

FACULTY OF APPLIED SCIENCES







QS WORLD UNIVERSITY RANKINGS 2019

Malaysian universities that featured in the rankings

	2019	2018	Institution
	87	114	Universiti Malaya (UM)
	184	230	Universiti Kebangsaan Malaysia (UKM)
	202	229	Universiti Putra Malaysia (UPM)
	207	264	Universiti Sains Malaysia (USM)
	228	253	Universiti Teknologi Malaysia (UTM)
	481	-	UCSI University
	521-530	601-650	Universiti Teknologi Petronas (UTP)
	601-650	-	Taylor's University
	601-650	701-750	Universiti Utara Malaysia (UUM)
	651-700	701-750	International Islamic University Malaysia (IIUM)
	701-750	-	Universiti Tenaga Nasional (UNITEN)
	751-800	751-800	Universiti Teknologi Mara (UiTM)
	801-1000	-	Multimedia University (MMU)

UCSI's Year of Milestones

QS World University Rankings 2019

- · Malaysia's best private university.
- The only private provider in Malaysia to make the top 500. • A top six university in Malaysia, along with the nation's five
- research universities.
- · One of only six Malaysian universities in the top 500 to receive a specific rank.
- Malaysia's most impressive debutant in the global rankings.

QS World Top 70 Under 50 (2019)

- · Malaysia's best private university under 50 years old.
- · One of the world's top 70 young universities.

QS World University Rankings by Subject 2018

- Malaysia's best music school
- · A top 100 university in the world for performing arts



The 1st university in Asia to facilitate industry placement for students

each year.







UCSI is rated in Tier 5 (Emerging Universities) in SETARA 2017, placing it on a par with established foreign branch campuses in Malaysia.





of UCSI's academic staff are PhD holders and a further 17% are pursuing their doctorate.

The 2015 average at private higher education institutions in Malaysia is 16%.

on campus



have studied at UCSI.

WELCOME TO UCSI MALAYSIA'S #1 PRIVATE UNIVERSITY

UCSI University opens door for students everywhere. It collaborates with the world's leading universities, engages the best minds and partners with global companies.



UCSI University stands out as Malaysia's best private university in the QS World University Rankings 2019. It is a top six university in Malaysia – only UCSI and the nation's five research universities made the global top 500 benchmark – and it is distinguished in the top 2% of all universities in the world. UCSI is also regarded as one of the world's best universities, ranked in the top 70 in the QS World Top 70 Under 50 (2019) rankings that rates universities under 50 years old.

These latest milestones cap a memorable year for UCSI. The University was previously distinguished as Asia's fastest rising university in the QS University Rankings: Asia 2018 after making a meteoric 131spot climb. It is also ranked as a global top 100 university for performing arts in the QS World University Rankings by Subject 2018 – a remarkable distinction based solely on the merits of its Institute of Music. Additionally, UCSI is rated in Tier 5 (Emerging Universities) – the highest rating achieved by universities under 15 years old – in SETARA 2017, on a par with established foreign branch campuses in Malaysia.

Long renowned for its excellent track record in teaching and learning, UCSI is quickly making a name for itself in research and innovation. The number of research publications has increased by 155% from 2013 to 2016 while the University's cumulative impact factor score has increased by 957% over the same period. The number of UCSI's Scopus/ ISI publications has also doubled from 2015 to 2016, reflecting the increasing focus on scholarly pursuit.

This distinction opens doors for UCSI students and staff when it comes to collaboration with the world's best companies, research institutes and universities. Since 2014, UCSI's top students have been annually selected to advance high impact research at Harvard University, Imperial College London, the University of Chicago and Tsinghua University, among others. A batch of Pharmacy students also furthered research at the University of British Columbia and more endeavours are in the pipeline with leading universities in the Ivy League, the Russell Group, Universitas 21 and Australia's Group of Eight.

More than 10,000 students from over 110 nations study at UCSI, making the campus a vibrant melting pot of culture and diversity. UCSI also partners with more than 4,200 global companies to provide students with structured internship programmes and job opportunities. These tie-ups provide most UCSI students with at least two months of internship each year. 97.8% of UCSI's industry partners state that they would like to rehire UCSI interns on the basis of their performance, capabilities and professionalism.

With these unique strengths and more, UCSI stands out as a University that offers an education few can, provides experiences others can't and delivers life-defining outcomes for students everywhere.

MORE THAN 100 ACCLAIMED PROGRAMMES IN MEDICINE | PHARMACY | ENGINEERING | APPLIED SCIENCE | BUSINESS | IT| ARCHITECTURE | SOCIAL SCIENCES| MUSIC| HOSPITALITY AND TOURISM MANAGEMENT | CREATIVE ARTS AND DESIGN

TOMORROW'S EDUCATION TODAY

It's not just a campus expansion. It's an education city in the making.



The artist's impression of UCSI's education city.

The recent addition of two new high-rise academic complexes at UCSI's Kuala Lumpur increases its operational capacity by more than 1 million ft² of state-of-the-art learning space. Popular with students and parents, its designs embody the zeitgeist of 21st century dynamism and interconnectivity. Housing science labs, interactive learning spaces, lecture theatres, recital halls, commercial areas, classrooms, hostels, sports facilities and a multi-level parking facility, the new complexes will change the way how students perceive and experience education.

Job done? Not a chance. UCSI's recent campus expansion is merely a microcosm of a far grander plan. More development will be undertaken to transform the Kuala

The isometric view of UCSI's Kuala Lumpur campus after its recent expansion.

Lumpur campus into a prominent education just launched its eponymous hotel and new city that defines the Cheras skyline. UCSI Hospital is also on the verge of completion. Offering the American model of clinical practice patientcare, this private teaching hospital is purposed to turn Springhill into a vibrant hub of healthcare, education and medical tourism. Over in Kuching, UCSI has



The artist's impression of UCSI Hospital

Sarawak campus to much acclaim, providing students in Sarawak with state-of-the-art facilities and learning spaces.

Much more lies in store for the future. Watch this space.



UCSI Hotel Kuching provides hospitality students with avenues to hone their craft

FACULTY OF APPLIED SCIENCES

UCSI University's Faculty of Applied Sciences provides smarter solutions for a smarter planet. Students and staff drive innovation on a daily basis and their research areas are as impressive as they are diverse. The suitability of local herbs in cancer treatment, the use of jellyfish toxins as therapeutic solutions, and the advancement of biology-based materials science are just a few of the many research endeavours at the Faculty.

This dynamic culture of scientific discovery is driven by the Faculty's goal to develop effective biology-based technologies for application in everyday life. Nothing is ever taken for granted and each conjecture is thoroughly debated, assessed, tested, and refined. This rigorous commitment to excellence translates into results. The Faculty is making great strides in drug discovery, food and water safety, greater crop yield, cancer treatment, and the curing of diseases, among others, and the trend shows no signs of stopping.

Research is a central theme at the Faculty. Most of its academics are PhD holders who stand out in their respective disciplines. They actively publish in international research journals and you will benefit immensely from their supervision. Additionally, many have worked overseas at leading companies, research facilities and universities. They bring their vast scientific and industry network along with them and the Faculty ups things further by inking strategic tie-ups with some of the industry's biggest brands, creating opportunities for students and staff. This is the engaging environment you will be stepping into.

You will think like never before. And you will love it as you evolve professionally through a multidisciplinary range of expertise and research. Ultimately, your experience at the Faculty will be rewarding. By learning from – and working alongside – experienced research mentors, you will develop new insights on how science can work for the betterment of all. You will utilise cutting-edge technology during your time here and you can be confident of achieving novel findings based on your mastery of applications. You will draw the smarter correlations as you analyse how biological systems function in response to external agents. And with an industry-acclaimed credential in science, you can be confident that doors will open wherever you go.



Foundation in Science A9776; 01/2019 with Applied Sciences pathways

If you are a science aficionado, you would probably like to try your hand at some of the following scenarios. Pioneer biotechnological breakthroughs in medicine and drug discovery. Improve crop yield. Harness the ocean's untapped potential and discover its hidden secrets. Preserve the ecosystem for generations to come.

At UCSI, we have long acknowledged the importance of science. And to provide the ideal start to prodigious students like you, we have introduced our specialised foundation pathways in Applied Sciences to provide you with avenues to specialise from day one of your preuniversity studies. On top of easing your transition to degree studies in the future, these pathways in Biotechnology, Aquatic Science, Food Science and Nutrition provide you with an edge as you will be equipped



GET THE IDEAL START WITH UCSI'S SPECIALISED FOUNDATION PATHWAYS



Tailor-made courses that cater to specialised career pathways.



Enjoy strong exposure to industry trends and developments.





Be taught by notable professors from day one.



Benefit from lessons that stimulate and encourage critical thinking.



Utilise exceptional subject-specific facilities.

with a deeper understanding of your preferred discipline.You will learn from an acclaimed team of academics who have extensive ties with the industry. Many have won accolades for their contributions to science and research and you can look forward to sharing their passion for science. From the classroom to the lab to industry visits, learning is convivial and dynamic. You will enjoy access to state-of-the-art facilities and vast repositories of knowledge. And as you mature to become an independent and critical thinker, you will appreciate how your Foundation studies was the watershed in your pursuit of scientific knowledge.

This is the dynamic environment you can look forward to with the specialised foundation pathways in Applied Sciences. Start focused and raise your aspirations.

KHONG MEI LI

started with the Foundation in Science.

Today, she is completing her PhD on full scholarship at the University of Hong Kong's Li Ka Shing Faculty of Medicine.

Two-time UCSI Presidential Award winner.

Alumna, BSc (Hons) Biotechnology



ENTRY REQUIREMENTS

ACADEMIC QUALIFICATION

SPM: Minimum 5 credits, including one Mathematics and one Pure Science subject.

ENGLISH REQUIREMENT

A distinction (A+, A or A-) in English Language course at SPM /UEC level; or MUET Band 5; or TOEFL score of 196 (computer-based) / 525 (written-based)

/69-70 (internet-based); or

IELTS Band 4.

Additional English course(s) must be taken at UCSI University concurrently with the undergraduate programme if English Language requirements are not fulfilled.

START FOCUSED. STAY AHEAD.

UCSI's specialised foundation pathway helps you acquire a much stronger grasp of your chosen field of study while covering the overall reach of a standard foundation programme. Apart from helping you immensely as you progress to degree studies, UCSI's foundation programme also provides you with an early taste of what the industry expects.



Learn from a team of acclaimed professors and academics who are at the forefront of their respective disciplines. Work with them, be mentored by them and benefit from their wealth of experience.



Associate Professor Dr Bimo Ario Tejo Dean

BSc Chemistry (Indonesia) PhD Biotechnology (UPM) Post doctorate Biochemistry (UPM) Post doctorate Pharmaceutical Chemistry (Kansas)



Assistant Professor Dr Pui Liew Phing Head of Department, Food Science with Nutrition

BSc Biotechnology Master of Science (Food Biotechnology) PhD (Food Biotechnoloav)



Assistant Professor Dr Loh Jiun Yan Head of Programme, Aquatic Science and **Diploma in Aquaculture with Entrepreneurship**

PhD Aquatic Studies and Aquaculture MSc Biotechnology/Animal Nutrition **BASc Fisheries Science Dip Fisheries**



Professor Dr Mirnalini Kandiah Professor

BSc Nutrition (Andhra University, India) MSc Food and Nutrition (Madras University, India) MSc Human Nutrition (London) PhD Nutrition (UM)



Associate Professor Dr Lionel In Lian Aun **Deputy Dean**

PhD Molecular Oncology BSc Biotechnology



Assistant Professor Dr Satvinder Kaur Head of Programme, Nutrition with Wellness

BSc Nutrition and Community Health (UPM). MSc Clinical Nutrition (UKM), PhD Nutritional Epidemiology (USM)

Associate Professor Dr Nyam Kar Lin

BSc (Hons) Food Science and Technology (UPM)

PhD Food Technology (UPM)

Member, AOAC

Head of Research and Postgraduate Studies



Associate Professor Dr Crystale Lim Head of Department, Biotechnology

BSc (Hons) Biomedical Sciences (UPM) PhD Molecular Medicine (UPM) Recipient of the L'Oreal-UNESCO 'For Women in Science' National Fellowship 2006

MSc Biotechnology

BSc (Hons) Biotechnology

A 10420; 06/2019

As one of the first Biotechnology education providers in the Malaysian private higher education sector, we have numerous strategic tie-ups with some of the world's biggest companies in science. This opens doors for students and staff through technology transfers, internship opportunities, numerous site visits, industry talks on campus, and, of course, job opportunities. Versatility is a hallmark of the programme – as a student of this programme, you will be addressing critical issues in biotechnology through the study of genetic engineering, pharmacology, fermentation technology, among others. You will complement your abiding interests in science with the market sense to translate academic mastery into business opportunities. And with a firm footing in both fields, doors will open wherever you go.

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When I received my PhD, I thought to myself — how did I get here? What led me here? I knew that I always loved human genetics but why did I persevere? Having a faculty that inspired me through my formative scientific years at UCSI University helped tremendously! The constant provocation of scientific questions and the development of an analytical mind were the core of what I felt moulded me into pursuing a PhD and being the gene hunter that I am now.

MUTHU KUMAR VEERAPEN

Currently a Post-doctoral Research Fellow at Broad Institute / Harvard Medical School

SUBJECT LISTING

YEAR

Chemistry 1 Biology Calculus & Analytical Geometry for Applied Sciences University Life (MPU-U2) Extra-curricular Learning Experience 1 (MPU-U4) Human Physiology Chemistry 2 Microbiology Structural Biochemistry Bioinformatics Co-operative Placement 1 Religions in Malaysia (MPU-U3) /



Religions in Malaysia (MPU-U3) / Business Law – Malaysian Perspective (MPU-U3) Biochemistry & Metabolism Microbes & Immunology Statistics & Its Applications Entrepreneurship for Applied Sciences Extra-curricular Learning Experience 2 (MPU-U4) Research Methodology, Safety & Ethics Pharmacology Molecular Cell Biology Recombinant Technology Enzyme Technology Co-operative Placement 2



Human Molecular Genetics Environmental Biotechnology & Sustainability Cell & Tissue Culture Biotechnology Research Project 1 Extra-curricular Learning Experience 3 (MPU-U4) Fermentation Technology & Downstream Processing Biotechnology Research Project 2 Bioprocess Engineering Biotechnology Research Project 3 Co-operative Placement 3

Elective (Choose one) Food Microbiology Fundamentals of Marketing Introduction to Public Speaking

* General Courses (MPU) are compulsory for all students.

- For Malaysian students: Ethnic Relations, Islamic Civilisation and Asian Civilisation
- For foreign students: Malaysian Studies, Communication in Bahasa Melayu 3

International Degree Pathway*

- Northumbria University (1+2)
- BSc (Hons) Biotechnology
- University of Queensland (1+3) B Biomedical Science (Hons)
- University of Queensland (1.5+2.5)
- B Biotechnology (Hons) Major: Microbial Biotechnology / Molecular Biotechnology
- University of Queensland (1.5+1.5)
- B Science Major: Biochemistry & Molecular Biology

• University of Queensland (1.5+1.5)

- B Science Major: Biomedical Science / Ecology / Genetics / Marine Science / Microbiology / Plant Science / Zoology
- University of Queensland (1+2)

U1

- B Science Major: Marine Biology
- University of the West of England, Bristol (2+1) BSc (Hons) Biological Science
- University of the West of England, Bristol (1+2) BSc (Hons) Forensic Science

BSc (Hons) Food Science With Nutrition

A 10009; 03/2019

Through our dynamic Food Science with Nutrition degree programme, you will explore the secret science behind food production, development and safety while you develop the research skills to enable you to pursue an exciting career within the food manufacturing industry, research institutes, government, and consumer organisations. As the market leader of Food Science studies in Malaysia, you will be able to utilise the latest practices in the industry and experience first-hand how technology affects food production and flavour delivery. You will enjoy avenues to create new food products and market them. And with a sound understanding of food safety, nutrition and legislation, you can rest assured that your future endeavours will change lives.

DID YOU KNOW?

Our faculty has been offering a credit transfer programme overseas since 1999, and our Food Science with Nutrition students have been on the dean's list at The University of Queensland, Australia, for four years since 2009.

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UCSI runs the most established food science programme in Malaysia – that's why I'm here. And it's one of the best decisions I ever made. I learned so much here and I benefited from the industry experience the university provides. I want to use my knowledge to help underprivileged people in the future and I'm certainly at the right place to help me achieve my goals.

CHARIS WONG YI HUEY

Valedictorian with first-class honours, Class of 2016 Currently working as a medical sales representative with Mead Johnson

SUBJECT LISTING

YEAR

Extra-curricular Learning Experience 1 (MPU-U4) Chemistry 1 Calculus & Analytical Geometry for Applied Sciences Human Physiology University Life (MPU-U2) Chemistry 2 Structural Biochemistry Statistics & its Applications Microbiology Principles of Nutrition Biochemistry & Metabolism Co-operative Placement 1



Extra-curricular Learning Experience 2 (MPU-U4) Malaysian Experiential Tourism / Malaysian Ethnic Food / Food Chemistry Lifespan Nutrition Fundamentals of Food Engineering Entrepreneurship for Applied Sciences Analytical Chemistry Food Processing and Packaging Food Microbiology Halal and Food Legislation Research Methodology, Safety and Ethics Business Law - Malaysian Perspectives and Religions in Malaysia (MPU-U3) Co-operative Placement 2

Free elective courses (select one)

Fundamentals of Marketing Introduction to Public Speaking Introduction to Internet Technologies



Extra-curricular Learning Experience 3 (MPU-U4) Food Safety & Quality System Nutritional Assessment Food Commodities Food Science & Nutrition Research Project 1 Nutrition & Chronic Diseases Food Science & Nutrition Research Project 2 Nutrition in Exercise & Physical Activity Product Development & Sensory Evaluation Food Science & Nutrition Research Project 3 Co-operative Placement 3

Professional elective courses (select one)

Enzyme Technology Fermentation Technology & Downstream Processing Nutrition & Functional Food Nutrition, Food & Society

* General Courses (MPU) are compulsory for all students.

- For Malaysian students: Ethnic Relations, Islamic Civilisation and Asian Civilisation
 - For foreign students: Malaysian Studies, Communication in Bahasa Melayu 3

International Degree Pathway*

- Deakin University (1+2)
- B Food & Nutrition Science
- Northumbria University (1+2)
- BSc (Hons) Food Science & Nutrition • Northumbria University (1+2)
- BSc (Hons) Human Nutrition
- QUT (Queensland University of Technology) (1.5+3) B Nutrition & Dietetics
- QUT (Queensland University of Technology) (1.5+2)
- **B** Nutrition Science
- University of Otago (1+2 / 1.5+1.5)
- BSc (Food Science)
- University of Queensland (1+3)
- B Food Technology (Honours)
- University of Queensland (1.5+1.5)
- B Science Major: Food Science & Nutrition / Food Science

BSc (Hons) Nutrition With Wellness

N/726/6/0039; 12/2018

If you are passionate about food, eager to explore how it affects the health of the individual and the nation, and curious to discover how diet can be used in the treatment of disease, our Nutrition with Wellness programme is for you. You will broaden your knowledge through a broad range of courses that underpin nutritional sciences. Our programme has an active application across a range of health and professional industries and will equip you with the knowledge, skills and expertise required to excel in this fascinating field. So whether your future lies in the nutrition and wellness, health and fitness advisory, health food and supplement sales and marketing, health education or government policy, you can rest assured that you will inspire confidence.

DID YOU KNOW?

UCSI's Nutrition with Wellness programme is one of the most competitively priced programmes in the market and certainly among other health and wellness programmes.

"



When UCSI announced the new Nutrition with Wellness course, I jumped straight into it, knowing that this opportunity would be a good stepping stone to fulfil my wish of becoming a nutritionist. It was one of the best decisions I have ever made. Not only did I gained a lot from this programme, it also gave me the platform to apply what I have learned by providing access to healthcare services to the underserved community.



TANASHA AZALEA SUHANDANI

Co-Founder of Hands of Hope Made the Dean's Honours List two times

SUBJECT LISTING

YEAR

Chemistry 1

Human Physiology Principles of Nutrition Microbiology Fundamentals of Marketing Structural Biochemistry Introductory Health and Wellness University Life (MPU-U2) Co-Operative Placement 1 Extra-curricular Learning Experience 1 (MPU-U4)



Lifespan Nutrition

Nutritional Assessment

Food Composition and Analysis Nutrition and Functional Food Nutrition, Food and Society Nutrition and Metabolism Nutrition for the Child and Adolescent Health and Wellness Promotion Entrepreneurship for Applied Science Biostatistics for Applied Sciences Malaysian Experiential Tourism / Malaysian Ethnic Food / Business Law – Malaysian Perspective (MPU-U3) Co-Operative Placement 2 Extra-curricular Learning Experience 2 (MPU-U4)

YEAR

Seminar: Current Topics in Nutrition and Wellness Nutrition for the Adult Nutrition Counselling and Education Health Psychology Nutrition and Non-communicable Chronic Diseases Complementary and Alternative Therapies in Wellness Community Wellness Project Research Methods Co-Operative Placement 3 Extra-curricular Learning Experience 3 (MPU-U4)

YEAR

Nutrition for Healthy Aging Principles of Health and Wellness Coaching Fitness and Wellness Final Year Project Paper (1) Final Year Project Paper (2) Final Year Project Paper (3) Co-Operative Placement 4

Free elective modules (select any two) E-Marketing One-to-One Marketing Halal and Food Legislation Introduction to Public Speaking

* General Courses (MPU) are compulsory for all students.

- **U1** For Malaysian students: Ethnic Relations, Islamic Civilisation and Asian Civilisation
 - For foreign students: Malaysian Studies, Communication in Bahasa Melayu 3

BSc (Hons) Aquatic Science

N/620/6/0002; 10-2019

Water covers more than 70% of the earth's surface. It is home to millions of aquatic species. And most importantly, it sustains human life. An invaluable resource must be managed responsibly and this programme was launched on this very basis. Addressing crucial issues in the aquatic ecosystem, the programme equips students with the know-how to develop solutions for an ever-changing planet.

You can look forward to developing a solid foundation in the basic sciences – analytical chemistry, microbiology, structural chemistry and statistics – before delving into the intensive study of environmental monitoring and assessment, aquatic biodiversity and taxonomy, principles in aquatic pollution and toxicology, among many others. You will also enjoy two different avenues of specialisation in your final year where you will opt for Aquatic Health and Management or Seafood Processing and Safety. Research is also an important component of the programme and you will have the opportunity to focus on ecosystem-based management, natural resources management, sustainable aquaculture, as well as impact of modernisation on natural ecosystems.

Define yourself at UCSI and keep the world's most vital resource flowing.

DID YOU KNOW?



UCSI University is the first private university in Malaysia to offer a degree that covers the study of both freshwater and marine ecosystems.

- * General Courses (MPU) are compulsory for all students. Please refer to the last page.
 - U1 For Malaysian students: Ethnic Relations, Islamic Civilisation and Asian Civilisation
 - For foreign students: Malaysian Studies, Communication in Bahasa Melayu 3

SUBJECT LISTING

YEAR

Extra-curricular Learning Experience 1 Biology Chemistry 1 University Life Chemistry 2 Structural Biochemistry Microbiology Analytical Chemistry Fundamentals of Management Cooperative Placement 1



Extra-curricular Learning Experience 2 Ecology and Sustainability Business Communication Environmental Monitoring and Assessment Aquatic Biodiversity and Taxonomy Entrepreneurship for Applied Science Statistics and its Applications Aquaculture Operation and System Current Topics in Aquatic Science Aquatic Pollution and Toxicology Research Methodology, Safety and Ethics Cooperative Placement 2

MPU-U3 (select one)

Malaysian Experiential Tourism (MPU-U3) Malaysian Ethnic Food (MPU-U3) Business Law – Malaysian Perspective (MPU-U3)



(Choose either Aquatic Health & Management or Seafood Processing and Safety)

Aquatic Health & Management

Extra-curricular Learning Experience3 Aquatic Science Research Project 1 Conservation and Management of Aquatic Resources Molecular Cell Biology Recombinant Technology Aquatic Science Research Project 2 Water and Waste-water Engineering Tools for Aquatic Resource Management Aquatic Diseases and Diagnostics Aquatic Science Research Project 3 Cooperative Placement 3

Free elective (select 2)

Strategic Management Seafood Industry Introduction to Internet Technologies Operation Management

Seafood Processing and Safety

Extra-curricular Learning Experience 3 Aquatic Science Research Project 1 Halal and Food Legislation Food Chemistry Food Microbiology Aquatic Science Research Project 2 Seafood Industry Food Processing and Packaging Food Safety and Quality Systems Product Development and Sensory Evaluation Aquatic Science Research Project 3 Cooperative Placement 3

Free elective (select 2)

Strategic Management Introductory Accounting Internet in Practice Operation Management

Diploma in Aquaculture With Entrepreneurship

N/620/4/0001; 10-2019

Anchored on the scientific understanding of aquatic management, this programme addresses the exploration, improvement and conservation of all freshwater and marine food resources. In ensuring students have an edge after graduation, this programme integrates the scientific aspects of aquaculture with the business aspects thus enabling one to venture into commercial activities such as business and entrepreneurship. You will develop the edge needed to thrive in a booming industry and the know-how to balance commercial benefit and sustainability concerns. And with a credential that inspires confidence, you can look forward to make a pertinent contribution in the industry.

""



I enjoy my studies at UCSI and much of this is down to the learning environment at the Faculty. I've always been interested in bioscience and it's great that I can complement this with business studies. The lectures I attend are extremely practical and I'm confident that I will realise my potential here.



YEOH SHENSHEN

Currently reading the Diploma in Aquaculture with Entrepreneurship State-level judoka (UCSI University Trust Sports Bursary recipient)

SUBJECT LISTING

YEAR

Fundamentals of Management Fundamentals of Chemistry Introduction to Internet Technology Business Communication for Diploma Extra-curricular Learning Experience I (MPU-U4) Aquatic Ecosystems and Environmental Management Aquatic Biology Fundamentals of Microbiology Business Essentials Introduction to Information Technology Principles of Accounting Cooperative Placement 1

YEAR

Entrepreneurship (MPU2) Basic and Practices of Marketing Aquaculture Facility Selection and Design Water Quality and Analysis Extra-curricular Learning Experience II (MPU4) Malaysian Eco-Tourism / Malaysian Traditional Food (MPU3) Introduction to Biological Research and Analysis Operational Management for Aquaculture Aquatic Health and Diseases Management of Water Systems Aquatic Biodiversity and Conservation Logistics Business Strategy & Planning Brood-stock Management for Aquaculture Cooperative Placement 2

* General Courses (MPU) are compulsory for all students.

U1 • For Malaysian students: Malaysian Studies • For foreign students: Communication in Bahasa Melayu 3



LEARNING BEYOND THE CLASSROOM UCSI Applied Science Week

Since 2009, the Faculty has organised the Wholesome, Original and Well-balanced (W.O.W) Food Fair annually as a platform to showcase innovative food products made by Food Science with Nutrition students. This food fair was further expanded in 2012 by including various aspects of Biotechnology – an industry that was rapidly growing globally, leading to the establishment of the 1st Applied Science Week (ASW). The Faculty's Nutrition with Wellness and Aquatic Science programmes were later incorporated in 2016.

The event features a range of academic-based competitions, fun-filled activities, collaboration with industry players, and talks by distinguished and experienced speakers. Students are given the opportunity to showcase their food and beverage innovations as well as research findings.

Profits generated from the event is channelled to charitable bodies as a form of community support. Previous beneficiaries of our fundraising activities include Special Children Society of Ampang and Yayasan Sunbeams Home, among many others.

Entry Requirements

INTAKES: JANUARY, MAY AND SEPTEMBER

ACADEMIC QUALIFICATIONS	BSC (HONS) BIOTECHNOLOGY	BSC (HONS) FOOD SCIENCE WITH NUTRITION	BSC (HONS) NUTRITION WITH WELLNESS	BSC (HONS) AQUATIC SCIENCE
UCSI Foundation in Science or equivalent	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics). Pass at SPM level (or equivalent).	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Minimum GPA 2.33 in TWO of the following subjects: Biology, Physics/Mathematics and Chemistry	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics).
STPM	Pass with minimum CGPA of 2.00 or Grade C in two (2) subjects inclusive of Chemistry and Biology/Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum 2 Principals (C) in Chemistry and Biology/Mathematics/Physics, minimum CGPA 2.0 and *Additional Requirement.	Pass Matriculation/ Pre-University/ STPM programme or equivalent, minimum GPA 2.33 in TWO of the following subjects: Biology, Physics/Mathematics and Chemistry	Minimum 2 Principals (C) in Chemistry and Biology/Mathematics/Physics. Minimum CGPA 2.0.
A-Levels	Pass with full passes in two (2) subjects inclusive of Chemistry and Biology/Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum 2 Principals (E) in Chemistry and Biology/Mathematics/Physics and *Additional Requirement.	A-Level programme or equivalent qualification with minimum Grade D in TWO of the following subjects: Biology, Physics/Mathematics and Chemistry	Minimum 2 Principals (E) in Chemistry and Biology/Mathematics/Physics. Minimum GPA 2.0.
UEC	Pass with minimum Grade B in five (5) subjects inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum 5 credits (inclusive of Chemistry, Biology and Mathematics/Physics).	Grade B in FIVE subjects including Biology, Physics, Chemistry, Mathematics and English.	Minimum 5 credits (inclusive of Chemistry, Biology and Mathematics/Physics).
CPU	Pass with a minimum of 60% inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum average of 60% in 6 subjects (Inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Minimum average of 60% in: Biology/Physics Chemistry Physics/Mathematics	Minimum average of 60% in 6 subjects (Inclusive of Chemistry, Biology and Mathematics/Physics).
National Matriculation	Pass with a minimum CGPA of 2.8 inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Minimum GPA 2.33 in TWO of the following subjects: Biology, Physics/Mathematics and Chemistry	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics).
WAEC	Pass with a minimum of 60% inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum average of 60% in 5 subjects (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Pass with ATAR of 60% in Biology/Physics Chemistry Physics/Mathematics	Minimum average of 60% in 5 subjects (inclusive of Chemistry, Biology and Mathematics/Physics).
Other qualifications deemed equivalent to STPM/A-Level by Malaysian Qualifications Agency	Admission: case-by-case basis	Minimum average of 60% (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Minimum average of 60% in: Biology/Physics Chemistry Physics/Mathematics	Minimum average of 60% (inclusive of Chemistry, Biology and Mathematics/Physics).
Diploma/ Advance Diploma/ Degree/ equivalent	Pass with minimum CGPA 2.0 inclusive of Chemistry, Biology and Mathematics/Physics (Admission level: case-by-case basis), and Pass at SPM level (or equivalent).	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics). (Admission level: case-to-case basis).	Minimum CGPA 2.75; or CGPA below 2.75 but above 2.0, with minimum of 3 years (36 months) working experience in the same field.	Minimum CGPA 2.0 (inclusive of Chemistry, Biology and Mathematics/Physics). (Admission level: case-to-case basis).
International Baccalaureate (IB)	Pass with a minimum score of 26/42 in 6 subjects inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Minimum 26/42 from 6 subjects. (Minimum scores of 4/7 in Chemistry, Biology and Mathematics/Physics).	Minimum 26 in 6 subjects including: Biology Chemistry Physics/Mathematics	Minimum 26/42 from 6 subjects. (Minimum scores of 4/7 in Chemistry, Biology and Mathematics/Physics).
SAM	Pass with a minimum of 60% inclusive of Chemistry, Biology and Mathematics/Physics, and Pass at SPM level (or equivalent).	Pass with ATAR of 70% including a minimum average of 60% in 5 subjects (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.	Pass with ATAR of 60% including a minimum average of 60% in: Biology Chemistry Physics/Mathematics	Pass with ATAR of 70% including a minimum average of 60% in 5 subjects (inclusive of Chemistry, Biology and Mathematics/Physics) and *Additional Requirement.

* Additional Requirement - Pass minimum 5 credits or equivalent at SPM level (or equivalent), three (3) of which are for the following subjects: 1) Biology 2) Physics 3) Mathematics 4) Chemistry 5) English

ACADEMIC QUALIFICATIONS	DIPLOMA IN AQUACULTURE WITH ENTREPRENEURSHIP	ENGLISH LAN
SPM/O-Level	Minimum 3 credits (inclusive of Mathematics and 1 science subject).	IELTS 5.0/CEFR (160)/CEFR B2; BSc (Hons) Nuti In the event that be required to u with the undergi
UEC	Minimum grades of B in 3 subjects (inclusive of Mathematics and 1 science subject).	
Polytechnic/Certificate Equivalents	Minimum CGPA 2.0.	
Equivalent Courses	Case-by-case basis.	

NGLISH LANGUAGE REQUIREMENTS FOR DEGREE PROGRAMME

IELTS 5.0/CEFR B1; or TOEFL PBT (410-413); or TOEFL IBT (34); or CAE (160)/CEFR B2; or CPE (180)/CEFR C1; or PTE (36) or MUET (Band 3)

BSc (Hons) Nutrition with Wellness: IELTS 5.5 or MUET Band 3.

n the event that the English Language Requirements are not met, student may be required to undertake additional English module(s) prior to or concurrently with the undergraduate programme, based on the University's decision.

Facilities



As the only local private university that offers aquatic science and aquaculture course, UCSI University has invested heavily in its new dry and wet labs equipped with aquarium tanks ranging from one to eight feet in length. The new facility is also home to the jellyfish kreisel tank, a carefully designed circular aquarium made specifically for jellyfish and seahorses that are sensitive to water pumps or even the corners of the tank itself.

This facility houses all the bacterial and fungal cultures used in research and teaching. Well-equipped to culture, store and contain microbes, the facility supports cutting-edge research in the areas of drug discovery, environmental health, food safety and antimicrobial therapies.



Used for both teaching and research, this facility houses a wide range of instruments that are used to determine the physiochemical properties and sensory characteristics of food, as well as the ideal packaging for long term storage. High standards of hygiene are maintained to accurately simulate industry practices like GMP and HACCP.

Equipped with an abundance of analytical instruments, this facility supports the analysis of biochemical enzymes, as well as organic and inorganic molecules. Training at the lab focuses on techniques that identify, quantify and separate components within natural and artificial materials.



Specially built to culture plant and animal cells, this facility is equipped with advanced imaging technology that enables researchers to visualise the cell growth and condition. A sterile environment is maintained to house the many instruments for culturing plant and animal cells including photosynthetic growth chambers, carbon dioxide incubators and biosafety cabinets. This facility is used by students for plant-related research. Our research teams collect plant samples from various localities for chemical analysis and bioactivity studies. The lab is equipped with the latest research instruments including high-end liquid and gas chromatographs, a microencapsulator, and equipment for sample extraction and preparation.



Intensive research on gene-based, protein-based and molecular-based H studies takes place at this facility. It houses many of the Faculty's f prominent instruments including a multi-mode microplate reader, gel documentation system and real-time PCR machine. These tools are indispensable in the search for new drugs, therapies and vaccines.



Used primarily for teaching, this lab houses various instruments and reagents for chemical assays and analysis.



Housing a freeze dryer, spectrophotometers and PCR instruments, this facility houses a wide range of research apparatus and analytical instruments.



This lab is used for both practical and teaching sessions as it is equipped with nutritional assessment instruments such as a body composition machine, skinfold calipers and a height scale. Biochemical analysis can be determined through handheld instruments that are available in this facility. In addition, counselling rooms are provided for students to conduct dietary counselling sessions. Treadmills are placed in this facility for teaching and practical sessions.

Careers

The Faculty's diverse range of academic offerings provide students with much avenue to pursue their scientific affinities in myriad specialisms. These primarily focus on, but are not limited to the fields of biotechnology, food science, nutrition and aquatic science. With a well-respected undergraduate credential from UCSI University, you can look to chart a promising career in the following fields:

- Analytical Chemistry
- Aquatic Science
- Aquaculture
- Biochemistry
- Biological Engineering
- Biological Science
- Community Wellness
- Education and Research
- Environmental Science
- Food Technology
- Food Packaging and Preservation

- Food Product Development
- Food Quality Assurance
- Forensic Science
- Genetic Engineering
- Genomics
- Health Psychology
- Human Nutrition
- Limnology
- Marine Biology
- Medical Biotechnology
- Microbiology

- Nanotechnology
- Oceanography
- Pathology Laboratory
- Pharmacology
- Proteomics
- Public Health
- Public Policy
- Sensory Evaluation
- Water Treatment
- ... AND MANY MORE

Get Set To Go Places

The Faculty is constantly expanding its global network so you can do the same. Partnerships are forged with many multinational companies and you will enjoy myriad opportunities to complement your academic qualifications with invaluable industry exposure. Synonymous with quality, our students are highly sought after and many readily secure employment at the world's leading scientific companies.

- 1. Abbott Laboratories
- 2. Banyan Tree Hotels and Resorts
- 3. Dutch Lady Milk Industries
- 4. Fonterra Brands
- 5. Fraser & Neave Holdings
- 6. GlaxoSmithKline

- 7. Mac Food Services
- 8. National Sports Institute of Malaysia
- 9. National Heart Institute
- 10. Nestle
- 11. Pfizer
- ... AND MANY MORE



UCSI EDUCATION SDN BHD (185479-U)

 KUALA LUMPUR CAMPUS
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