announced that all university lectures and classes must be conducted online until 31 December 2020. In a statement issued on 27 May, the ministry said that there will be no face-to-face teaching and learning (PdP) as the COVID-19 pandemic continues on.

The 8th ASEAN Future Leaders Summit (AFLES 2020) has taken the Online route this year due to the Covid-19 pandemic. AFLES has gathered student leaders across ASEAN nations. With the restriction imposed on movement due to Covid-19, AFLES 2020 was held Online from 21-25 September 2020. The summit was launched Online, which was later followed by the Alumni Talk, and this year's programme gathered around 160 delegates from the ASEAN region.

USM Introduced 3-Minute Drive-Through Registration for New Students (2020/2021 Academic Session) as Covid-19 Cases Rise Sharply

USM introduced for the first time a drive-through registration process for new students that only took three minutes to complete. The whole process require a student to undergo health screening, register at the MyDaftar application by scanning a QR code and watch a short online tutorial video while seated in their vehicle until they reach their respective hostels to drop off their belongings. The initiative was in line with the new norms' standard operating procedure (SOP) to curb the spread of the Covid-19 pandemic. The University tried to make the best of the current uncertain situation which is quite worrying, by coming up with some proactive measures and making them simple for all to follow.



Recognition

In 2018, the International Institute for Educational Planning (IIEP), which is under the United Nations Educational, Scientific and Cultural Organisation (UNESCO) launched a research project on SDG4: Planning for Flexible Learning Pathways in Higher Education. The research comprised an international baseline survey and a case study of eight countries from different regions which are developing or have developed initiatives for flexible learning pathways. USM, through the Commonwealth Tertiary Education Facility (CTEF) c/o National Higher Education Research Institute (IPPTN), was selected to lead the study for Malaysia. The case study focused on national policies, their implementation and influences on institutional practices. The case studies, involving the United Kingdom, Chile, Finland, India, Jamaica, Morocco, and South Africa were deliberated at the International Policy Forum, which was held in Malaysia in March/April 2021, with CTEF as the local organiser.

USM Advanced Medical and Dental Institute (IPPT) has been recognised as a global educational and training centre for gynaecological, liver, head and neck, prostate and esophageal brachytherapy techniques, with a special focus on primary and secondary liver cancer and also head and neck cancer. The recognition, the first of its kind in Malaysia, was given by Nucletron Operations B.V. (Elekta), a company that has long been a specialist for brachytherapy and is headquartered in Veenendaal, The Netherlands. Brachytherapy is a form of radiotherapy treatment where radioactive material is placed in or near the cancerous tumour, hence reducing the radiation exposure to the surrounding healthy tissues.

The USM School of Housing, Building and Planning (HBP) announced the continuation of its academic partner membership to CABE, or the Chartered Association of Building Engineers. CABE is a professional body for building engineers in the UK and several other countries like Australia, USA, Hong Kong, China and Singapore. CABE generally partners with a host of academic institutions around the world, with the goal of driving the built environment forward with uncompromising and meticulous standards. To date, there are around 100 institutions throughout the world which are academic partners to CABE, and USM is now one of them, and the first in Malaysia. Once USM, and HBP in particular, becomes CABE's academic partner, the architecture programme could proceed further to have all of its Part I and II architectural degrees accredited with CABE, including its pioneering and well regarded USMKPM offshore, the HBP BSc Architecture degree at Politeknik Port Dickson.

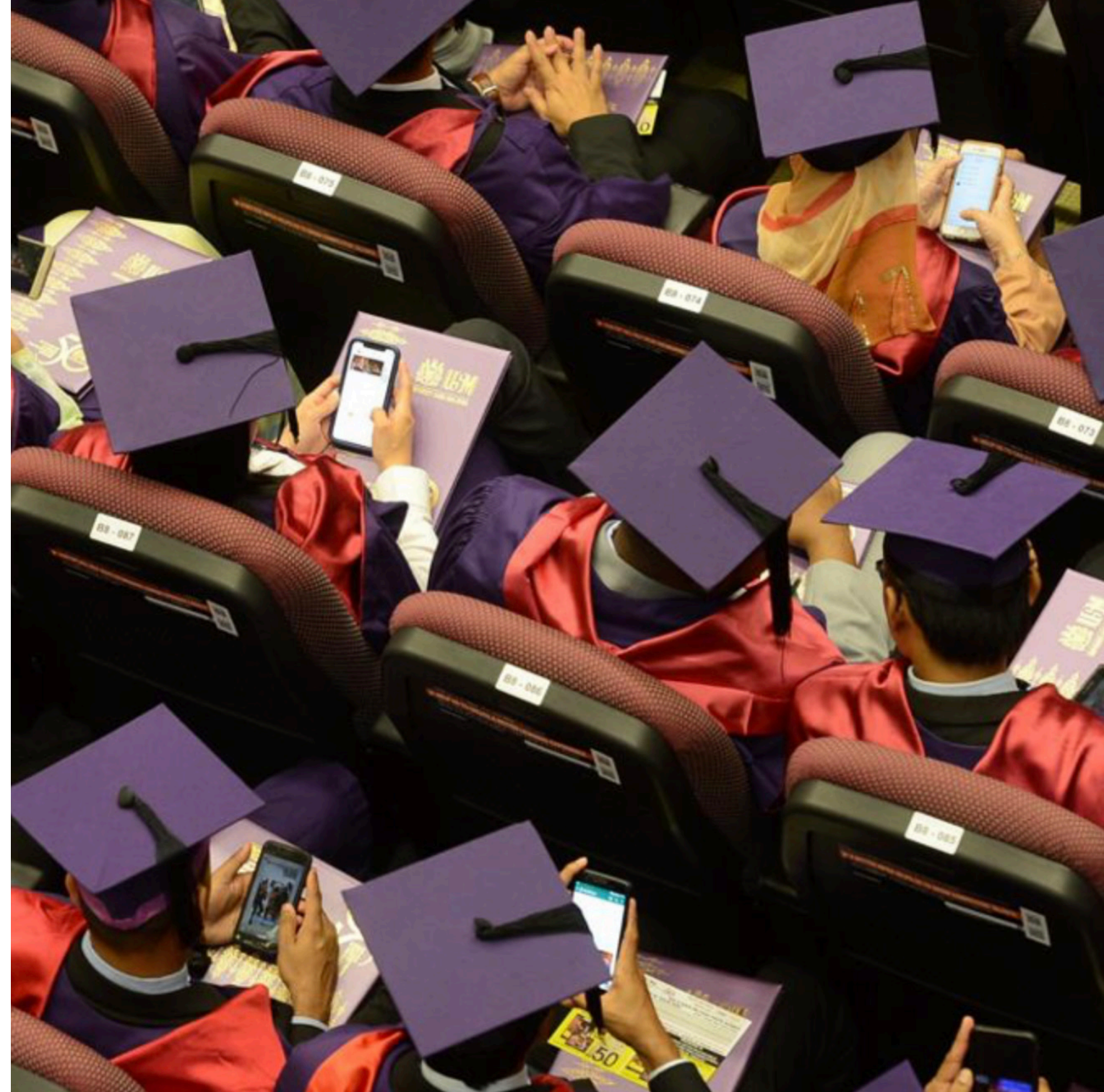
Activities

USM Launching Its First Audiobooks

Penerbit Universiti Sains Malaysia (USM) continues to expand its digital publication agenda by releasing its first series of audio-book titles to the market. This expansion is made possible through a collaboration with Suara Arkilis Sdn. Bhd., which will provide regional distribution of the audiobooks. Suara Arkilis operates Nusantara Audiobooks, an audiobook distribution platform for regional territory encompassing Malaysia, Brunei, Indonesia and Singapore. Partnership with Suara Arkilis will both widen the publisher's market reach and add value to its products and brand. While audiobooks are still a new phenomenon in this region, there is ample room for growth as digital literacy levels surge and consumers become more preoccupied. People are beginning to realise that audiobooks are a viable alternative to reading. Using just a smartphone, people can enjoy audiobook contents while driving, jogging, commuting or before going to bed.

USM Virtual Fair

In 15-16 August 2020, USM launched its virtual fair to introduce the university and its programme to potential students. It was a programme initiated by Institute of Postgraduate Study, IPS in order to gain more students from all over the world. Besides, this idea was to go against the usual face-to-face approach that would take more time and space.





Achieve gender equality and empower all women and girls

International Women Day 2020

Centre for Research on Women and Gender (KANITA) had been collaborating with the Students' Representative Council (SRC) to organize annual International Women's Day celebration since 2017. This was part of creating awareness about gender equality amongst students and mentoring women student leaders. Female student leaders played active role in organizing the event, with guidance and assistance from lecturers and staff of KANITA. The events which ran over a period of two weeks were organized with the participation of mostly students.

Gender-Prihatin Policy

Lactation Room under the Gender-Prihatin Policy was established in 2018—The Vice Chancellor announced the Gender-Prihatin Policy of USM in her New Year's Address. One of the initiatives under this policy is the establishment of lactation rooms in strategic spaces throughout the campus. New Lactation Rooms were established at the premises of the School of Humanities and School of Physics. Existing Lactation Rooms are in the buildings of the Centre for Research on Women and Gender, the Advanced Medicine and Dental Institute and USM Hospital.

Childcare Facilities

USM offers childcare facilities to staff and faculty under the Islamic Centre Hadhanah. The Hadhanah day-care facility provide subsidised fee for babies, toddlers and children of staff and students under the age of 7. The day-care also offers transit facility (in the afternoon, after school) for school children between 7 to 12 years of age.

The Islamic Centre of USM on the other hand offers kindergarten service for children of students and staffs aged 4 to 6 years. The kindergarten is for a half-day from morning till mid-day. Many of the children in the kindergarten go to the Hadhanah post-session.

Tadika Minden USM: Established in 1975, is kindergarten run by the Cooperative of Tadika Minden (members are USM staff). This is an in-house kindergarten for children between the age of 4-6 years old, charges for USM students and staffs are at subsidised rate.

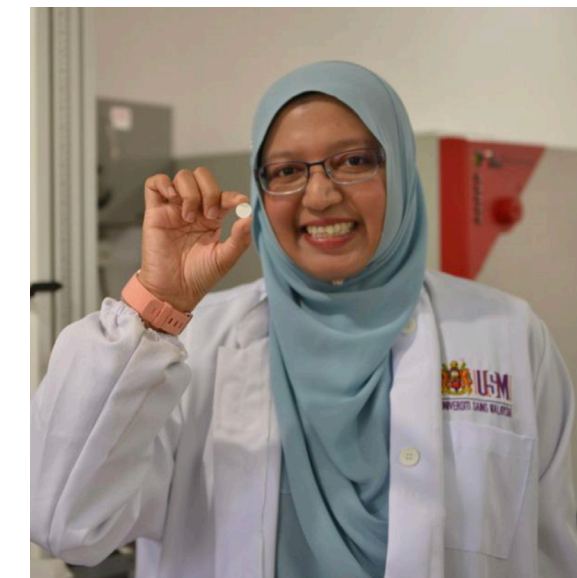
ididik USM: USM provides Islamic educational session for children of USM staffs and students.

Women in Science

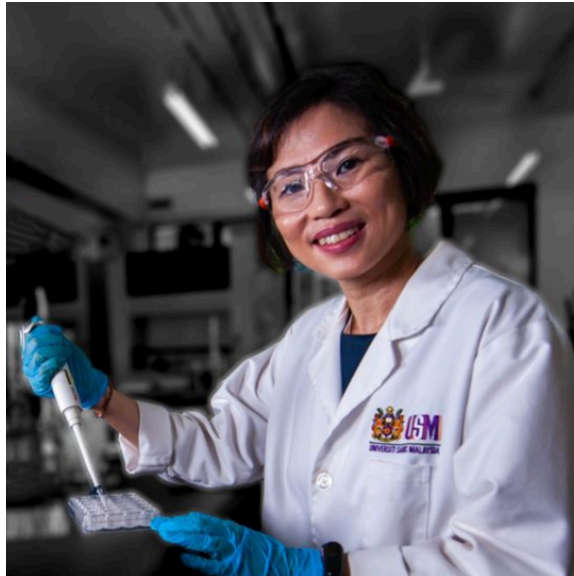
Professor Dr Fauziah Ahmad from School of Civil Engineering, USM took the lead as President of Asia Pacific Inventors and Innovators Networking (APWIIN) 2020. The main objectives of APWIN are to empowerment women to be innovative and create new ideas so that the product can be invented for impact to the society and to move forward for commercialization in the current industry. The APWIIN Networking will assist in many ways for assisting and bring forward the idea for commercialization in the industry or public sectors.

Professor Dr. Fauziah Ahmad was also appointed as Chairman and Board of Directors in a public listed company (Fibromat (M) Bhd where it links University and Industry. With this link, students in the future can do their internship and site visit the company enhanced their knowledge and sharpen their skills in the field of Geosynthetics. Fibromat has agreed to support the School of Civil Engineering and also USM by granting RM15,000 for the best Final Year Project Award 2020/2021 Session.

Dr. Yanny Marliana Baba Ismail from School of Materials & Mineral Resources Engineering, USM is among the 100 Scientists of Malaysia. She became a Materials Engineer with the aim to develop advanced materials for medical applications. Her team experiment in developing new synthetic biomaterials for bone repair. These materials are specifically designed and formulated to closely resemble the architecture and composition of native bone.



Dr. Lee Hooi Ling, an academician from the School of Chemical Sciences USM recently made the university proud after being selected into the 2020 cohort of women leaders to be featured on Southeast Asian Women (SEA Women) for the Science, Education and Women Categories. Only 80 leading women were selected in the 2020 cohort from 10 Southeast Asia countries across 16 industries. She specialises in the field of physical chemistry, with research interest in Nanomaterials & Nanotechnology, Green Chemistry, Surface Science and Microscale Chemistry.



A research scientist and lecturer from the School of Biological Sciences USM, Dr. Chew Bee Lynn made the nation and USM proud when she emerged victorious in the Science, Technology and Digital category at the 2020 Women of The Future Awards (South East Asia). The awards ceremony aimed at providing a platform to showcase regional emerging women leaders in their respective fields, ranging from arts and culture to business, science and community service. Chew was recognised with this award for her research work, contributions to science and technology and leadership qualities, showcasing the region's female change makers. Being trained in the field of Plant Biology, specialising in plant tissue culture, she works with local farmers and food growers in Malaysia to introduce practical agricultural technologies which include the production of high-quality fruit plant stocks.

A multidisciplinary team of researchers from USM, University of Westminster and Middlesex University were recently awarded the Newton Fund Impact Scheme (NFIS) of the British Council and the Malaysian Industry Government Group for High Technology (MIGHT) for a project entitled "Piloting Health Interventions to Advance the Sexual and Reproductive Health of Women Migrant Workers in Malaysia". This international grant awards a total amount of £133,161 (about RM732,385), where USM will receive £73,902 (about RM406,461). Researchers from USM are Professor Dr. Noraida Endut and Dr. Lai Wan Teng of the Centre for Research on Women and Gender (KANITA) and Dr. Suziana Mat Yasin of the School of Social Sciences.





Ensure availability and sustainable management of water and sanitation for all

Recognition

USM become the first university in the country to be awarded the “UNESCO Chair on Ecohydraulics for Sustainable Water Infrastructures for SDG 6 in the Asia and the Pacific Region”. The Chair will be hosted specifically at the USM River Engineering and Urban Drainage Research Centre (REDAC) covering the period of 4 years. With USM being selected for the water-related UNESCO Chair, the University is poised to become the international hub for education and research in sustainable water infrastructure. USM will dominantly be serving Asia and the Pacific region, addressing issues relating to the access to clean water impacting over 663 million people. The Chair according to the agreement was established with the general objective of contributing to the overall development goals - social, economic and cultural development.

Commitment

USM established River Engineering and Urban Drainage Research Centre (REDAC) with a niche area in Sustainable Urban Stormwater Management. REDAC has been awarded a pilot project in implementing a Bio-Ecological Drainage System (BIOECODS). BIOECODS is an innovative sustainable drainage system that helps restore the natural environment, maintain river flow and control ground subsidence. BIOECODS offers an exemplary model for urban storm-water management in tropical climates. BIOECODS is designed to solve three major water-related problems commonly encountered in Malaysia which are flash floods, river pollution and water scarcity during dry periods. The BIOECODS which consist of three components, namely ecological grassed swales, biofiltration storage (Dry Ponds), and Ecological ponds (Wet Ponds, Detention Ponds, Constructed Wetlands, Wading Rivers and Recreational Ponds) became a living lab to consultant, community, students and NGO in related field.

Research

School of Civil Engineering is also doing a research on pollutant and concentration level by sampling water and sediment from Sg. Perak Basin every three months since 2020. The aim of this research is to collect water and analyse the pollutant and determine its concentration levels. This is to map the pollutants using geospatial analysis which will help to give indicator on human activities impact to the water bodies as well as the sediment transport ed and settlemen at the riverbed. The impacts is to ensure that the water quality at Sg. Perak Basin can be used as clean water by the community.

USM collaborated research and consultancy with Toyota Daihatsu Engineering & Manufacturing Com (TDEM). The Thailand based company is responsible for the Asia region assembly unit and companies. In the Toyota Environmental Challenge 2050, they are highlighted to answer to SDG 6 in the plant operations by minimising and optimizing the water usage. The School of Civil Engineering, USM was appointed to carry out monthly water quality monitoring for the discharged wastewater from Toyota plant in Shah Alam, and to determine the impact of the effluent to the nearby river— Sg. Renggam. This will bring good impact to the environment and clean water for the future.

Education/Training

RCE Penang@USM and RCE Tongyang visited the Sri Nibong School, where the school collected wastewater from the air conditioning and use the harvest to water plants in the school compound. This effort educates school childrens on the importance of saving water and being innovative to recycle water from the air conditioning and use it for irrigation.

REDAC organised a number of trainings and workshops to consultant, communities, students and NGOs in related field. Among the training and visitors in 2020 were MSMA staffs for water quality BMPs design workshop between 14 to 15 September 2020, visitors from Pemaju Ringgit Muhibbah on 14 January 2020, staff visits from *Pusat Kajuruteraan Automotif* (AEC), Universiti Malaysia Pahang (UMP) on 28 February 2020, study tour from *Jabatan Kerja Raya* (JKR) Melaka on 12 March 2020, visitor from Malaysia Productivity Corporation (MPC) on 29 July 2020, visitors from *Pusat Kajian Kualiti Air & Alam Sekitar* (PKKAAS), *Institut Penyelidikan Hidraulik Kebangsaan Malaysia* (NAHRIM) on 29 Julai 2020, JPP and UKM to Pilot Study Wetland site dan BIOECODS on 29 October 2020.





Ensure access to affordable, reliable, sustainable and modern energy

TEACHING & LEARNING

Video Competition: Empowering Students' Leadership in (SDGs) via Innovation and Invention 2020

Student leadership in sustainability cannot be achieved single-handedly by single stakeholders. Collaboration has proven to be a strategic avenue to develop students' leadership in SDGs. Therefore, in line with 21st century learning competencies, it is essential that students are empowered to create innovations and inventions relating to sustainability. A collaboration programme between USM, Penang State Government and Penang Education Council (who is sponsoring and supporting this programme) as part of the Science and Technology Awareness Programme 2020. It is important that students in Penang play a leading role in SDGs and share with other students around the globe through RCE Centres. The programme involved innovations, inventions and video competition focusing on Sustainable Development Goals with three themes namely Quality Education (SDG 4), Affordable and Clean Energy (SDG 7) and Life on Land (SDG 15). This programme provides a collaboration opportunity for students in Penang to share and exchange ideas on sustainability with regard to the specific themes. Due to the COVID-19 pandemic, the webinar and competition were conducted online.

A webinar series on the implementation of Green Technology Across the Curriculum was held together with Centre for Education, Training and Research in Renewable Energy and Energy Efficiency (CETREE) USM and Seberang Perai Polytechnic, Penang on 23 October 2020. The objective of the webinar was to discuss the importance of green technology implementation elements and incorporate them into the curriculum in teaching at polytechnics.

Another series of webinar on Green—Technology for Next-Generation Series 1: "Importance of Green Technology in Education"—was held together by Centre for Education, CETREE USM in collaboration with Institute of Teacher Education Campus Sultan Abdul Halim. The aim of this webinar was to provide awareness and education about the importance of green technology in education to teachers and prospective teachers.



Earth Hour

Earth Hour is a worldwide movement organized by the World Wide Fund for Nature (WWF). The event, held annually, encourage individuals, communities, and businesses to turn off non-essential electric lights for an hour. The goal is to raise awareness about energy consumption and its impact to the environment. Every year, USM participated in the Earth Hour event to increase staff and students' awareness on the importance of energy conservation. However USM took the initiative to extend Earth Hour by implementing it from 9-10 p.m. every Friday from December 2019 to April 2020.



RESEARCH

SUSTAINABLE ENERGY RESEARCH BY SCHOOL OF CHEMICAL ENGINEERING USM—Sustainable energy is the sustainable provision of energy that meets the needs of the present without compromising the ability of future generations to meet their needs. Technologies that promote sustainable energy include technologies developed to generate renewable energy sources and also technologies designed to improve energy efficiency. Renewable energy technologies are essential contributors to sustainable energy as they generally contribute to world energy security, reducing dependence on fossil fuel resources and providing opportunities for mitigating greenhouse gases. Research to produce sustainable energy are required to establish feasible technologies to produce energy sources, to carbon emissions through cost effective energy education and policy.

RECOGNITION

Professor Dr. Hooi Hooi Lean a Professor of Economics at the School of Social Sciences, USM has been appointed as Associate Editor for Sustainable Energy Systems and Policies articles under Frontiers in Energy Research (FER). FER publishes rigorously peer-reviewed research across the field, with an emphasis on sustainable and environmental developments and technologies and sustainable energy systems and policies publishes high-quality research relating to the technological, economic and social aspects of energy systems as well as the policies needed to make them sustainable solutions. Dr. Lean obtained her PhD in from the National University of Singapore. She also served as a post-doctoral visiting scholar to the Department of Economics at Monash University, Australia. She has been a visiting scholar to a number of prestigious international universities. Professor Lean has authored more than 150 scholarly articles and academic book chapters—her experience in editorial work is very extensive.

Energy Outreach Activities/Network

Among the objectives and targets of empower NCER Program: Penang Academics is to utilize existing resources and energy at USM with specific skills to provide professional guidance to students through high-impact planned programs and activities, provide a systematic teaching and learning system and follow the latest syllabus through monitoring the School of Education, guiding students through a coaching and mentor-mentee approach in an effort to form a dynamic, intellectual and virtuous young generation with strong spirit. Along with CETREE's main objective in providing awareness, training and education to the entire community in Malaysia to achieve excellence in education and soft skills related to energy efficiency and Green Technology, they are also invited to enliven the program by providing hand's on and STEM -related exhibitions.



Green Technology Awareness

Safety awareness in the regulation of energy and gas consumption is an important element in helping the success of Green Technology practice in daily life of all target communities in Malaysia. CETREE collaborated with the Safety Regulation Unit, Energy Commission Malaysia in a program to increase knowledge on the safety of energy and gas use among the community in Malaysia as well as disseminating the role of CETREE to enhance awareness education in the use and practice of Green Technology in daily life.

In 2020, delegation from CETREE held a discussion with Penang Matriculation College (KMPP) to work together in increasing the knowledge of KMPP residents about Green Technology and to understand the role of CETREE in education with the concept of Green Technology in daily life. The meeting also discussed about planned activities related to Green Technology at KMPP in 2020. It was hoped that KMPP can become the first matriculation centre to introduce the practice and awareness of Green Technology elements in daily life of its residence.





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

Ekspo Pendidikan Dan Kerjaya (EKSPEN) 2020

Ekspo Pendidikan dan Kerjaya (EKSPEN) 2020 fully organized together by Centre for Alumni Liaison, Career & Graduate Employability USM, the Center for Great Development (HDC) and in collaboration with the Ministry of Education Malaysia (MOE), Penang State Government and SOCSO was held between 13-14 March 2020 at Dewan Utama Pelajar, USM. EKSPEN 2020 aims to open space and employment opportunities for final year students who will graduate and enter the working world. EKSPEN 2020 was joined by 80 companies that opened job opportunities and ‘walk-in’ interview sessions as well as 44 sales stalls to visitors. The activities were:

1. Education and Career Talks
2. Education and Career Open Exhibition
3. Job Interviews (Walk-in-Interview Sessions)
4. Career Counselling
5. Resume and CV Writing Workshop
6. Academic Journey Guidance
7. Talk Session with Celebrities
8. Lucky Draw
9. Food Truck

Pusat Transformasi Insan (PTI)

USM’s Pusat Transformasi Insan (PTI) in an initiative to transform the university for the continuation of the APEX Agenda. Main aim of PTI is to prepare and sustain high-performing talents by implementing strategic programs and ongoing training. These talents will continue as role models who will be to shoulder the responsibility for succession plan and transform the overall university administration according to competency requirements, across schemes and grades. Training programs are designed and offered to all staff covering aspects of Core Competencies, Functional Competencies and Information, Communication and Technology (ICT). PTI USM also introduced the Administrative Outreach Program (AOP)—a facility offered by the university to staff (management & professional and executors) to expand their knowledge and gain experience on recent administrative advances or field concerned with essential duties for a specific period of time.



Scale-Up of Premium Madu Kelulut Production as a New Commodity

Lecturer from the USM School of Medical Sciences, Dr. Mohd Zulkifli Mustafa obtained a KPT Translational Research Grant (TR@M) amounting to RM1,927,000 for a project entitled “Scale-Up of Premium Kelulut Honey Production as a New Commodity and Remedy *via* Advance National Honey Landmark (AnNahl) Project”. The project—to use a systematic farming methods for stingless beekeepers ‘kelulut’ to ensure the production of high quality honey to meet the commercial standard. Dr. Zulkifli has trained 3,000 people from rural areas all over Malaysia to be active beekeepers. Most of the participants are housewives and the B40 group who are expecting to increase their total household income through this program.



USM, a Haven to Unleash Your Potential

V. Sandrageson, called Sandra among friends and superiors, spent nearly four decades of his life with USM. Starting his career as an office boy in 1979, he advanced his career to a hospital attendant in HUSM, Kubang Kerian kelantan in 1983 after a 4 years stint at the Ministry of Education Malaysia. USM changed his life. In USM that he really discovered his hidden potentials—taking a lesson from people around him. To him, USM a second home. He enjoys working, staying and enjoying the environment in USM. His messages his colleagues are to always be professional, uphold the integrity and set their commitment align to the five core values/tenets of USM. Working as a team and take the time to understand each other better will make the impossible possible. Most importantly, always work truly from the heart and expect nothing in return.

30 Years of Showering Love to Patients Through Food

Mat Rohim Hussin, 56, is the most senior cook in the Nutrition and Dietetics Unit at Hospital USM. He is now the most respected reference person when it comes to preparing scheduled healthy meals for the patients warded at Hospital USM. Holding firm to the principle of 'Always Do Your Best', Mat Rohim would like to encourage his colleagues to continue to be committed in their work and career. He also has high hopes in his heart that the quality of meals prepared by the unit can be further enhanced for the patients seeking treatment at the hospital. After all, it's the food that connects the souls. "Always be sincere with what you do. Each effort you put in will somehow go into the healing process of the patients. You might not be able to see the sincerity, but it will come back to you in many other ways," reminded Mat Rohim.



USM Offers Help to Re-Skill Potentially Affected Sony Workers

USM is willing to help re-skill some potentially affected workers following SONY's Audio plan to close its operation in Penang. About 3,600 workers from the Penang factory will be affected. Many are likely to be laid off, while some could be transferred to other factories. The USM Vice-Chancellor said that USM continuously focuses on helping the nation to grow and retain its talent and during difficult times, re-skilling can be one of the options to ensure that talents in the country could revisit and re-plan their career path. USM is willing to offer short courses which are future-ready, such as the Internet of Things (IoT), Business Analytics, Business Continuity, Occupational Safety and more at the certificate level. According to the Vice-Chancellor, the courses will be conducted mainly at the Alor Setar facilities, Kulim facilities and can be made accessible Online from wherever the participants are and shall be conducted with a fee waiver for the impacted staff of SONY. Discussions with the Northern Corridor Economic Region (NCER) on this move has been initiated so that USM can also help to channel those trained into relevant sectors. The initiative may be expanded into other economic sectors impacted during the COVID-19 period.

USM Bridging Relations with Industries

USM intends to revise its curriculum to reduce the mismatch of skills required for industries and enhance employability of its graduates. USM's Vice-Chancellor, Professor Dato' Dr. Faisal Rafiq Mahamd Adikan has taken the initiative to visit two prominent industries, OSRAM Opto Semiconductors (M) Sdn. Bhd. and National Instruments (NI) Malaysia Sdn. Bhd., to gain more insights and bridge the gaps between theoretical training and physical learning in a real-life environment.

USM, Vitrox to Strengthen Academia-Industry Linkages

Following the signing of a Memorandum of Agreement (MoA) on 16 December 2019, USM continues deepening ties with ViTrox Corporation Berhad. In a world where there is rapidly changing technology, automation will surely help to meet the demands. However, to improve the current technology, a continuity of R&D is crucial, and companies are seeking for more automation processes—with its home-grown technical expertise and its world-class products, ViTrox is now venturing into smart agriculture to help the farmers. ViTrox is revolutionising agriculture in Malaysia, using natural resources and eliminating the use of pesticide; and V-Farm Automation, a modern vertical farming system will enhance agricultural yield and minimises the usage of resources. Welcoming the future collaboration with ViTrox, the USM Vice-Chancellor then related on how to embed the practice of collaborating with industries into the undergraduate programme to enable the students to share their ideas and talents more effectively.

RECOGNITION

KUFS-USM Director Conferred Decoration by the Emperor of Japan

The Director of KUFS-USM Japanese Cultural Centre, Mr. Masatoshi Soeda has been conferred the Decoration (The Order of the Sacred Treasure, Gold and Silver Rays) and certificate of recognition from His Majesty the Emperor of Japan. This was in acknowledging of his many years of outstanding achievement in forging ties between Universiti Sains Malaysia (USM) and Japanese institutions locally and abroad. Soeda has been serving as the Director at the Cultural Centre since its inception in 2015. He is deeply honoured and grateful to receive this Decoration and to be able to contribute towards the exchange of cultural and academic values, of which he believes will further enhance cultural and academic integration, in the effort to strengthen the bilateral relationship between Malaysia and Japan. The Government of Japan has announced the recipients of the 2019 Conferment Japanese Orders, which included Soeda as one of the prominent recipients to be awarded The Order of the Sacred Treasure, Gold and Silver Rays.

Teoh Selected into First Cohort for World Obesity Federation Leadership Programme

USM Family Physician cum Medical Lecturer from the USM Advanced Medical and Dental Institute (IPPT), Dr. Teoh Soo Huat has been selected into the first cohort of SCOPE leadership programme launched by the World Obesity Federation. The World Obesity Federation's Strategic Centre for Obesity Professional Education (SCOPE) leadership programme offers a unique opportunity for healthcare professionals to learn from leading obesity medicine experts. The programme aims to create a global pool of obesity experts who will disseminate information regarding obesity to practitioners in their own countries

Dr. Garry Kuan Honoured with Two Prestigious Global Awards in Exercise and Sports Science

Associate Professor Dr. Garry Kuan Pei Ern, a sport psychology lecturer in the Exercise and Sports Science programme at the USM School of Health Sciences, has been presented with the IFPEFSSA International Eminent Educator Award 2020 in recognition of his contribution in the field of exercise and sports science by the International Federation of Physical Education, Fitness and Sport Science Association (IFPEFSSA), India. Dr. Kuan had achieved an impressive benchmark through his extensive hard work in promoting exercise and sports science at the international level. On the second award, he was co-selected for the International Society of Sport Psychology (ISSP) Developing Scholar Award winner for 2021. This award was presented to him by the peak organisation in sport psychology based in Canada, in acknowledgement of his contributions to excellence in research and scholarly activity.

Four USM Academics Acknowledged Among Malaysia's Thirty Top Research Scientists

Four Universiti Sains Malaysia (USM) academicians have been recognised as Malaysia's Top Research Scientists. The announcement on the four, being among the thirty outstanding scientists to be acknowledged as the 2020 Top Research Scientists Malaysia (TRSM), was made recently by the Academy of Sciences Malaysia (ASM). The recognition is awarded by ASM to researchers who have made a strong impact at the national and international levels. This is in line with its focus on fostering a culture of excellence in Science, Technology and Innovation (STI). Those given the recognition are leading research scientists who have been actively involved in national research and innovation to generate new knowledge, making new discoveries, creating value-added opportunities and translating their research into meaningful and impactful outcomes that can significantly contribute to the socio-economic transformation of the nation. They are:

1. Professor Dato' Dr. Aileen Tan Shau Hwai (School of Biological Sciences/Centre for Marine and Coastal Studies, (CEMACS))
2. Professor Dr. Sreeramanan Subramaniam (School of Biological Sciences)
3. Professor Ir. Dr. Nor Ashidi Mat Isa (School of Electrical and Electronic Engineering)
4. Professor Dr. Zulkifli Ahmad (School of Material and Mineral Resources Engineering)





Build resilient infrastructure, promote sustainable industrialisation and foster innovation

SDG 9 in higher education focuses on universities' role in fostering innovation and serving the needs of industry. It explores institutions' research on industry and innovation, their number of patents and spin-off companies and their research income from industry. Spearheading USM's commercialisation drive is the Centre for Innovation and Consultation (CIC). The CIC is given the responsibility of assisting USM's researchers to channel their scientific discoveries efficiently to relevant markets. In 2020, USM participated in a few competitions and exhibitions locally and internationally.

Competitions



2 Special Awards



4 Special Awards



THE 5TH INTERNATIONAL BUILT ENVIRONMENT UNDERGRADUATE RESEARCH COMPETITION (BEURC) 2020



USM Architecture Students Win Honorary Mention for ACAE Student Design Competition

Two USM's architecture students from School of Housing, Building and Planning (HBP) have participated in the prestigious ACAE Student Design Competition and won an Honorary Mention for their architectural design. With the accolade, not only did the second year students, Mohd Hazimi Afif Fairus and Mohd Zulkamal Arif Abd Ghani brought a sense of pride and joy to the School of HBP and the University, but also to the nation, as their design entry was the only one from Malaysia which made it to the winning list this time. This prestigious design competition, entitled 'Contextuality: Design of A Bus Shelter For Your City' was organised by ACAE or Arcasia Committee on Architectural Education specially for architectural students in institutions of higher learning across the Asian region during the COVID-19 lockdown period.



USM Students Shine at James Dyson Award 2020

Students from the USM made the institution proud when they emerged as Runners-up at the James Dyson Award 2020 with their 2 products. This competition is open annually to design and engineering students to challenge students to think differently and to create innovative products that work better. The first project is known as VIBRAILLE, produced by a team of students from the School of Computer Sciences (SoCS) and School of The Arts (SoTA). VIBRAILLE enables the blind community to read digital materials using phones by sensing the vibration. VIBRAILLE translated the codes following the Braille pattern and eliminates the mainstream approach which uses external devices and voice reader. The second project is called PEBBLE, an automated food tracking system that is compatible via an app, which aims to reduce the amount of food waste generated in the household and allowing the consumer to keep track of their food before they went bad. Inspired by the research at finding out the reason behind the amount of food waste generated from households in Penang, PEBBLE, will remind consumers when their food is going to expire and prevent them from throwing out food by suggesting recipes for the customer using the remaining leftovers in the household.

Two USM Teams Won Regional Global Innovation Challenge on Climate Change

Two out of three USM teams won the third and fifth places in the finals of the South East Asian-Global Innovation Challenge 2020 (SEA-GIC 2020), held virtually recently on 3 December 2020. **Third Place** went to a team of final-year students from the USM School of Chemical Sciences, with their project entitled "Conversion of Dissolved CO₂ into Electrical Energy Using an Electrochemical Method". **Fifth Place** (Consolation Prize) went to another team of USM's third-year students from the School of Chemical Engineering, with their project entitled "Next Generation Carbon Capture and Storage: Chemical Looping with Oxygen Uncoupling (CLOU)"—an innovation to replace the current method of coal combustion for power generation with a new approach called chemical looping with oxygen uncoupling (CLOU) which does not require a separation unit to capture carbon dioxide.

USM Won Gold with 'PST' to Assist Children with Language Disorder

Specific Language Impairment (SLI) is a disorder wherein an individual cannot master a spoken and written language, although no apparent handicapping conditions can be identified. Dr. Jong Hui Ying, a researcher and lecturer from USM School of Humanities researched into this area and has successfully come up with an automated tool named the Psycholinguistics Software Tool (PST) that could benefit all those concerned. Jong described that the PST is an integrated system which offers preliminary screening or detection of SLI and music intervention.

USM PCM-FC Cladding Won Gold At Toronto

USM lecturer from School of Housing, Building and Planning (HBP), Dr. Mohd Hafizal Mohd Isa made the institution proud when he clinched a Gold Medal and a Special Award with an innovation submitted at the International Invention Innovation Competition in Canada (iCAN) 2020 recently. The innovation which is called PCM-FC Cladding had earned Hafizal and his team (Zeyad Amin Al-Absi, Muhamad Azhar Ghazali and Xia Qing) the prestigious award that will put USM once again on the global stage. Hafizal said, PCM-FC Cladding is an innovative material that was developed to have good thermal resistance and thermal mass. He added that this material when tested has shown significant indoor temperature reduction, providing more thermally comfortable conditions.

I-TEST CAD: USM Invention Champions Sustainability, Enhances Online Learning Method

USM researchers has invented a product called i-Test CAD to improve the test assessment method for learning outcome of CAD software through e-learning. This invention recently won a silver medal in the 31st International Invention, Innovation and Technology Exhibition (ITEX) 2020, held online for the first time due to the ongoing worldwide COVID-19 outbreak. The i-Test CAD is invented with the aim of reducing the use of paper, while also fulfilling the aspirations of the university, the country and the agenda on sustainability. In the era of IR 4.0, the conventional method is no longer suitable as it required a sizeable number of paper scripts, and it is also time-consuming to conduct the test.



INNOVATION

USM Researchers Make Use of Tissue Culture and IoT to Optimise the Growth of Figs

A team from the USM School of Biological Sciences (SBS) led by Dr. Chew Bee Lynn and Professor Dr. Sreeramanan Subramaniam obtained a grant entitled Tissue Culture Propagation of Fig and the Establishment of a Model for Automated Commercial Planting in Malaysia. The project aims to expand the research on fig tissue culture for a variety of cultivars that were identified to be suitable for commercial cultivation in Malaysia. The project will also involve the incorporation of computerised and automated IoT (Internet of Things) system in greenhouses as a modern approach towards Precision Farming. This includes provision of monitoring software, installation of sensors and optimisation of planting conditions to produce high-quality fruits suitable for marketing to supermarkets and processed food including the Sunnah-based industry. The outcome of the project will be a model for commercial cultivation of figs and other Superfruits in Malaysia.



Meyer Lemons: From the Lab to the Farm

A group of researchers led by plant scientist from the USM School of Biological Sciences, Dr. Chew Bee Lynn has recently established plant tissue culture techniques to produce healthy Meyer lemon plants suitable to be grown on the Malaysian and tropical soil on a commercial scale. Plant tissue culture technology offers an alternative that is a reliable for the mass propagation of crop plants resulting in high number of clones from novel mother plants. It is hoped this initiative will introduce the potential of lemon farms establishment that is consistent in terms of plant growth and yield, suitable for commercial production and supply to the local market chain, hence creating more job opportunities to the younger generation to become researchers, planters, growers and entrepreneurs of this cultivated fruit.



Mobile USM Custom Fit Wrist Brace Provides Support for Better Living

The Mobile USM Custom Fit Wrist Brace is a custom-made external optimum support that provides stability and allows motion, and which caters to the process of healing and rehabilitation of wrist joint injuries. The innovation is a custom-fit thermoplastic external support that can provide stability with coaptation over bony prominence, which allows movement for early rehabilitation of wrist joint problem. It is strong and durable for early rehabilitation. It is useful in its application to avoid prolonged immobilization; stable for early wrist exercise while offering comfort and safety. The rehabilitation process is applicable for osteoporosis fracture in the elderly, complex high velocity wrist fracture in the young and sport wrist injuries with potential to be commercialized. The invention won a gold medal at the 31st International Invention, Innovation and Technology Exhibition (ITEX 2020) held in Kuala Lumpur.





Reduce inequality within and among countries

Student Inequality

The vision of Student Development Affairs and Alumni Division is Nurturing, developing and enhancing graduates with H.E.B.A.T (Holistic, Entrepreneurial, Balanced, Articulate, Thinking) attributes by creating a conducive ecosystem in providing services, welfare and student development to empower talent based on APEX's core values towards producing global-minded future leaders. This sets out how we sustain or improve access, student success and progression among people from under-represented and disadvantaged groups. From the total of 3,402 USM students registered for their degree in 2020, 52% are first generation students (the first in their family to start a degree). USM is very particular in student intake and indeed really cares about the admission of students, especially students with disabilities and B40 students. There are 165 students with disabilities and USM values the sacrifice of a mother who braves long journey across Penang Bridge on motorcycle to send her son to register in an academic session.

A high proportion of USM students are from developing countries and USM offers a range of scholarships, fund and awards to support these students as the aim in their home countries that will create social impact throughout their lives. Fundings came from various sources including universities, government and industries, as follows:

1. Murata Electronics (M) Sdn Bhd Scholarship Program
2. Permohonan Pinjaman Jangka Panjang USM (SEM 02, SA 2019/2020)
3. Yayasan Kuok Berhad
4. Tawaran Biasiswa Perguruan Persekutuan Program Ijazah Sarjana Muda Pendidikan (Ism) Tahun 2020
5. Maybank Group Scholarship Programme 2020
6. CIMB Asean Scholarship 2020
7. Program Penajaan MARA Pengajian Tertiar (TESP 2020)
8. Penawaran Biasiswa Yayasan Tunku Abdul Rahman 2020
9. United Malacca University Scholarship Award
10. Tawaran Biasiswa Tan Sri Lee Loy Seng Foundation 2020
11. Yayasan KLK Scholarships
12. Application for Yayasan Sime Darby (YSD) Post Degree ACCA sponsorship (September 2020 Intake)
13. Toray Scholarship Program 2020
14. UEM Group Scholarship (LOCAL) 2020

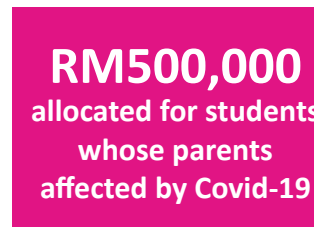
Sustaining a HEBAT Student

Following the Covid-19 Pandemic and to reduce the student burden, the Top Management of USM decided to fully refund the Accommodation Fee to all students who did not stay on campus due to the COVID-19 pandemic. In addition, USM also fully refund the Student Facilities Fee (Sports and Transportation) to all relevant students. In order to highlight the Excellent and HEBAT students, USM is always ready to help, especially the B40 group through various initiatives as follows:

1. Student Welfare Fund
2. Azman Hashim Tube
3. Zakat
4. 1Remaining: 1Device
5. Free Food Vouchers

KPT Prihatin: Distribution of One-Off Financial Assistance RM50

The impact of the COVID-19 pandemic has increased the number of B40s in the country as some have lost their jobs and experienced declining sources of income. The higher education sector is one of the most affected sectors where teaching and learning activities (PdP) need to be implemented Online to replace the face-to-face method commonly practiced before. Recognizing the importance and need for the new normal PdP method which emphasizes the aspect of cloud computing and to alleviate the burden of students to bear the cost of following PdP Online, MOHE offers a one-off Cash Assistance of RM50 to all New Students.



INITIATIVES

The Mental Health Disorders Management Guidelines or Garis Panduan Pengurusan Gangguan Kesihatan Mental (PGKM) is a comprehensive effort to assist Administrators in Public Universities to manage mental health disorders cases among students whether in a controlled state or in the situation of students behaving aggressively and difficult to control. PGKM aims to provide uniform guidelines in dealing with cases of mental health disorders and explain the roles and responsibilities of the center or school (PTJ) of USM in dealing with cases of mental health disorders in among students of Universiti Sains Malaysia.

COVID-19: USM Comes Up with Guidelines for Laboratory Operations Post MCO

USM Division of Research and Innovation (R&I) working together with Pusat Sejahtera USM to come up with a set of Guidelines for Laboratory Operations Post COVID-19 Movement Control Order (MCO). This is in line with the announcement made by the Senior Minister (Defense), Dato' Sri Ismail Sabri Yaakob on behalf of the National Security Council (MKN) which allowed research mode postgraduate students (Masters and PhD) to return to campus to resume their academic activities there. This move will enable postgraduate students in research mode to conduct physical and practical forms of research in laboratories which requires specialized facilities and equipment available there. This guideline applies to all staff, students or anyone who has been granted permission from their respective Head of Department to use laboratory facilities to ensure the highest level of safety and security is observed and always practiced. It was developed in accordance with the guidelines issued by the Ministry of Health Malaysia (MOH) and the World Health Organization (WHO).

USM Staff to Continue Working from Home During CMCO

Despite the Conditional Movement Control Order (CMCO) going into force, USM has told both its academic and non-academic staff to continue working from home. The university will continue to restrict the movement of staff throughout the CMCO, except for those working in the front line and directly involved in critical services. USM appreciated all staff for their hard work, contribution and dedication in carrying out their duties. The university's heartfelt appreciation to all its frontliner workers (medical and non-medical) in all its campuses who have been risking their lives in their fight against the COVID-19 spread.





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

The USM campus, rich with tropical plants and forest habitats, can be classified as a tropical garden. The hot and humid climate encourages an extraordinary rate of growth for plants and flowering trees, which in turn attract various species of fauna as their desired habitat. The setting of a typical tropical forest has transformed USM into a unique garden campus. The USM garden campus is actually made up of many small gardens. Some of the gardens are deliberately left untouched while others have been landscaped elaborately. Some gardens are open courtyards while others are indoor gardens.

Blessed with treasured natural assets contained within a lush green park and commanding views overlooking the hills and sea, the campus reveals the intrinsic values of a garden environment which inspires human creativity and imagination. The interplay of ecologically rich assets within the campus sets the stage for intellectual discourse amongst the students, academics and the general public.

Galeri Adiwarna, School of Arts is a platform where staff and students, together with invited artist, can showcase their talents through various types of artworks which combine fine art taste and design flair. It is situated at the main building of School of the Arts. The art exhibitions and design showcase aim to inspire and nurture artistic passions in students and enriching the arts and culture of Universiti Sains Malaysia. The exhibition is open to the public with free access.



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Dewan Budaya/Cultural Hall

In a university with extensive scientific involvement, the field of culture becomes very important to trace and integrate knowledge and race to the core, history and identity. Recognizing this fact, the USM Cultural Hall was created with the aim of developing all cultural, artistic and heritage activities, especially for students and all USM citizens. This means that its function is not only to carry out activities and services in the field of culture and the arts but to cover a wider scope where it is also related to the field of knowledge either through research and education (seminars, discourse of knowledge through meaningful local and international conferences, courses or certain workshops). Among the organised cultural activities are Hidden Germ of Sarawak entitle Malam Bumi Kenyalang 2020 that was held on 13 March 2020 and Malam Citra Bayu: Sanggar Tari Bayu Menyemarak Tradisi Kinabalu was held on 7 March 2020.



Exhibition at Muzium & Galeri Tuanku Fauziah

ARUS: 2nd Feb – 14th March 2020

Those who are into the art scene (and behind the scenes) of Penang art, Shaparel is one among prolific artist who's devoted himself to visual art. He deemed his art as an inner voice to reflects the conflict of the mind and soul. He started to paint from the beginning, held more than 70 exhibitions local and international. His realism required a so much time consuming and physical energy to continuing day by day, year by year to attain the perfection of form and light. These intense efforts of struggling with the basic and principle of colour encompassing the deep psyche move searching for its true soul. ARUS is a flow, continuously, fresh and sparsely entering new territory. The artist knew, nature and the whole universe moving and changing practically every day. Otherwise, it will get pungent and hold a speck of dirt. ARUS remarks on his long narrative of the journey. Catch more than 20 pieces of his latest masterpieces at Muzium & Galeri Tuanku Fauziah, Universiti Sains Malaysia from 2 February until 14 March 2020.

Uncertainty Dissolves: 1 July-29 August 2020

“Uncertainty Dissolves” features upcoming talent of fine art alumni hailing from School of Arts USM graduating from 2009 to 2019. USM alumni produces and presents myriad of practice from drawing, paintings, installations to artistic research. Stereotypes and perceptions of fine art alumni from USM constantly inhibit these remarkable young talents. This show aims to rediscover and showcase the artistic changes materializing from these alumni ever since they left art school. Featuring 18 contemporary young and established artists including Ain Ariffah, Afzanizam Mohd Ali, Ain Munirah, Amir Mansor, Amirul Alwi, Athirah Azlee, Ermy Shahira Zaihan, Hafizah Rosli, Hana Tan, Maizul Affendy, Mary Tang, Moses Khor, Nik Mohd Husyaidi, Norfatihah Yusof, Putri Amrizal, SM Raja, TC Liew, and Zamri Yacob exhibited their artworks, returning back to their once creative playground during student days. In overcoming creative obstacles, rules, restriction and lines are bent. We celebrate individuality, idea and expression hoping to clear the path, overcoming and dissolving the murky shroud of uncertainty.

Hamzah Sendut Library

Established in 1969, initially the library operated in borrowed premises at the Malayaan Teacher’s Training College, Gelugor. When USM moved to its own permanent campus at Minden in 1971, the library was housed in a heritage building which is now the University’s Museum and Gallery. The main library moved to its present three-storey building (Perpustakaan Hamzah Sendut 1) in 1979 and an additional Library building (Perpustakaan Hamzah Sendut 2) was built in 1996. On 10 December 2004 the Main Library was named Hamzah Sendut library taken after the name of the first USM Vice Chancellor, Tan Sri Hamzah Sendut.



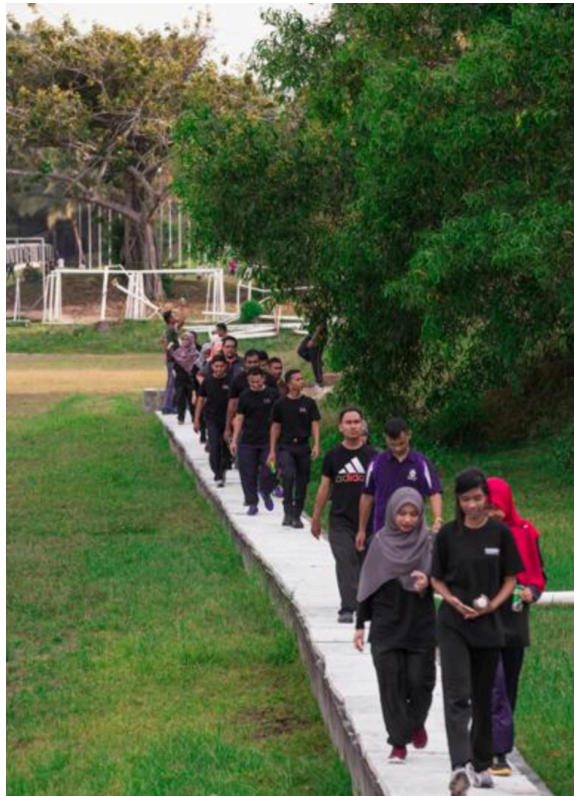
Eco-Hub USM

The USM Eco-Hub is a natural laboratory that benefits all campus residents. The main objective of Eco-Hub is to store information related to the ecology of the campus environment, control exotic trees and collaborate in research with other schools. Eco-Hub areas that are actively operating are Mid Valley and Durian Valley. Through the Eco-Hub, various species of living plants will be preserved while the specimens of the plants are also provided through the curing process. The specimen is able to last for 20 years if undergoing treatment from time to time and also used as a reference for research. There are various types of exotic herbal plants around the Eco-Hub area such as ground cover trees, Robibia, Ozali, Asisstaxia, Bitangor, Moringa, Sinai leaves, Patawali, Cyprus aromatica, Lantana, Gandarusa, turmeric, Black Meet, ground starfruit, Yusufarus and so on. Students are welcome to do research on these plants and if identified has a high medical value then it will be used for the common good.



USM Fit Trail

The two kilometers USMFIT Trail was first constructed in March 2018 at 49 meters elevation in USM compound. The Registrar's Department has been organizing #USMFit Program since Feb 2018. Due to the Covid-19 pandemic, the face-to-face #USMFit program was canceled, however, the program was continued virtually through the BookDoc application. This program is to encourage USM residents to practice healthy lifestyle.



Sustainable Commuting @USM

As a sustainable-led university, USM provides a number of sustainability commuting facilities within its compound. This is to accommodate the USM community and reduce the need for commuting using vehicles such as car and motorcycle, which in turn would help to reduce the amount of carbon footprints. In addition, the sustainable commuting facilities offered by USM is considering the user with disabilities. The facilities are E-bike & E-scooter @USM, pedestrian pathway under shady trees, pedestrian pathway with roof, zebra crossing, wheelchair pathway, special pathway for the blinds, parking space for disable, shuttle bus and flyover at USM to access campus and student hostel.



USM-JMG Affirm Agreement with MoU to Develop Lenggong Valley as a National Geopark

USM has been appointed by the Department of Mineral and Geoscience Malaysia (JMG), Ministry of Energy and Natural Resources (KeTSA) to collaborate through scientific research at the Lenggong Valley in Perak to ensure that the heritage site will be firmly on its way to become one of the country's National Geopark. With the affirmation of a Memorandum of Understanding (MoU) between USM and JMG, both parties will now work together in documenting a strategic plan in ensuring that the aspiration of the Perak state government to obtain recognition for Lenggong Valley as a National Geopark for the country and later under UNESCO will be achieved in the near future. USM through Centre for Global Archaeological Research (CGAR), School of Materials and Mineral Resources Engineering and School of Physics and Centre for Marine and Coastal Studies (CEMACS) will jointly focus on studying aspects of geology, geophysics, geochemistry, mineral resource engineering, marine science and geological heritage in greater depth at Lenggong Valley to collect more information and identify the required criteria together with JMG, as they move towards ensuring the area to be recognised as a National Geopark.



Commitment by USM to Realise a Sustainable Green Campus

Universiti Sains Malaysia (USM) is on the right track in its commitment towards realising the sustainable Green Campus agenda. The Deputy Minister of Environment and Water, Senator Dato' Dr. Ahmad Masrizal Muhammad, was suitably impressed and satisfied with the various initiatives implemented by USM in mobilising the campus community to collectively uphold the responsibility to realise the sustainable environment agenda. One example would be the initiative by USM in establishing the University Sustainability Council to clearly and precisely outline the steps towards achieving the objective of becoming a Green Campus. He also visited the USM bee farm where he was briefed on the more systematic method of 'kelulut' (stingless bee) rearing to produce high-quality honey by a senior lecturer from the Department of Neuroscience, USM School of Medical Sciences, Dr. Mohd Zulkifli Mustafa.



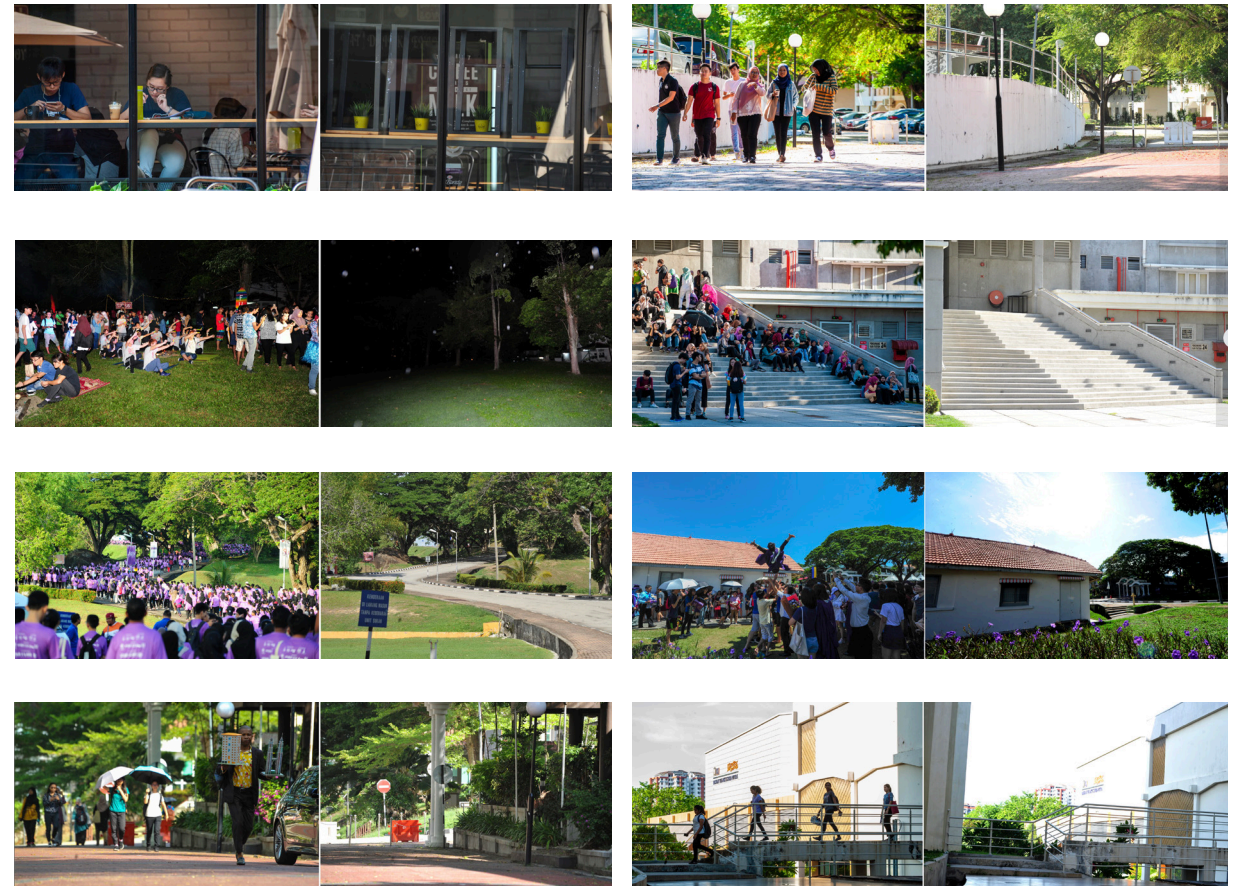
Famed USM Minden Field Undergoing Renovations

USM soon to have the first synthetic football field of FIFA standards in Penang. Anyone passing the field lately would have noticed that there is some evidence of earthwork present. Befitting the USM motto of 'We Lead', the ongoing renovation would be for the building of the first synthetic football field of FIFA standards in Penang. The renovation has been planned for 6 months, from August until December 2020. The 'B' and rugby fields would undergo renovations such as the installation of synthetic turf, flood lights, spectators' seats, toilets and food and beverage outlets. This is the first time that part of the Minden field is undergoing renovations throughout the years. All the work being done are under the supervision of the USM Department of Development and Asset Management (JPPA); USM Sports and Recreation Centre and USAINS Holding Sdn Bhd.



COVID-19: BEFORE & AFTER@USM

It's been a while since the campus was a hive of activity. There is now a sense of loneliness, being here without its community members, especially the students. Nevertheless, we wish all of them a safe journey home, with a few others still waiting for their turn to go back to their hometown. The campus will miss each and every one of you





Ensure sustainable consumption and production patterns

USM DVC Reminds Everyone to Become Responsible Consumers in Asia-Pacific RCE Online Meet

Although the impact of the COVID-19 pandemic can still be seen and felt in many parts of the world, going the online route is one way whereby some aspects of life can still continue. The online platform has seen a dramatic increase in networking in the form of seminars and other means of exchange and transfer of knowledge and ideas being undertaken among institutions. The Regional Centre of Expertise on Education for Sustainable Development (RCE Penang) at USM recently participated in an online discussion session in conjunction with the International Green Consumer Day on 28 September. The session was organised by the Faculty of Social Science and Politics (FISIP), University of Jember in Indonesia, and in collaboration with RCE East Java and co-hosted by RCE Srinagar, with the topic “Making Right Choices, Becoming a Responsible Consumer; Towards Sustainable Consumption and Production (SDG12)”.

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USM Invents Mini Printing Kiosk Utilising Used Plastic: Educates Community on Reusing Plastic Waste

USM continues its innovative practice in raising the awareness of the community on recycling plastic waste with the invention of a Mini Printing Kiosk that utilises used plastic which has proven to produce useful items for the community. The ‘Mini Circular Economy Manufacturing Kiosk: For Community Plastic Recycling’, an invention of the lecturer and researcher from the USM School of Materials and Mineral Resources Engineering (PPKBSM) is capable of producing a variety of products from plastic waste which could be of use to the community. The mini kiosk has been confirmed to be able to produce complete items using discarded plastic from within 30 minutes to 2 hours, depending on the complexity and printing quality specified by the customer.



Plogging@USM

Recreational activities while collecting garbage or ‘plogging’ is no longer a new thing in today’s society and it is one of the activities that is gaining attention because it not only provides benefits to health but also awareness of caring for the environment. The Vice Chancellor’s Office (PNC), the Media and Public Relations Center (MPRC) and the Strategic Corporate Development Office (PPKS) took the initiative to do plogging to clean up the USM main campus environment. With the themed ‘Let’s Go Plogging: Run and Clean,’ a total of 50 staff from the three PTJs came together to make this activity a success which involved a leisurely run while collecting garbage along the road around the campus. Apart from focusing on leisure and garbage collection, such activities also aim to convey a message to the campus community as well as off campus about the importance of working together between all parties in an effort to maintain the level of cleanliness and good environmental ecosystem in the country.



USM Takes Opportunities Of Environmental Sustainability Project

In line with efforts to preserve the environment, especially the campus environment, USM welcomes the intention of the Ministry of Environment and Water (KASA) to implement a trail project on the banks of Sungai Pengkalan Datu. Part of the campus area was on the outskirts of Sungai Pengkalan Datu that has been developed with staff from the Nursing Unit, USM retirees from Kelab Jasa Budi and students over the past two years as an area for staff activities and student co-curricular activities. The Pengkalan Datu River Trail, Kubang Kerian is one of the pilot projects under the River Conservation program through the Denai Sungai Kebangsaan (DSK) Program as a result of KASA’s initiative to encourage local community and stakeholders in ensuring rivers in Malaysia are protected from pollution.



LEARNING/TEACHING

IWK103/4 Pulp Production and Paper Recycling

This course emphasises on the principles of pulping, chemical recovery, pulp bleaching and paper recycling. The main topics include various types of raw material for pulping, effects of biomass components on pulping, principles and types of pulping and pulp bleaching, advantages and disadvantages of conventional and chlorine-free bleaching, paper types, resource and various types of secondary fibres, utilisation rate and wastepaper procurements. The advantages and disadvantages of paper recycling in terms of economic and technical aspects are also included.

IUK303/3 Industrial Waste Management

This course exposes students to various industrial waste management practices in terms of philosophy and practical technology. Among practical philosophies are “Just-in-time”, Lean Manufacturing, “5R”, and zero waste management. Students will also be introduced to technologies used in sustainable industrial waste processing. This course also includes laws, regulations, and protocols implemented in industrial waste management. In addition, students will conduct case studies and journals review as exposure to industrial waste management practices in developed and developing countries, as well as recent research in sustainable industrial waste management.

RESEARCH

UNIVERSITY-COMMUNITY ENGAGEMENT GRANT for Project Medicinal Herbs Aeroponic System using Recycled Bottle and Fruit Waste Liquid Fertilizer at SK Sungai Kecil Ilir and SMK Taman Mutiara Karangan Kedah. The School of Civil Engineering’s expertise in recycling methods, as well as garbage and agricultural waste processing, is being used to enhance the status of rural B40 communities. Aeroponic technology’s fundamental supplies are plant seeds, water, old bottles/containers, and fruit waste, which are all readily available in rural areas. As a result, children and parents will be introduced to the notion of this rural medi-herb producer who utilises aeroponic systems.



Campaign/Poster in Handling Waste

Restu Alam
Kelestarian Alam Pemacu Masa Hadapan
Tarikh: 10, 11, 15 Januari 2020
Masa: 9PM - 10PM
Tempat: Recycle Corner (Setiap Aras M01 & M02)

KERTAS **TIN** **BOTOL PLASTIK** **E-WASTE**

Sebarang pertanyaan hubungi:
Hajimah Husna: 017-5693195
Aziman Aminin: 019-4929422

MYCSO DISEDIAKAN!

#desasiswarestu

Ethics in Handling Waste

BLUE BIN **BROWN BIN** **ORANGE BIN**

PAPER **GLASS** **METAL & PLASTIC**

ACCEPT

All kind of

- Papers (Colored/Colorless) Eg: Newspapers, Magazines, Books, Brochures, Calendars, Cards, Cardboard Boxes, etc
- Non-broken Glass (Colored/Colorless) Eg: Glass bottle, glass jar, soft drink bottle, food containers, vitamin bottles and cosmetic bottles
- Aluminum
- Steel Cans
- Plastic Bottles
- Plastic Bags

Make sure the waste is/has CLEAN | DRY | NO LIQUID

NOT ACCEPT

- Tissue Paper
- Carbon Paper
- Oil Paper
- Paper Mixed with Plastic Layer
- Dirty/Wet Paper
- Food/Snack Wrapper
- Other waste that is not made from paper
- Crystals
- Mirrors
- Porcelain
- Ceramics
- Metals
- Laboratory Equipments
- Toxic Containers
- Containers that contain liquid/food
- Paint Cans
- Toxic Containers
- Laboratory Equipments
- Styrofoam/Polystyrene
- Containers that Contain Liquid/Food

#zerowaste #usmgreen



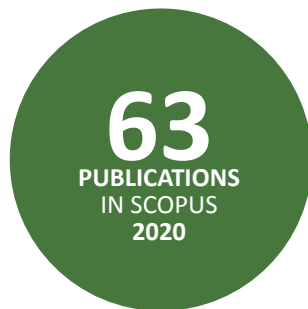
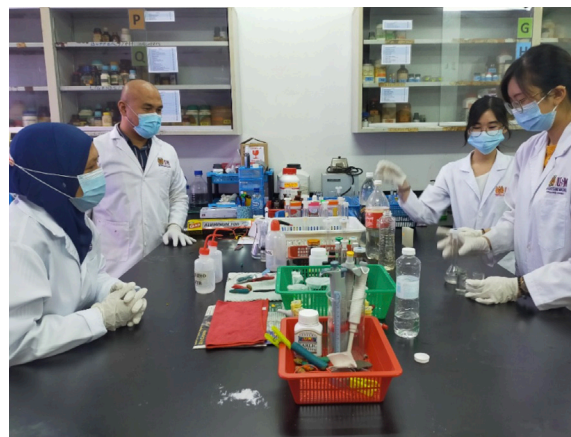
Take urgent action to combat climate change and its impacts

Climate Change and Us

Biodiversity team from Kampus Sejahtera society had organized an interesting forum entitled “Climate Change and Us”. The event was held at Dewan Kuliah A (DK A), School of Social Sciences. Climate Change and Us invited Professor Dr. Mahamad Hakimi bin Ismail from School of Technology Industries to share in-depth explanation on the climate change issues. Starting with giving the definition of climate change to the audience, he then emphasized on two important things which were the implications and practical steps in this eminent problems.

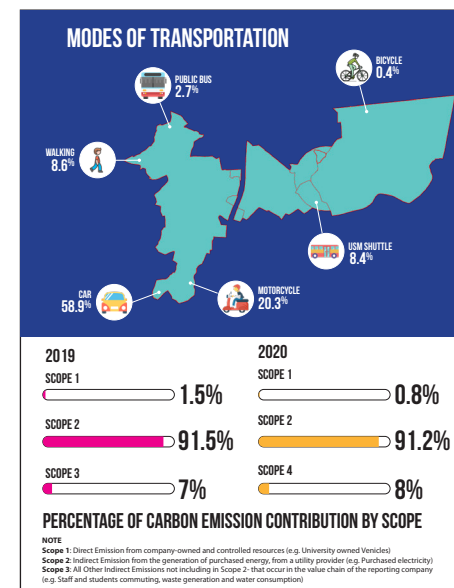
USM Teams Won Regional Global Innovation Challenge on Climate Change

USM won Third and Fifth places respectively in the finals of the South East Asian-Global Innovation Challenge 2020 (SEA-GIC 2020), held virtually on 3 December 2020. The programme was organised by the American Chemical Society (ACS) Malaysia Chapter, in collaboration with ACS UTP and UTP (Universiti Teknologi Petronas). A total of 63 teams, representing public and private universities from Malaysia and Indonesia took part in the pitching competition event aiming to discover chemistry-related projects that could address the ever-challenging issue of the current time—climate change—covering topics related to renewable energy, transportation, CO₂ utilisation, green chemistry and green building.



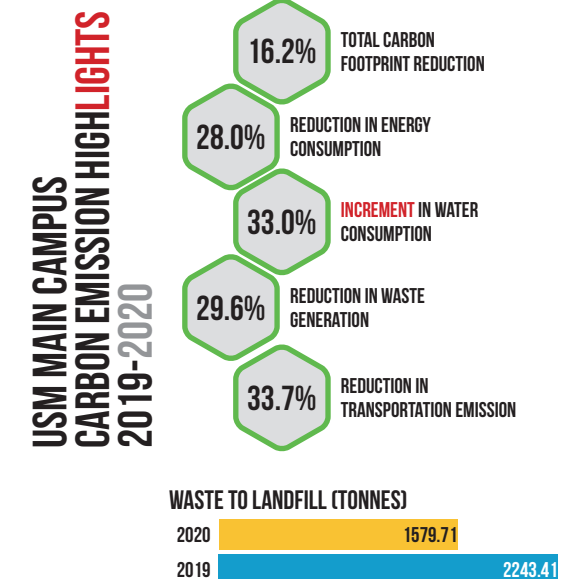
Tracking Climate Change

Scientists from three universities have planted several permanent data loggers into seashore rocks in Teluk Bahang, Penang, at the intertidal zone to gather data on global warming. Thirty professors and students from Hong Kong University, Northeastern University in Boston, United States, and Universiti Sains Malaysia have chosen Teluk Bahang shores to be the site for data recording on climate change. Held at USM’s Centre for Marine and Coastal Studies (Cemacs) in Teluk Bahang, the course aimed to expose undergraduates aged between 20 and 25 years to sustainability challenges along coasts when cities are nearby.



Carbon Footprint

Carbon Footprint is the total greenhouse gas emissions caused by an individual, event, organization, service, place or product, expressed as carbon dioxide equivalent. Measurement of carbon footprint is an effort to ensure that USM is listed as a Carbon Neutral University by achieving the target of reducing carbon emissions of 45% by 2030 as recommended by the Ministry of Environment and Water (KASA).





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

International Coastal Cleanup 2020

Universiti Sains Malaysia's Centre for Marine and Coastal Studies (CEMACS) decided to commemorate the occasion with a slight twist—by encouraging people to conduct their own beach clean ups instead—in small groups, wherever they like and at their convenience time for the entire month, from September 19 to October 18 2020. CEMACS kicked off the month-long cleanup along Medan Selera Queensbay (Pantai Seagate). A total of 166kg of trash was collected on a 930m stretch of beach. Of the items gathered, cigarette butts numbered the most, followed by plastic grocery bags and straws/stirrers. The team also audited the weight and type of trash collected. Participants were likewise urged to do their own trash audit and to submit their data on CEMACS' online form. The results were most encouraging. Data was received from the twelve groups that were formed in response—seven in Penang, three in Kelantan, and one each in Pulau Langkawi and Kuching. The collective cleanup yielded 7,347 trash items from different coastal areas.



Education/Webinar

Due to an increased case of jellyfish in Penang, a Harmful Jellyfish Webinar was held on 15 September 2020 with title Future Friend or Foe: Handling Our Relationship with Jellyfish in SEA. The objective of this webinar is to give awareness to all about the dangers of jellyfish. This webinar brings together experts from Malaysia, Indonesia, Philippines, Thailand and Singapore to discuss and find solutions to this issue.

The three series of Webinar on Navigating Life Below Water@CEMACS: Challenges, Research & Opportunities were held on 18 July 2020, 25 July 2020 and 3 August 2020. The selected topic for the webinar were Biodiversity & Mariculture that bring expert from field of Mariculture, Coastal Conservation and Marine Invertebrate Systematics & Echinoderm Systematics. Second webinar series bring topic on Pollution and Ocean Acidification. Expert from Marine Pollution/Ecotoxicology, Coral Ecology and Marine & Coastal Environment were brought together to discuss about the topic. The third series was on Marine Mammals and Threats in the Marine Realm. The expert from Marine Mammals Conservation, Marine Ecology and Microalgal Photophysiology were brought together to discuss about the topic.

CEMACS USM Embarking on Next Phase of Study on Jellyfish Bloom in Penang Waters

SM Centre for Marine and Coastal Studies (CEMACS) has embarked into the second phase of the study to seek answers on the cause of the jellyfish population to bloom in the seas around Penang. The research was conducted around the coastal areas of Teluk Bahang, Batu Ferringhi, Tanjung Bungah, Tanjung Tokong, George Town (off Eastern and Oriental Hotel) and Balik Pulau on the island, and in Pantai Bersih on the mainland. CEMACS will study the ecological processes that trigger jellyfish blooms and also determine the monthly distribution. When the peak seasons have been identified, a prediction model will be formulated to forecast blooms and prepare an early warning system and preventive management steps. Once the research has concluded, CEMACS will publish a field guide to assist the public, especially tourists, beach hotels and water sports operators, to identify the jellyfish species, get to know the peak seasons and to properly deal with jellyfish stings. The species possibly invasive, seemingly having drifted from the north and not native to the local waters and the main concern would be on the safety of beachgoers enjoying sea recreational activities and inshore fishermen at work. The species possibly invasive, seemingly having drifted from the north and not native to the local waters and the main concern would be on the safety of beachgoers enjoying sea recreational activities and inshore fishermen at work.





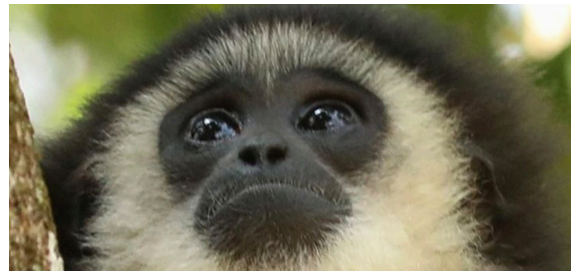
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

USM EcoHub

EcoHub aims at becoming the “nature repository” for storing information with regard to the campus ecological surroundings, preserving exotic flora and fauna which can benefit the community within or outside USM. As a living lab, students, lecturers, and researchers at USM are welcomed to carry out their research on the flora and fauna found in EcoHub to produce findings that can be beneficial to other researchers. Throughout the establishment of EcoHub, various species of living plants have been preserved to ensure that the plants can benefit the future generations. Three groups of plants; orchard, herbaceous, and forest encompassing 150 different species can be found in EcoHub such as *Ixora javanica*, *Mallotus paniculatus*, *Antidesma cuspidatum*, *Vitex pinnata*, *Tetracera indica*, and etc. A number of herbaceous plants found in EcoHub have many medicinal properties, one of which is the ability to treat diseases including cancer. Moreover, since the area has many shade trees, 115 types of birds such as Brahminy Kite, Asian Koel, and Asian Glossy Starling which can hardly be found elsewhere can also be spotted in the area.

Song of the Gibbons: An Ethnoprimateological Approach to Conservation of the Hylobatidae

Song of the Gibbons is a collaboration between the School of Social Sciences and the School of Biological Sciences at Universiti Sains Malaysia (USM). It is part of an innovative three-year study using passive acoustic monitoring to better understand gibbon population ecology in and around Taman Negara National Park. The study enlists members of the Bateq hunter-gatherer community at the fringes of Taman Negara National Park as co-researchers.



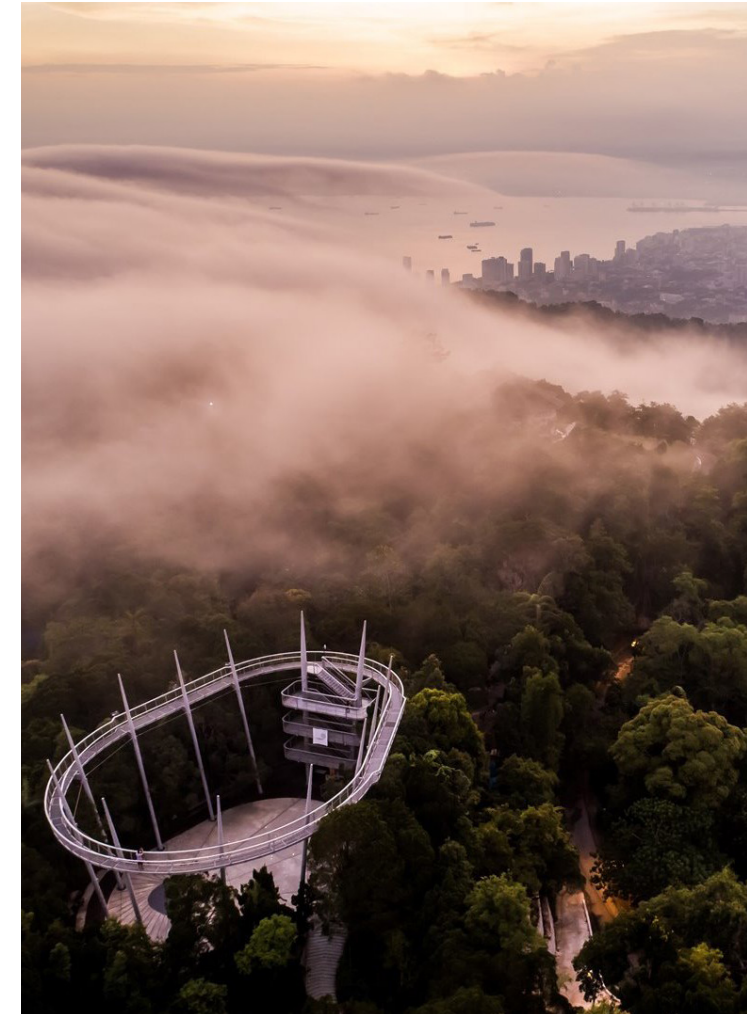
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IN SCOPUS
2020

State Seeks UNESCO’s Recognition for Penang Hill Biosphere Reserve

The Habitat Penang Hill and various state and Federal agencies are celebrating the nomination of the Penang Hill Biosphere Reserve as a candidate site under the UNESCO’s Man and the Biosphere Programme. The UNESCO biosphere reserves recognition does not bring with it the funding from UNESCO, the recognition allows Penang to brand itself as a magnificent environmental heritage site under the UNESCO umbrella. The 12,481ha proposed Penang Hill Biosphere Reserve encompasses the Penang Hill, the permanent forest reserves, Penang National Park and the marine reserve. A total of 7,285ha is on land and 5,196ha is marine. The Habitat funded the preparation of the nomination dossier by the consultant team from Universiti Sains Malaysia (USM).

Webinar

A Webinar on Mother Nature, themed ‘Leading the Way to A Greener World’ that organised by Majlis Penghuni Desasiswa Restu (MPDR) was held on 27 December 2020. The webinar was discussed about sustainability and the effective ways to preserve our environment. MPDR was proud to have Malaysian environmental activist, Maya Karin (also actress, singer and host) as an invited speaker.





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

COMMITMENT

Legal Office

Legal Office of USM is committed to provide sound and specialized legal advice and service to meet the best interests of USM and the diverse needs of academicians, staff and students of the University. The Legal Office is responsible for the provision of all the University's legal service, with the main aims to ensure the University meets its strategic imperatives. The vision of the Legal Office is to protect and preserve the legal, ethical, governance and integrity of Universiti Sains Malaysia.

Integrity Unit

The University has set up an Integrity Unit on the 15th of January 2014. The set up was in line with the Public Services Department's Circular No. 6, Year 2013, for all public sectors including universities, to establish an Integrity Unit in accordance with the effort of the Malaysian Government for the implementation of integrity values among civil servants in Malaysia. USM Integrity Unit is responsible and accountable for developing and strengthening all programs, manual and procedures relating to ethics, governance and implementation of high integrity among the staff and student of the University. The University's Integrity Unit is led by the University's Legal Advisor who is also a Certified Integrity Officer conferred by the Malaysian Anti-Corruption Commission.



Ombudsman Office

The Ombudsman Office of USM is an initiative undertaken to realize one of the main pillars of the Accelerated Programs for Excellence (APEX) transformation in ensuring good governance and integrity within the university ecosystem. The Ombudsman Office of USM is a recognized member of the well-known International Ombudsman Association (IOA), based in Seattle, USA. Ombudsman (om budz man) is a Swedish term, meaning "representative of the people" in the sense of a person who, on behalf of the higher authority within an organization, receives, investigates, and resolves complaints coming from members of the organization or the citizenry. More than handling complains, the Ombudsman mediates and resolves conflicts without going to the court. He/she may also offer ideas on how to smoothen the management of the organization, thus enhancing its governance, promoting integrity, and increasing work satisfaction along with productivity. Conceptually, the Ombudsman Office is quite similar to and has its origins in Muhtasib, the office responsible for hisbah (accountability), and Diwan al-Mazalim (Board of Grievances) during the classical age of Islam. As a member of the International Ombudsman Association (IOA), the Ombudsman Office of USM operates in accordance to the standards of practice and code of ethics of the association, specifically in terms of function and integrity principles.

Khambeswaran Brings Pride to the Nation, State and USM Through Archery

Congratulations to USM first-year student, Khambeswaran a/l Mohanaraja, from the School of Social Sciences, for his success in the Malaysia Archery COVID-19 Remote Scoring Challenge 2020 for the Men's Compound event in the 50 meter distance category. His success has brought pride to the country, the state of Penang and the university. He managed Third Place overall from out of 93 competing athletes consisting of individual athletes, club athletes and archery association athletes from all over Malaysia and Indonesia.



USM 'KAMPri' Programme Focuses on Volunteerism For The Future

Universiti Sains Malaysia witnessed the pre-launch ceremony of the Kami Prihatin (Kampri) “Coaching and equipping Malaysia’s future leader to discover and pursue their fullest potential” programme. The programme is aimed at providing training to approximately 400 Kampri volunteers who participated in the programme. A new twist is that this year, the programme was held Online.

USM Now Recognised by Facebook as an Authentic Global Brand

Christmas came early to Universiti Sains Malaysia when its Facebook account finally received a blue checkmark (blue tick), hence further strengthening USM as an established global brand. USM received the good news on 22 December 2020, which also means that the USM official Facebook account has been verified as an authentic account. With the lovely blue checkmark placed next to the name of its Facebook account, USM is now in the same elite league as some established global brands such as Harvard University, University of Cambridge, Yale University, NST Online, Perodua, Nike, Adidas, Liverpool FC, Manchester United, Arsenal and the like. It also means that now USM could be easily found in Facebook and having more credibility to the international audience; this will make USM more visible and will further drive its internationalisation efforts, as more people will know about USM and even look for USM. With the recognition given to the USM Facebook account, it signifies that the account has fulfilled all the necessary criteria set by Facebook, among which are it needs to be authentic, unique, active, complete and notable.

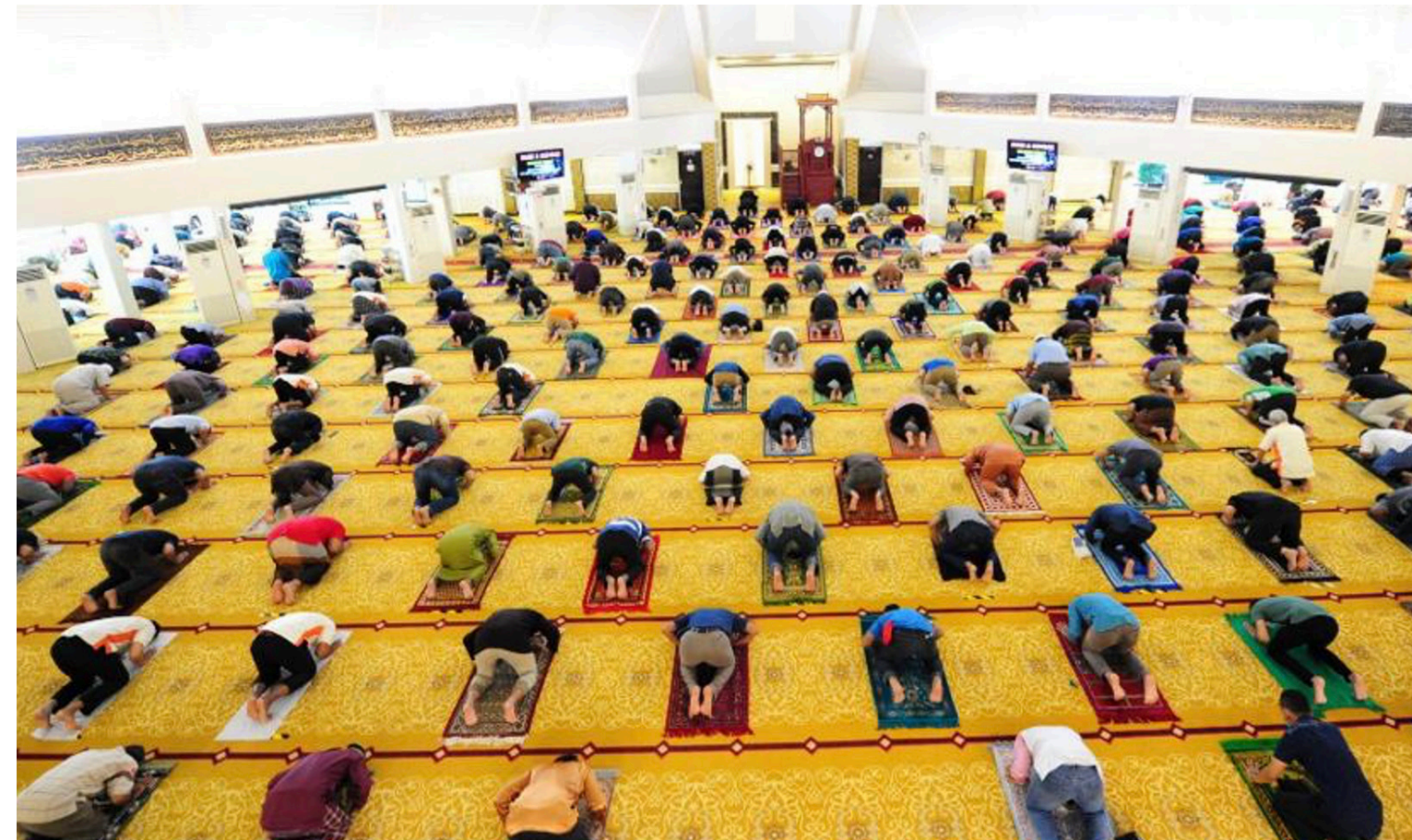
USM Among Eight Universities Achieve Six-Star Setara Rating 2018/2019

USM was among the eight Malaysian higher education institutions (HEI) that attains the highest 6-star (outstanding) performance rating in the Malaysian Higher Education Institutions Rating System (SETARA) 2018/2019. SETARA, which is a rating instrument that assesses Malaysia’s HEIs in teaching, research and services, was developed to help HEIs build a strong foundation in the three main core functions mentioned, to promote institutional excellence as well as to recognise the diversity among Malaysian universities. The SETARA rating is important as it helps an HEI to address any weaknesses and take strategic approaches to improve the overall performance. It also plays an important role in influencing the perception of stakeholders such as students, government, industries, parents, general public, international partners and other parties who would contribute to the reputation and income of the HEI. SETARA evaluations are based on four criteria/indicators, which are General—student quality, lecturer capability and institution reputation (40%), Teaching and Learning—programme recognition, teaching and facilities (30%), Research—quantity and quality of publications (20%) and Services (10%).

Facing Covid-19: How USM Nailed It

COVID-19 had turned the world upside down, as the outbreak went global in 2020. Communities, organisations and nations across the world scrambled to seek solutions. Some stumbled, others fumbled; yet there are those who have managed in their own way on how things were handled. USM went to ‘war’ and coordinated most efforts from its Nerve Centre (COVID-19 Crisis Management Centre) at the Main Campus; meetings were held, decisions were made, announcements and procedures were drafted and sent through various channels including social media and actions followed through almost

every day. Initiatives such as setting up a COVID-19 Fund, preparing equipment and infrastructure for scanning/monitoring/observation, providing Personal Protective Equipment (PPEs) for front-liners and ensuring that others concerned would be well-cared for were taken, all involving USM staff and students, as well as alumni members and industry players. The initiatives were coordinated on all four campuses: the Main (on Penang island), Engineering (on Penang mainland), Health (in Kelantan) and the Advanced Medical and Dental Institute (at Bertam), as well as the USM offshore campus (USM-KLE) in Belgaum, Karnataka, India.





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

Partnerships Are Here To Stay: 2020 and Beyond

Universiti Sains Malaysia has been actively pursuing collaborations and partnerships with many different partners. From working together with other academic institutions and industries in research and academic programmes, to providing consultancies and conducting community projects at various locations, USM realises the value of engagement with the community at different levels. The Division of Industry and Community Network (BJIM) would lead in many of the efforts relating to establishing partnerships at various levels and for different projects. One example would be the Asia-Pacific University Community Engagement Network (APUCEN), a regional network initiated by USM. Currently it has 84 member institutions, 4 affiliate members, 5 associate members and 2 corporate members. The members comprise of local and foreign entities, which would plan programmes and contribute or provide assistance to the growth and development of other communities in need globally, more specifically the ones marginalised or those affected by disasters.

USM Bridging Relations with Industries

USM intends to revise its curriculum to reduce the mismatch of skills required for industries and enhance employability of its graduates. The Vice Chancellor of USM has taken the initiative to visit two prominent industries, OSRAM Opto Semiconductors (M) Sdn. Bhd. and National Instruments (NI) Malaysia Sdn. Bhd., to gain more insights and bridge the gaps between theoretical training and physical learning in a real-life environment. National Instruments (NI) Malaysia Sdn. Bhd. is committed in developing young engineers by giving them the skills and experience that they need to have in the engineering industry. OSRAM, on the other hand provides an opportunity for USM students to undergo industrial training at OSRAM as a preparatory step before they apply the acquired knowledge when they begin their career at a later time. OSRAM Opto Semiconductors has a broad network of partners in the scientific community, with connections at universities and USM is one of the universities having collaborations with the leading global LED company.

USM Strengthens Growth Through Training and Mentoring Collaborations with Two Strategic Partners

USM continues to promote excellent teaching and research, ensuring a strong foundation for growth and shared success with the signing of MoA and MoU with its two valuable strategic partners. USM is committed to provide students with the best possible education to prepare them for their future careers. Research, teaching and employability are central to programmes and to equip students to best meet the challenges of the industry, especially in the wake of Industry 4.0. To support these aims, USM proactively seeking partnerships with key industries to strengthen the knowledge and bringing in valuable exposure to students. A collaboration project with Flextronics Systems relates to the Lean Enterprise Training programme, internships and research to nurture USM students to become the next generation of leaders in the Lean Six Sigma managerial enhancement programme. USM also forged partnership with Shell Malaysia, in organizing the annual competition for Shell Eco-Marathon Asia, which is a unique global programme created for science, technology, engineering and mathematics students to design and build ultra, energy-efficient cars to compete on track. Through this collaboration, mentoring support will be provided by SHELL, by organizing technical and non-technical workshops, and facilitating pitching sessions with industry players.

USM Among Five Universities in the World Recognised as ICAEW ACA Strategic Credits Partner

USM has embarked on a strategic collaboration with the Institute of Chartered Accountants in England and Wales (ICAEW), paving the way for USM to be recognised as an ICAEW ACA Strategic Credits Partner. Hence, USM joins the rank of only five universities in the world, whose undergraduate accounting programmes have been accorded ICAEW ACA Strategic Credits status. Besides USM, Universiti Malaya (UM) has also been awarded the same prestigious accolade. This also puts USM and UM in having the privilege to be the first two public universities in Asia to receive the ICAEW Strategic Credits Partner status. The partnership will include a transfer of knowledge from ICAEW's Chartered Accountant (ICAEW ACA) qualification, one of the most advanced learning and professional development programmes. In addition, ICAEW will work with the USM School of Management that offers the accounting programme to train students through structured work experience placements with ICAEW's Authorised Training Employers.

USM Welcomes the Very First Tenant to Newly-Opened Incubator

Universiti Sains Malaysia is truly delighted to have the University's first industry partner, OPPSTAR Technology moving into their office at the newly-opened Innovative Incubator University (I2U) building at Sains@USM, Bukit Jambul. The building which comprises of seven levels of working space was completed in 2019, and was aimed as a centre for the development of research outputs with the potential to be commercialised in the future. I2U, which is open to any interested relevant partner, is a strategic place to empower innovative and quality human capital as well as overcoming the human capital gap in research and entrepreneurship. Meanwhile, Oppstar is a premiere IC (integrated circuit) design service company which was established in 2014, providing its customers with related various services, including complete IC design and system solutions. The company's main purpose of moving to the new office location is mainly to accommodate their growth in a more conducive environment for academics and the industry as well as entrepreneurs both local and international to interact and synergize.



USM to Assist in the Development of Medical University in Jordan

USM has been chosen to be the sole Malaysian university to assist in developing a private medical university in Jordan, which is expected to offer international medical admission. The appointment as a partnering university to develop the Jordan Modern Medical University (JMMU) was made through a full partnership agreement with the Group of Arab International Company PLC, a company involved in the development of higher education, medical and real estate in Jordan. Through the collaboration, USM will provide, review and approve the relevant curricula to be utilised, while also being involved in the direct teaching of clinical courses, and at the same time assist in providing expertise in education support, faculty development, professional services, and staff development throughout the six-year period. USM will also be assisting in the expansion of a JMMU teaching hospital and related branding exercises with regard to recruitment, accreditation, and transcript documentation.

USM and Henan University of Engineering to Establish Joint Master's Programme

Universiti Sains Malaysia (USM) and Henan University of Engineering (HUE), China have signed a Memorandum of Understanding (MoU) at a virtual ceremony to further accelerate the establishment of a joint Master's degree programme. The MoU was signed by both universities on 22 December 2020 through a ceremony conducted using the video conferencing application Webex, in part due to restrictions on international travel brought about by the COVID-19 pandemic.

USM Bridging Relations with Industries

Universiti Sains Malaysia intends to revise its curriculum to reduce the mismatch of skills required for industries and enhance employability of its graduates. USM's Vice-Chancellor, Professor Dato' Dr. Faisal Rafiq Mahamd Adikan has taken the initiative to visit two prominent industries, OSRAM Opto Semiconductors (M) Sdn. Bhd. and National Instruments (NI) Malaysia Sdn. Bhd., to gain more insights and bridge the gaps between theoretical training and physical learning in a real-life environment.



USM, Imperia College Inked MoU, Embark on Joint Offshore Programme

USM, through the School of Housing, Building and Planning (HBP), recently signed a Memorandum of Understanding (MoU) with Imperia College that is based in Subang Jaya, Selangor. The purpose of the signing was to develop academic, research and educational cooperation as well as promoting mutual understanding between the two institutions. Both parties plan to embark in a joint education programme, i.e. an offshore programme in Quantity Surveying which will be professionally accredited. This collaboration will also look into allowing the foundation and diploma level students that achieved the required admission criteria from Imperia College to continue their education in the offshore programme in the future.



USM Secures Funding from Alps Biotech Sdn Bhd for Cancer Research

A team of researchers from the Universiti Sains Malaysia (USM) School of Medical Sciences has recently secured a grant from ALPS Biotech Sdn Bhd to work on a project involving high throughput biomarker discovery using the NanoString technology. This collaborative project involves researchers from both USM and ALPS Biotech Sdn Bhd, and it is aimed to identify blood-based markers of breast, cervical, colorectal and lung cancer patients for the development of a screening/diagnostic panel based on gene signature. Both parties recently signed a Research Collaboration Agreement which will see the project entitled 'Novel blood-based gene expression signature in breast, cervical, colorectal and lung cancers' to be completed within a three-year period (1 September 2020 - 31 August 2023).

3D Video For Burn Injury Awareness

The Reconstructive Sciences Unit (RSU) of the Universiti Sains Malaysia (USM) School of Medical Sciences and the Burn Unit of Hospital USM launched a novel digital Burn Awareness Campaign in collaboration with WAU Animation Sdn. Bhd. The video content highlighting the deleterious health effects of firecracker burn and blast injuries as well as the proper first aid in acute burn management. The launch was done via social media platforms. Understanding the current trend, USM uses social media to conduct awareness campaigns to attract more viewers. In a month, the video gained 29,585 viewers, 60,920 reaches and 874 shares. This proven that the digital platform is truly a game-changer for health awareness campaigns and digital health campaigns have proven to be less labour intensive, have higher impact and reach, are environmentally friendly and easier to reproduce.

