

UK-Malaysia University Consortium Research Workshop 30th June 2022

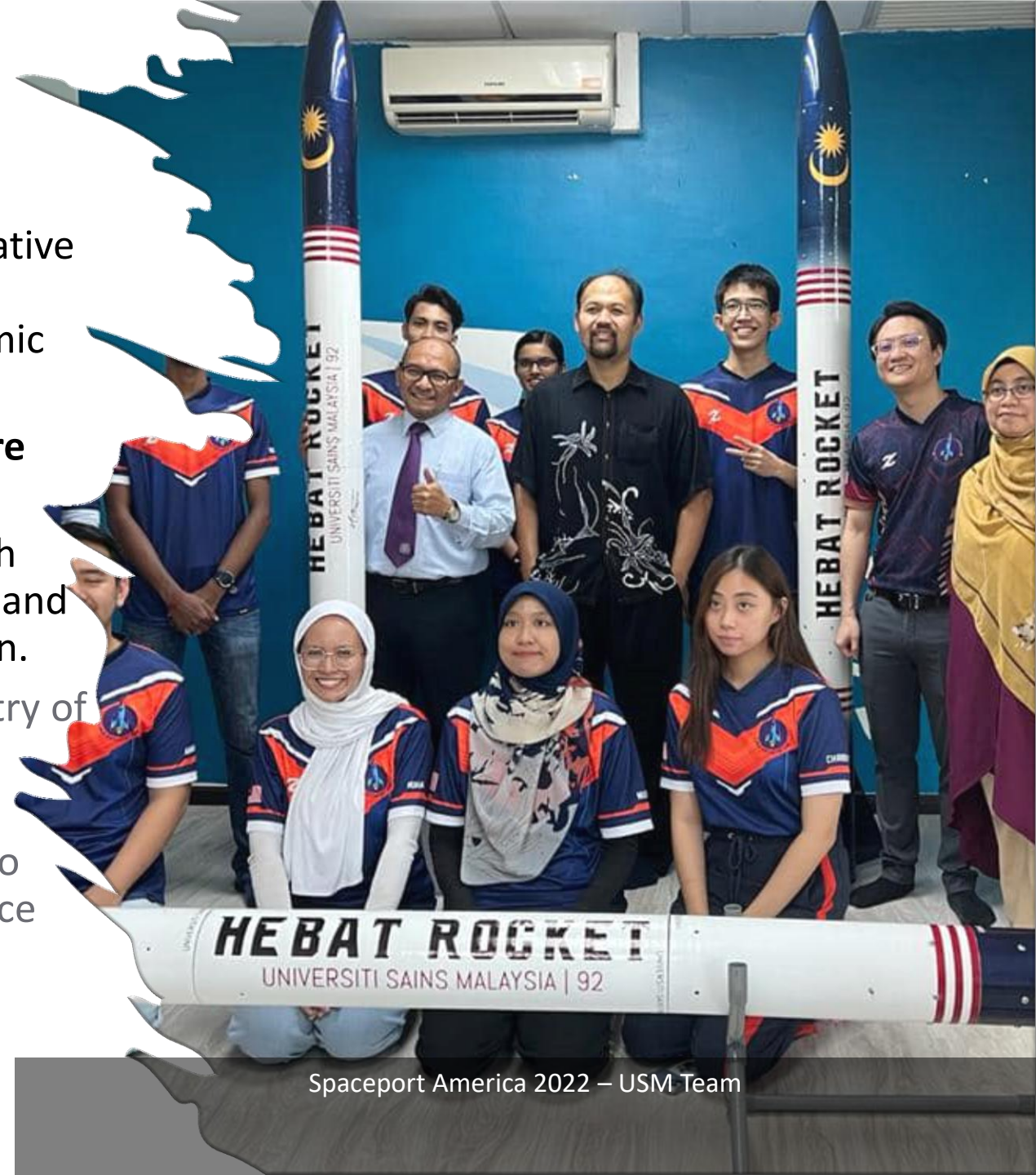


Profesor Dato' Gs. Dr. Narimah Samat
Deputy Vice-Chancellor, Academic & International

www.usm.my

Introduction

- USM – the 2nd oldest university in Malaysia.
- a comprehensive university that has adopted an innovative approach to higher education and of significance is its departure from the traditional faculty system of academic organisation.
- USM implements the **broad-based School system where courses offers ranging from**
 - Natural Sciences, Applied Sciences, Medical and Health Sciences, Pharmaceutical Sciences to Building Science and Technology, Social Sciences, Humanities, and Education.
 - Research Intensive University recognised by the Ministry of Higher Education Malaysia (MOHE) in 2007
 - In 2008, USM also became the first university in the country to be selected by the Malaysian government to participate in the Accelerated Programme for Excellence (APEX), a fast-track programme that helps tertiary institutions achieve world-class status

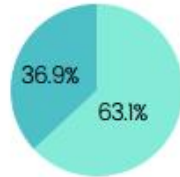


Spaceport America 2022 – USM Team

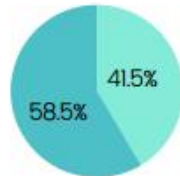
34,123
TOTAL STUDENTS

22,970 UNDERGRAD

22,083
DOMESTIC

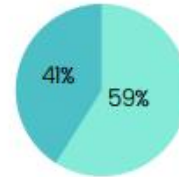


887
INTERNATIONAL

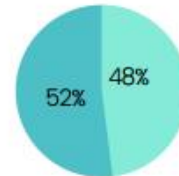


11,153 POSTGRAD

6,582
DOMESTIC



4,571
INTERNATIONAL



Male Female

LOCATIONS

MALAYSIA

PENANG

Main (Minden)
Engineering (Nibong Tebal)
IPPT (Bertam)
Sains@USM (Bukit Jambul)
CEMACS (Teluk Bahang)

KELANTAN

Health (Kubang Kerian)

KUALA LUMPUR

Sains@KL

KEDAH

Sains@AlorSetar

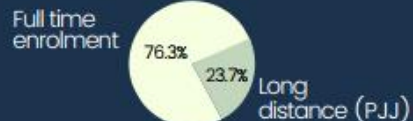
INDIA

KARNATAKA

Medical (Offshore)

TURKEY

OFFSHORE TURKIYE



UNDERGRAD ETHNICITY (DOMESTIC)

Malay 14,211 (64.4%) Chinese 4,330 (19.6%) Indian 2,205 (10.0%)
Sabah/Sarawak 1,094 (5.0%) Orang Asli 24 (0.1%) Others 2109 (1.0%)

Our Locations



Main Campus Minden
233.66 Hectares
+CEMACS – Teluk Bahang (1.46)



Sains@USM Bukit Jambul
12.58 Hectares



Engineering Campus Nibong Tebal
147.34 Hectares



Bertam
45.65 Hectares

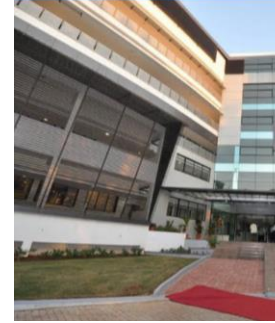
816
bedded hospital

Health Campus Kubang Kerian
94.52 Hectares



Off-shore Programmes

USM-KLE Medical Program in Belgaum India



USM-EGS-U Off-shore Programs in Besiktas, Turkiye



USM Schools



SCHOOL OF MEDICAL SCIENCES
SCHOOL OF DENTAL SCIENCES
SCHOOL OF PHARMACEUTICAL SCIENCES
SCHOOL OF HEALTH SCIENCES
HOSPITAL USM



SCHOOL OF CHEMICAL SCIENCES
SCHOOL OF BIOLOGICAL SCIENCES
SCHOOL OF PHYSICS
SCHOOL OF MATHEMATICAL SCIENCES



SCHOOL OF CIVIL ENGINEERING
SCHOOL OF MECHANICAL ENGINEERING
SCHOOL OF MATERIALS AND MINERAL RESOURCES ENGINEERING
SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING
SCHOOL OF AEROSPACE ENGINEERING
SCHOOL OF CHEMICAL ENGINEERING

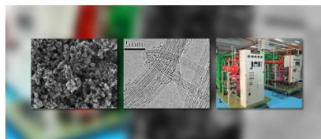
SCHOOL OF SOCIAL SCIENCES
SCHOOL OF MANAGEMENT
SCHOOL OF HOUSING BUILDING AND PLANNING
SCHOOL OF INDUSTRIAL TECHNOLOGY
SCHOOL OF HUMANITIES
SCHOOL OF LANGUAGE, LITERACIES AND TRANSLATION
SCHOOL OF EDUCATIONAL STUDIES
SCHOOL OF COMMUNICATION
SCHOOL OF THE ARTS
SCHOOL OF DISTANCE EDUCATION (PPPJJ)
GRADUATE SCHOOL OF BUSINESS (GSB)
SCHOOL OF COMPUTER SCIENCES

Research@USM

- As one of the Higher Institutions of Learning recognised by the Ministry of Higher Education as a **Research Intensive University**, USM offers educational and research opportunities to both students and staff.
- One of the key elements in the development of academic excellence at USM is the establishment of its **research centres and units**.
- University has always been aware of the need for both research and teaching to remain as receptive as possible to the demands of society, and that the centres and units would provide better opportunities for integration and networking.



Culturing species at the lower trophic level as sustainable aquaculture; eg. molluscs, echinoderm or macroalgal. Photo by: CEMACS



Low Carbon Economy



Sustainable Energy



Global Environmental Issues



Sustainable Bioresources



Collaborative
Microelectronic
Design Excellence
Centre CEDEC



Turning around Research and Innovation @ USM

- USM continues to enhance its research edge and create new opportunities to help humanity, by establishing translational research centres working towards achieving scientific breakthroughs and creating new technology platforms in order to provide people-focused solutions.
- Only then can the university be considered relevant to the needs of the society and communities.
- - on creating an impact to the society by creating sustainable research products that are affordable and accessible to the poor and needy.

Applied Sciences

1. Analytical Biochemistry Research Centre (ABrC)
2. Centre for Global Sustainability Studies (CGSS)
3. National Advanced IPv6 Centre (NAv6)
4. Computer Translation Unit
5. Malaysian Institute of Pharmaceuticals and Nutraceuticals (IPHARM)
6. Centre for Drug Research



Pure Arts

1. Centre for Global Archaeological Research
2. Centre for Policy Research and International Studies (CenPRIS)
3. Centre for Research on Women and Gender (KANITA)
4. Centre for Education, Training and Research in Renewable Energy and Energy Efficiency (CETREE)
5. Centre for Islamic Development Management Studies (ISDEV)
6. Research and Education for Peace (REPUSM)

Medical

1. Advanced Medical & Dental Institute (AMDI)
2. Pusat Genom Manusia (Pusat Vitual)

Applied Arts

1. Basic Education Research Unit (BERU)
2. Centre for Instructional Technology and Multimedia
3. National Higher Education Research Institute



RESEARCH CENTER

Pure Sciences

1. Centre For Chemical Biology (CCB)
2. Centre For Marine & Coastal Studies (CEMACS)
3. Vector Control Research Unit (VCRU)
4. Unit Penyelidikan Ilmu Falak & Sains Atmosfera



Hi-Centres of Excellence

1. Institute for Research in Molecular Medicine (INFORMM)
2. River Engineering and Urban Drainage Research Centre (REDAC)
3. Centre for Drug Research

Engineering

1. Center of Engineering Excellence (CEE)
2. Collaborative Microelectronic Design Excellence Centre (CEDEC)
3. Science & Engineering Research Centre (SERC)
4. Institute of Nano Optoelectronics Research and Technology (INOR)





GROWTH, DIVERSITY & INTERNATIONALIZATION

THE PANDEMIC YEARS 2019-2022



#1
IN MALAYSIA

GLOBAL
UNIVERSITY
EMPLOYABILITY
RANKING

#1
IN MALAYSIA

GLOBAL
IMPACT
RANKING
BY SDGS

Highest international student intake among all public & private universities: 2020 & 2021

2020 1,374 (31% growth)
2021 2,752 (100% growth)

Highest postgraduate intake among all public & private universities

2021 4,817 (51% growth)

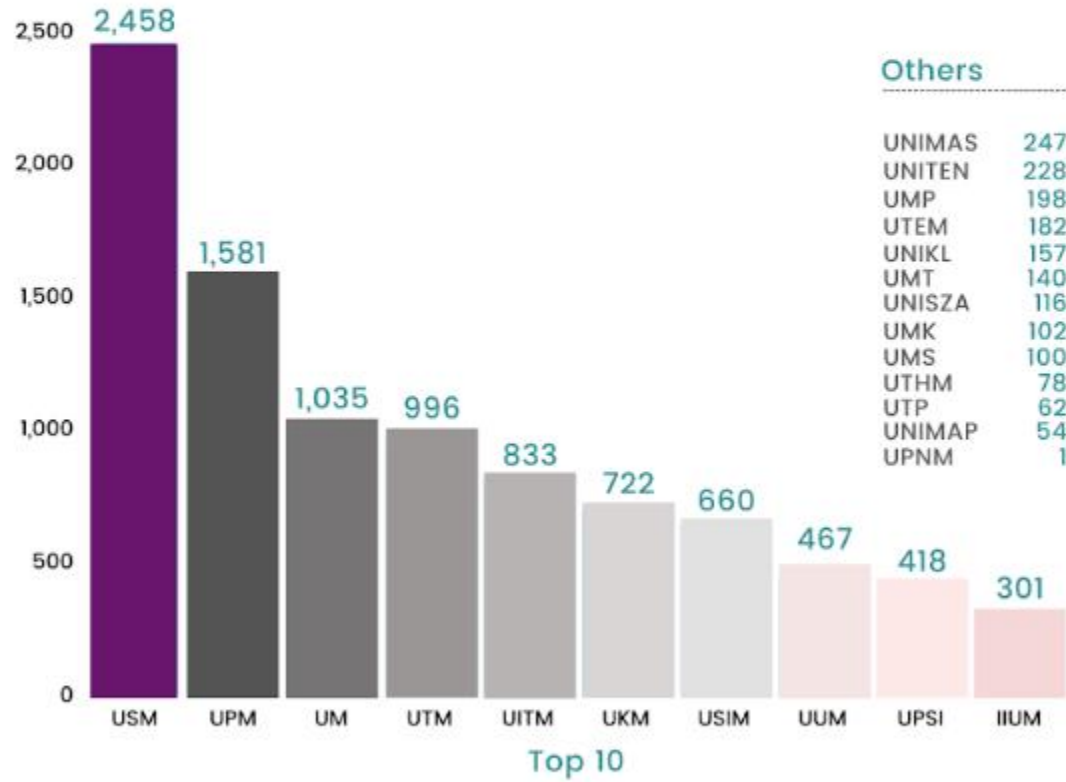
291 no. of USM+1 students since 2020 (inception)

38 offshore programs approved & implemented

7% increase in STEM student intake in 2021



2021 POSTGRADUATE INTERNATIONAL INTAKE





Research @ USM is driven by
3 main thrust :

Curiosity-driven

People-focused

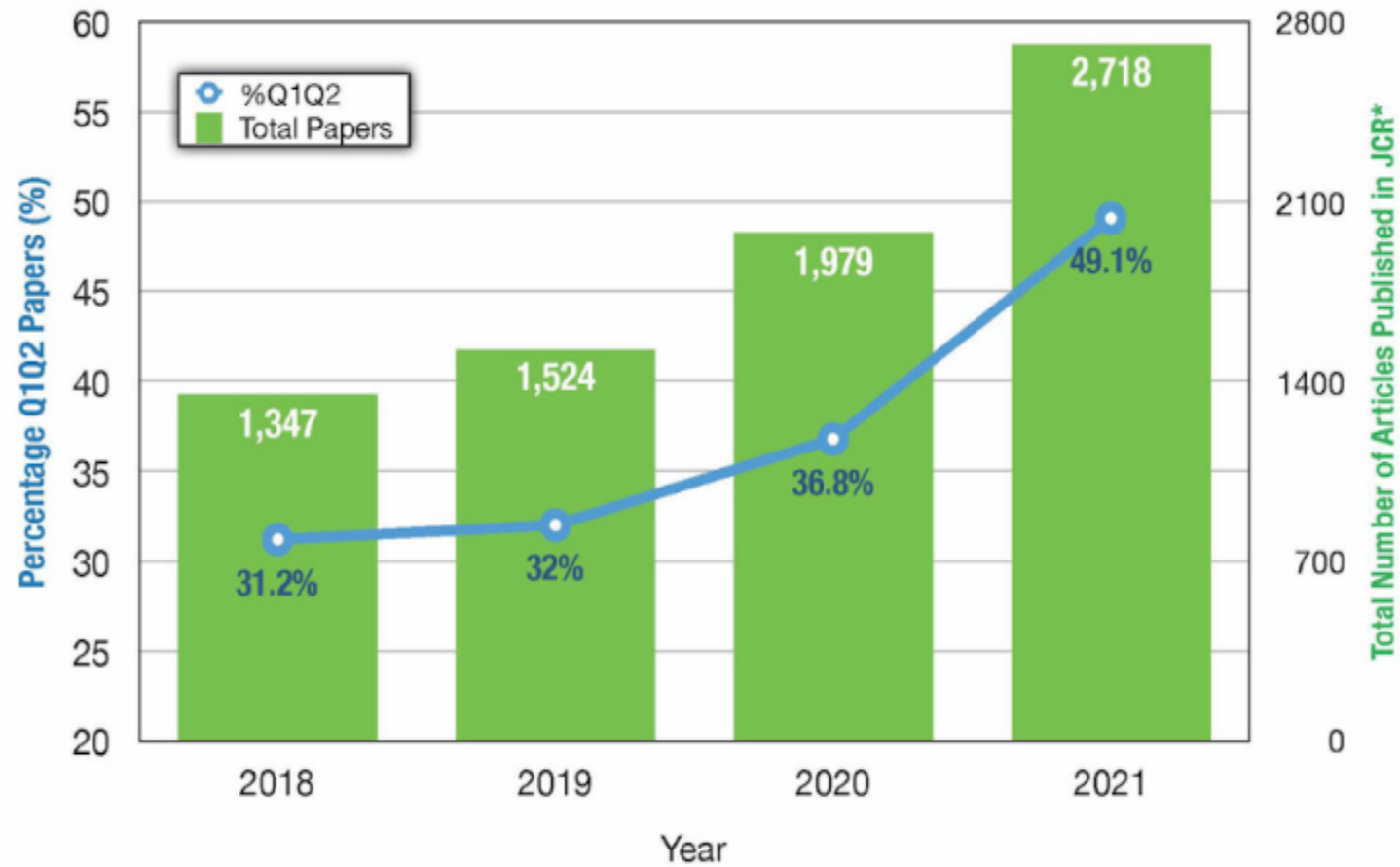
Industry-driven

Managing Research @ USM



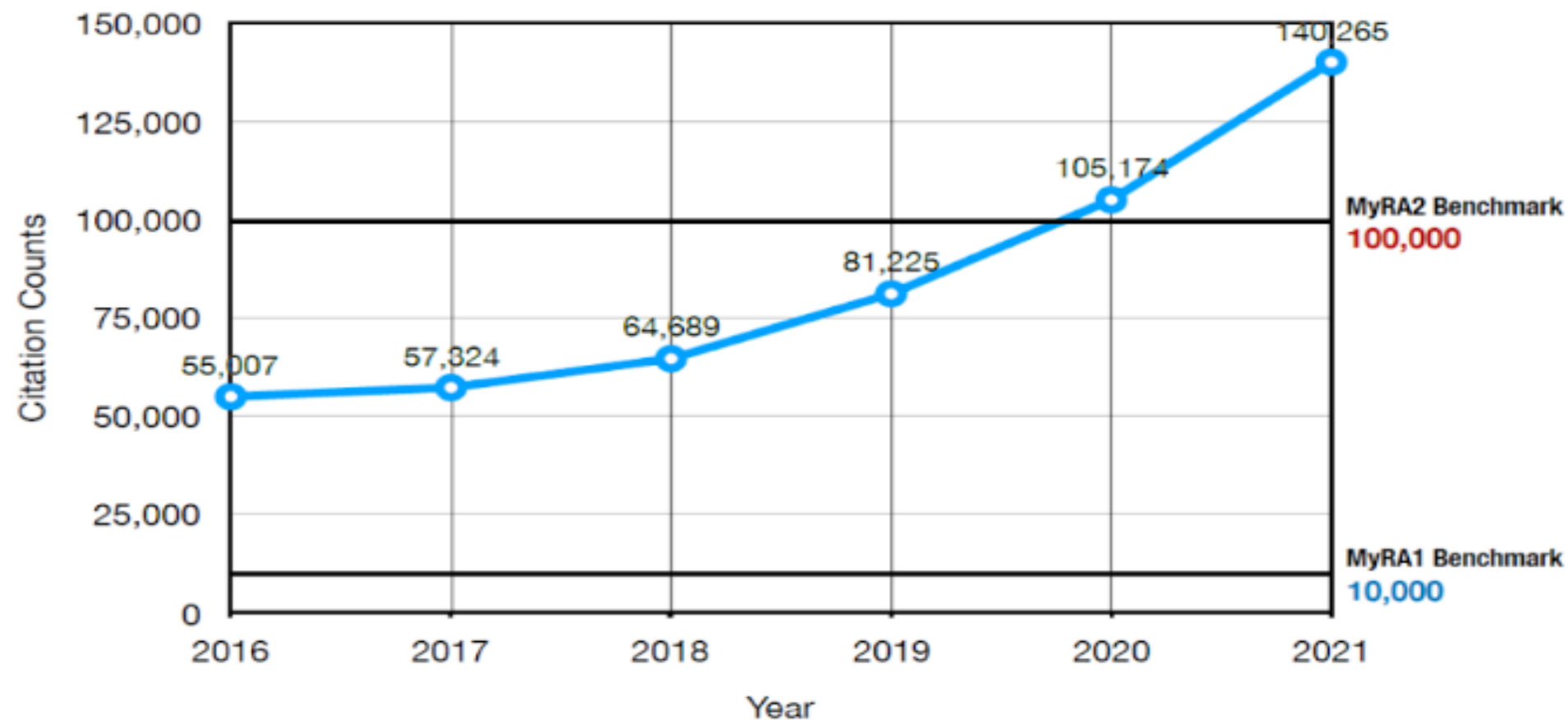
- USM's **Research Creativity and Management Office (RCMO)** is a one-stop centre which handles matters pertaining to research information, grants, university facilities, equipment and human resources. The office was set up to be the bridge between USM researchers, grants financiers and the industry.
- RCMO manages two categories of research fund:
 1. Internal Funds – Publication/Incentive (GOT)/ Internal Grant-ST/RU
 2. External Funds- International/ MOHE/MOSTI/ External Agencies,

USM INDEXED JOURNAL PAPERS (2018-2021)



Note: Data from KPI-MS extracted from JCR and SCOPUS until 15 Dec 2021

5-YEAR CUMULATIVE CITATIONS



Notes: Cumulative citations is defined as the total citations of publications in the past 5 years
Data as of 1 Jan 2022

VENTURE INCUBATION

55K-sq-ft Innovative Incubator University (I2U), hosting strategic partnerships with industry research players

Offices, labs and amenities, linking enterprises with academia, government and industry

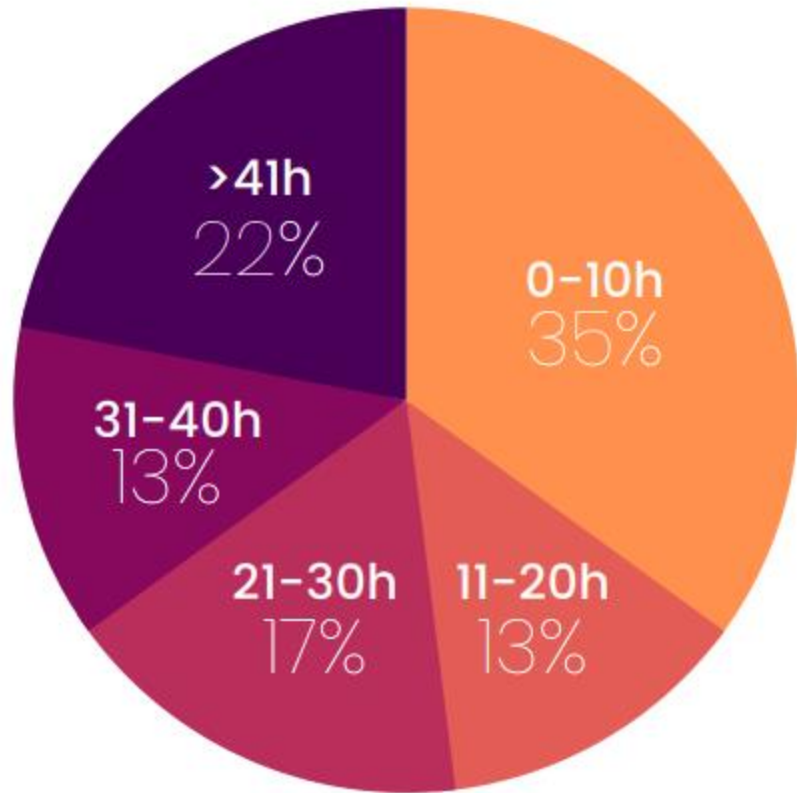
A centre for electronics, IoT, semiconductor, integrated circuit (IC) design, AI and healthcare solution developments

“ Fuelling creations and inventions...”

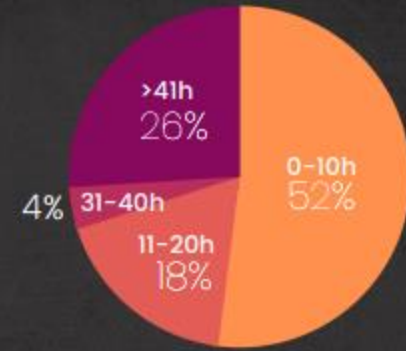


SURVEYS ON USM-INDUSTRY SYMBIOSIS 2019-2021

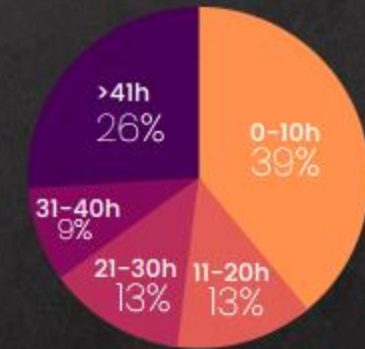
No. of Hours Industry Players Contribute to UG & PG Teaching



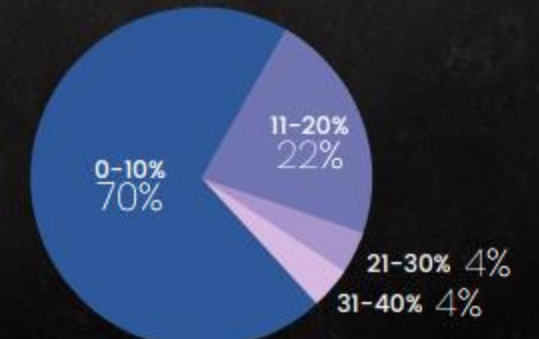
No. of Hours Industry Players Contribute to Capstone Project



No. of Hours Industry Players Contribute to Final Year Project



Percentage of PhD/Master by Research Projects under Supervision with Industry Players





Community Engagement & Network Initiatives

RM4.6M income generated, products imported to Far East/Middle East

RM24M external funding secured

2 SUSOs born

410 students appointed coaches, generating RM300K extra income



The Centre for Archaeological Research Malaysia, established in 1995

CGAR is the only one in the country which offers a minor package in archaeology at Universiti Sains Malaysia.

We are actively training new students from the field of arts and pure sciences, and staff from other universities, the Department of National Heritage, Museum Departments, and other relevant institutions in various aspects of archaeological research and work.



Earth Material Characterisation Laboratory (MPBB) is an integrated laboratory in Centre for Global Archaeological Research (PPAG) which consists of three main instruments (SEM, XRF, and XRD) in the early of its establishment. Research and analysis in the lab are not limited to the archaeological field but also offers an analysis that meets the customer's need

WELCOME TO CEMACS

CENTRE FOR MARINE & COASTAL STUDIES



BE A **MARINE BIOLOGIST**
Let your dream come true at **CEMACS**

Master of Science (Marine Sciences)
Doctor of Philosophy

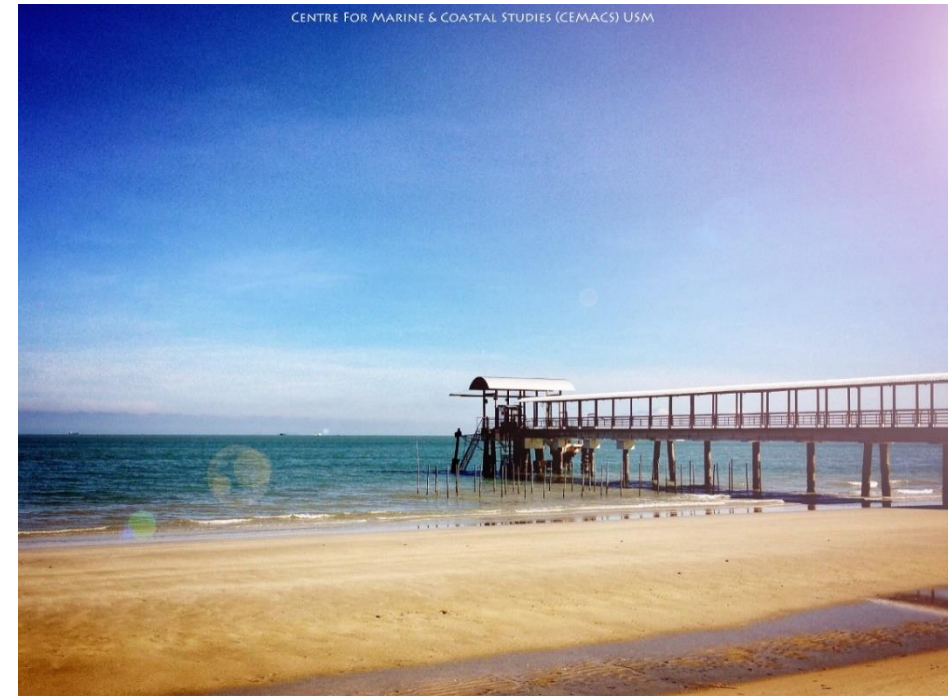


<http://cemacs.usm.my/>
<http://www.ips.usm.my/>

- Marine & coastal biology
- Study on mangrove ecosystem
- Marine pollution & toxicology
- Marine culture
- Coral reefs – ecosystems
- Integrated coastal zone management

CEMACS is an ideal permanent base for postgraduate studies and collaborative research as it provides marine and coastal field studies that offer unique coastal, marine and rainforest habitats and exceptional species diversity. At CEMACS, our thrust areas include:

1. **Biodiversity, marine invertebrates & marine mammals**
2. **Long-term monitoring** - atmospheric, marine physical & chemical parameters
3. **Aquaculture**
4. **Climate changes & ocean acidification**
5. **Pollution & plastics**



Research Network



USM-RIKEN Interdisciplinary Collaboration for Advanced Sciences (URICAS)

-was established as a collaborative program by Universiti Sains Malaysia (USM) and RIKEN, Japan to undertake interdisciplinary research. The research theme for the first five years (2015-2020) was on ageing science, and since then URICAS has broadened its research scope.

<http://uricas.usm.my/>



Asia-Pacific University Community Engagement Network (APUCEN)

-PUCEN) is a regional network of academic institutions of higher learning concerned with promoting the culture of university-community engagement in a proactive, inclusive, holistic and participatory way APUCEN is motivated by the belief that institutions of higher learning and the community can collaborative to generate ideas on how to improve the quality of life of the society in the Asia Pacific region.

<https://apucen.usm.my/>



Commonwealth Tertiary Education Facility (CTEF)

(CTEF) is a collaboration between the Ministry of Higher Education Malaysia and the Commonwealth Secretariat in London to strengthen the link among Commonwealth countries in the development of tertiary education. It comprises a network of partners to generate knowledge and share good practices on tertiary education among Commonwealth countries.

<https://www.ctef.com.my/>



Southeast Asia Sustainability Network

The South East Asia Sustainability Network (SEASN) is an alliance of higher education institutions and other related sustainability organisations, agencies, NGOs and industries in South East Asia countries committed to promote, engage and integrate sustainability in their teaching, research, community engagement and institutional arrangement.

<https://seasn.usm.my/index>



THE GLOBAL FACULTY

**EXCHANGE PROGRAMME
2018 to 2020
(Approx. 400 International
Students)**



Potential Research Collaboration

- Visiting Scholar
- Research Attachment
- Research Training/Seminar
- Research & Publication
- Community Engagement
- Consultation

THANK YOU