

**University** of

Nottingham



# Our history your future

# 2020

Science and Engineering Undergraduate prospectus



# Welcome to the world of Nottingham

Top

universities

QS World University Rankings 2020

worldwide

### Access to a world-class UK education

Our programmes are Honour degree programmes and taught in English. All students graduate with the same degree and the same certificate, irrespective of which campus they study at. Our degrees are accredited by international professional bodies such as:

- Association of Chartered Certified Accountants (ACCA)
- Association for Nutrition (AfN) UK
- British Computer Society (BCS)
- British Psychological Society (BPS)
- Certified Practising Accountant (CPA) Australia
- Chartered Institute of Management Accountants (CIMA)
- Engineering Council, UK (ECUK)
- European Foundation for Management Development (EFMD) Quality Improvement System (EQUIS)
- General Pharmaceutical Council (GPhC), UK
- Institute of Chartered Accountants in England and Wales (ICAEW)

### Worldwide study abroad opportunities

Wealth of opportunities at our campuses in UK, China and partner universities across the globe



Over

About **5,000** students from 85 countries study at Malaysia campus

Sports University of the year The Times and The Sunday Times Good University Guide 2019

**290,000** alumni from across the globe

Alumni from our UK, China and Malaysia campuses

#### Nobel prizewinning academics

University of Nottingham academics have won Nobel Prizes twice since 2003

international campuses in China and the UK Renowned for our commitment to teaching and learning, we are in the top 100 of universities internationally.\* Recognised globally for teaching excellence, acclaimed for our lifechanging research and home to students from all over the world, University of Nottingham is an inspiring place to study and work.

In 2000 we became the first British university to set up a campus both outside of the UK and in Malaysia, earning University of Nottingham the Queen's Award for Enterprise 2001 and the Queen's Award for Industry (International Trade) 2006.

Since opening, Nottingham Malaysia has welcomed students from across the globe and gained a reputation for world-class research and teaching in arts, engineering, science and social science. \* QS World University Rankings 2020

# **It starts here** Where it goes is up to you

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# **Teaching excellence**

Students are the heart of the University and learn in an academically-stimulating environment. Students are especially nurtured with regards to personal development, which includes current entrepreneurial and leadership skills. These commitments and their achievement are recognised by the Teaching Excellence Framework (TEF) Gold rating for outstanding teaching achieved in 2017 and Rating System for Malaysian Higher Education Institutions (SETARA) 2017 5-star 'Excellent' for mature university category. There are just two of the most recent ratings received for the quality of teaching and learning at Nottingham.

The SETARA rating is further evidence of our strong commitment to the growth of the higher education sector in Malaysia, in providing access to students to earn an international degree with mobility opportunities across campuses in the UK and China. In addition, being part of two quality assurance jurisdictions (QAA\*, UK and MQA\*\*) further strengthens our quality standing, as we are independently evaluated by these agencies. The University is consistently among the highest ranking performers in independent teaching assessments.

### An internationally recognised UK degree

All degrees offered by University of Nottingham Malaysia are University of Nottingham degrees and are subject to the same quality assurance processes as those offered in the UK. You will graduate with a degree from University of Nottingham, irrespective of the campus at which you complete your programme, be it in the UK, China or Malaysia. You will receive a UK-style education and all our degree programmes, coursework materials, and assessments are in English.

#### Academic excellence

All academic staff at the University of Nottingham Malaysia are selected based on their excellence in teaching and research. Diversity is our strength. Our highly qualified academic staff members are from the UK, Malaysia and various countries recruited based on open international competition.

Besides their qualification in their respective discipline, they are required to obtain Post Graduate Certificate in Higher Education (PGCHE). Apart from teaching, academic staff members are required to be active in research and publication and be involved in community and international engagement.

#### **Quality programmes**

We offer a comprehensive and varied range of programmes. catering to students at all levels, through foundation, undergraduate and postgraduate to PhD. Our programmes span a range of disciplines and subjects across arts and social sciences, engineering and science. Our degrees are accredited by both the Malaysian and UK quality assurance agencies and by relevant national and international professional bodies such as the Association of MBAs, EQUIS, the UK Engineering Council, the General Pharmaceutical Council (UK), Board of Engineers Malaysia (BEM) and Pharmacy Board Malaysia (PBM).

Our undergraduate and postgraduate taught programmes provide a structured framework for study. They are based upon a programme of strategic and innovative delivery and assessment mechanisms and also traditional ones such as lectures, seminars and tutorials. Students will normally complete compulsory core modules and will have the opportunity to select from a number of optional modules.

These programmes aim to equip you with a curiosity-driven and deep understanding of your subject, as well as a critical approach and skills relevant to your future career. Our teaching is informed by the very latest research findings and our programmes constantly evolve to incorporate new research developments, with many delivered by research scholars, passionate about their subjects. We also regularly consult with businesses and employers to ensure our programmes are structured with the opportunity to develop key transferable skills for employment.

# Envisioning the global workplace

As an international university we pride ourselves on generating graduates with global attributes for the global workplace. Our student- centred style of learning will equip you with the skills and analytical abilities necessary to thrive in business and industry. Teaching and learning opportunities at Nottingham Malaysia are directly informed by cutting-edge research and technology.

Programme activities are enriched by guest lectures from visiting scholars, research seminars, workshops and student conferences. Classes are led by tutors who are actively involved in extending the boundaries of our knowledge, and who seek to promote a community of learning in which undergraduate and postgraduate teaching feeds directly into a collective and collaborative intellectual endeavour. The relatively small size of our student body with an average staff student ratio of 1:14, allows for a more intimate teaching and learning experience, with academics readily approachable to provide further one-on-one support where needed.

In addition, our personal tutorial system gives you access to academic staff to assist you in any non-academic issues that you may face during your time at University.



\* The Quality Assurance Agency (QAA) for Higher Education's independent review of teaching quality in the UK.

\*\* The Malaysian Qualifications Agency (MQA) for quality assurance practices and accreditation of national higher education in Malaysia.



# World-changing research

- Over 400 papers were published by academics in 2018\*
- We currently have a portfolio of more than RM43 million for both internally and externally funded research-related activities.
- 5\* rating from the Malaysian Research Assessment Instrument (MyRA)

\* As submitted to MyRA 2018

#### Accolades

Recent awards for our academic staff include: Appointment as Academy of Science Malaysia Fellow (FASc) 2019; Winner of the L'Oréal-UNESCO International Rising Talents award 2018; Winner of the L'Oréal-UNESCO For Women in Science National Fellowship 2019;

Two shortlisted nominees for the Science, Technology and Digital category Women of the Future awards South East Asia 2020.

#### Support

We provide extensive support for our academic staff through initiatives such as the Early Career Researcher programme, and workshops organised by the newly formed Research and Knowledge Exchange hub.

We run regular competitions with opportunities for internal funding for various research-related activities.

#### Research

Here at Nottingham we deliver research that transforms lives and shapes the future, with a particular focus on addressing the challenges facing South East Asia and beyond.

We currently support more than 300 postgraduates and 280 research-active staff working on a large portfolio of interdisciplinary projects funded by government agencies, non-governmental organisations and companies.

Many of our research projects have international collaborators.

#### Future food Malaysia

In the face of climate change we must develop new, resilient crops.

Yields must also increase to feed the additional two billion people expected by 2050.

Better access to healthier, safer, more nutritious food is needed in all countries due the growing prevalence of pollutants, nutrient deficiencies and over-processed foods.

Our research identifies sustainable local solutions in Asia to the global challenge of feeding a growing population in a changing world. We have more than 150 active research projects spanning schools and departments in both faculties.



#### Developing sustainable societies

The world is changing in the face of population growth, climate change and diminishing natural resources we must deepen our understanding of changing environments and pioneer new ways to save our precious planet.

Our research seeks solutions towards preserving our environment for a more sustainable future. We have more than 100 active research projects spanning schools and departments in both faculties.

In addition to these major interdisciplinary research themes, we have established research groups and institutes on: digital frontiers, nanotechnology and advanced materials, green technologies, smart manufacturing, aerospace technology, and Inclusion and diversity in the workplace.

# On campus

Combining beautiful gardens, striking architecture and state-of-the-art learning and research facilities, our University is an inspirational place to live, work and study.

Nottingha

TRENT RUILDING

# A strong sense of community

University of Nottingham Malaysia is characterised by its strong sense of community, created by approachable staff, a welcoming student body, excellent support services and a wide range of activities to help you meet new people and feel at home.

# A truly Malaysian setting

We are based on a self-contained site near Semenyih in the state of Selangor, 30 kilometres from Malaysia's capital city, Kuala Lumpur (KL). The beautiful setting and state-of-the-art teaching, learning, research and leisure facilities combine to make an inspirational environment for studying and student life. Transport is available from the campus to the nearest bus and rail stations, providing easy access to KL and the surrounding region. Kuala Lumpur International Airport is just a 30-minute drive away, making it an ideal base from which to explore locally and further afield.

#### Amenities for your convenience

Our self-sufficient campus provides students and staff with a range of amenities. Facilities include:

- 24-hour computer accessconvenience stores
- vending machines
   ATMs
- ATIVIS
- an extensive library
- a sports complexan Islamic Centre
- a health centre
- a creche

Prayer rooms are available 24-hours a day for Muslim students, with a free bus service provided to the mosque in Semenyih for Friday prayers. Buddhist, Christian and Hindu places of worship can be found in Semenyih and university facilities are also available to support and host these activities.

#### Eat, drink and socialise

The campus has an indoor and outdoor food court based in the Students' Association Building, which has recently been extended and renovated, providing a wide choice of food for all tastes. The University has also invested money in creating social and learning hubs for students in the Students' Association Building and around campus. These are perfect places to relax and catch up with friends.





# **Student life**

Our vibrant campus is welcoming and has many events and activities on offer. The Students' Association provides many opportunities to enhance university life, and our facilities enable you to socialise and participate in activities.

Find out more about the Students' Association at





### Students' Association of UNM

As a student at the University, you are automatically a member of the Students' Association (SA), which focuses on student experience and also acts as the bridge between the student community and University management.

The SA encourages you to get to know your peers and get involved with the wide range of events and activities organised by the SA Executives and its clubs and societies, beginning with Freshers' Week for new students.

The SA receives an annual grant from the University in order to offer activities and improve equipment and facilities for students. We also have the authority to raise additional funds from profits made, by running activities and via business ventures run by students, such as its very own merchandise shop Nott A Shop.

You may choose to take the leadership challenge as an elected student officer in the SA Executive Committee, the Student Council Steering Committee, clubs and societies executive positions, or use your talents to organise or participate in events and activities. Whatever you decide to do, there are ample opportunities available to help develop your skills while enhancing your CV.

#### Freshers' Week

The SA aims to provide all new students with a fun-filled Freshers' Week experience. During Freshers' Week you can enjoy various events designed to welcome you to the University, make new friends and experience the diversity. Past activities have included ice-breaking sessions, karaoke, campus-wide treasure hunts, cabaret, bowling, BBQ nights, music jamming sessions and much more.

#### **Networks**

Networks bring together students either to discuss issues of importance or to work together to organise events, campaigns or other forms of value-adding activities to our student community.

Each network is chaired by an SA Executive Officer. Networks are also channels to collectively bring up welfare concerns to the University management while recommending ways to improve and resolve such matters.

Whilst playing a part in creating a green environment, the



#### **Clubs and Societies**

The SA has about 80 clubs and societies covering a wide spectrum of interests:

- Academic
- Creative arts
- Cultural
- Religious
- Special interests
- Sports

It is highly recommended that you become a member of one or more of our clubs and societies to build up your CV and for your own selfdevelopment.

Sustainability Network also focuses on activities that are charitable and promote equal opportunity as well as social justice.

The networks under the various executive officers are:

- Education Network Education Officer
- International Students' Bureau (ISB) – International Students' Officer
- Marketing and Communications Network – Vice President
- Postgraduate Students' Network (PGSN) – Postgraduate Officer

Sports Network – Sports Officer

- Sustainability Network Sustainability Officer
- Welfare Network –

Home Students' Officer and International Students Officer who deal with:

- Accommodation
- Food
- Health
- Security
- Transport

#### **Student Council**

The Student Council serves as a key component of our student community it is the highest governing and policy setting body of the Students' Association (SA). Council consists of over 40 student representatives who serve in the interest of all students. Councillors serve at various levels across our vibrant student community under the positions of: Student Council Steering Committee, SA Executive Officers, faculty and school representatives, postgraduate representatives, clubs and societies representatives, hall tutors and five random voting members from the student body. Council's roles include the consideration of business affecting the student community, initiation and framing of SA by laws and the regulation of SA policy

#### **Students' Association Executive Committee**

The SA is run by an Executive Committee (EXCO) of nine elected full-time student volunteers holding various portfolios to serve the student community. The EXCO aims to improve the experience of student life by providing representation, development opportunities and quality services for all our students. No matter what is your level of study, your student experience will be taken care of by your elected peers from the time you step into the University until the day you graduate.

To see more of what is happening at our University, visit nottingham.edu. my/currentstudents

- Home Students' Officer
- International Students' Officer

Positions held by the Executive

- Postgraduate Students' Officer
- President
- Sports Officer
- Sustainability Officer

**Committee include:** 

Vice President

# Sporting opportunities

As well as an excellent academic reputation, Nottingham is well known for its sporting success and was the winner of *The Times and The Sunday Times Good University Guide* Sports University of the Year 2019.



#### **Sports facilities**

University of Nottingham Malaysia boasts an impressive range of sports facilities which are free to all students and staff.

Indoor facilities include courts for badminton, basketball, futsal, netball, squash, and volleyball; a fully-equipped gymnasium; and a multi-purpose room for martial arts or table tennis.

Outdoor facilities include a five-a-side football and hockey pitch; a jogging track; a multipurpose field with football, rugby and cricket pitches; a mini archery range; a multipurpose outdoor court suitable for basketball, futsal, and volleyball; and two tennis courts.

We also have a 25m outdoor swimming pool with mixed gender, male and female only sessions.



#### Sports Clubs

The Students' Association (page 13) supports many sport clubs that you can join during your time with us. This include clubs for archery, badminton, cheerleading, chess, cricket, dodgeball, fitness, football, frisbee, hockey, martial arts, netball, paintball, rock climbing, rugby, squash, swimming, table tennis and volleyball.

THE SAME TIMES THE SUNDAY TIMES GOOD UNIVERSITY GUIDE 2019

SPORTS UNIVERSITY OF THE YEAR



Find out about getting involved in sport at Nottingham:

nottingham.edu.my/sport

#### Tri Campus Games

Unique within higher education, our Tri Campus Games see students from each of our Nottingham campuses – Malaysia, the UK and China – competing against each other in several sports. The Games involve nearly 200 students from more than 20 nationalities and are held on a different international campus each year.

Get involved in the games through one of the Students' Association sports clubs or come along and show your fellow students your support!



# Kick start your career

Our experts in Careers Advisory Service offer ongoing support for planning your career throughout your time at University and beyond.



Our services will provide you with essential resources and guidance for your career choices and offer many opportunities for you to develop the skills needed to plan and manage your future. We help you find your future by:

- arranging company presentations, field trips, networking events, roadshows and on-campus interviews
- creating awareness of the importance of career information, resources, skills development and career guidance to fully prepare you for the workplace
- liaising and maintaining close links with potential employers to obtain information on career opportunities, internship and training programmes and competitions
- maintaining good relationships and excellent collaborations with potential employers for the benefit of students, employers and the University
- offering advice on matters such as CV and cover letter writing, interview and job hunting skills
- organising events such as careers fairs, careers talks and employability workshops to provide invaluable opportunities to meet potential employers

- providing access to dedicated online and printed careers information on relevant occupations, employers and further study through the Careers Resource Centre
- providing you with necessary knowledge to manage your career expectations and enhance your employability



Research shows that Nottingham is one of the most targeted universities by Britain's leading graduate employers.\*

\* Ranked in the top ten in The Graduate Market 2013-2018, High Fliers Research



#### Set yourself apart

The Nottingham Advantage Award is a voluntary extracurricular programme that enables you to develop further skills outside your main degree programme.

It provides the opportunity to gain additional skills and experiences that you can put on your CV, adding to the portfolio of employability skills that you will have developed by the time you graduate.

These include language learning, community volunteering, career skills and enhancing sustainability skills. Modules successfully completed under the Award are recognised on your degree transcript and those students who complete the full award (at least three modules) receive an additional certificate upon graduation.

nottingham.edu.my/currentstudents/nottinghamadvantage-award

# Our global community



As a graduate of the University of Nottingham, you will join our global community of 290,000 alumni which includes pioneering scientists, international policymakers, leaders of national charities, newspaper editors, novelists, Olympic medallists and a Nobel Prize winner.

#### **Our alumni**

Graduates of the University of Nottingham automatically become members of our global alumni community enabling access to extensive services:

- alumni reunions
- lifelong access to the Careers Advisory Service
   masterclasses
- master classes
   mentoring programmes
- recognition through Alumni Laureate Awards
- social networking events

#### hottingham.edu.my/alumni

#### **Alumni Online**

Join our online alumni community to find and stay in touch with friends, enquire about the latest exclusive alumni events, gain access to social networking sites, subscribe to newsletters and receive the alumni magazine.



#### Follow us at:



#### Notable alumni

We're proud of the contribution that our alumni make to society. Here's what some of them have gone on to do:

- Dr Deng Yaping-China's Sporting Star of the century
- DH Lawrence-author
- Dr Stewart Adams OBE-pharmacologist and creator of the painkiller ibuprofen
- DYMM Tuanku Zara Salim-Raja Permaisuri Perak
- H. E. Mrs Nur Ashikin Mohd Taib-Ambassador at Embassy of Malaysia to Sweden
- John Rishton-former CEO, Rolls-Royce
- Judith McHale-former Under-Secretary of State in the US Obama Administration
- Molly Fong-CEO of Body Shop (West Malaysia and Vietnam)
- Sir Andrew Witty-former Chancellor of University of the Nottingham and former CEO of GlaxoSmithKline
- Sir Clive Granger–economist and Nobel Prize Winner 2003
- Sir John Sawers-former Chief of the Secret Intelligence Service (MI6)
- The late DYMM Sultan Azlan Muhibbuddin Shah Ibni Almarhum Sultan Yussuf Izzuddin Shah Ghafarullahulah-former King of Malaysia and Sultan of Perak
- The late DYMM Tuanku Ja'afar Ibni Almarhum Tuanku Abdul Rahman-Former King of Malaysia and Yang Di-Pertuan Besar of Negeri Sembilan
- YAM Tunku Tan Sri Imran ibni Almarhum Tuanku Ja'afar-son of the former King of Malaysia
- YM Tengku Tan Sri Dato' Seri Ahmad Rithauddeen Bin Tengku Ismail-former Minister of Foreign Affairs, Minister of Trade and Industry and Deputy Minister of Defence, and Founding Chairman of the University of Nottingham in Malaysia Sdn Bhd

# Your support network

Academic and practical support

#### Library resources

The library has a comprehensive collection of books to meet the taught programmes offered by the University. The library also has a wide spectrum of electronic and information resources, including subject-based reference enquiry, internet subject gateway and subject focused academic support services. Electronic resources can be accessed anywhere via internet.

nottingham.edu.my/thelibrary



#### **Student Service Centres**

The Student Services Centre located in the Students' Association building helps you with accommodation, campus services, finance, sponsorship, support services, registry, and visa queries. For faculty matters you will need to visit your faculty office.

#### **Student registry**

The Student Registry Office oversees administrative matters that concern students, including issuing letters, processing withdrawal and suspension applications, producing official transcripts and certificates, maintaining the student records database, updating student details, setting the academic calendar, managing and updating programme information.

nottingham.edu.my/studentregistry

#### English language support

The Centre for English Language Education provides English language support for all students who need it through our free in-sessional classes.



#### Academic and personal tutoring system

At the start of each semester you will meet your personal tutor and may turn to them for advice for related matters.

#### IT services

IT Services provide a range of facilities both on campus and off campus. These include computer rooms, video conferencing facilities, print, copy and scanning facilities, and student portals for accessing study materials.





#### University Health Centre

We offer healthcare, a pharmacy, GPs, physiotherapy laboratory tests and referals to hospitals.



### Counselling and mental health

Our free and confidential counselling service provides emotional support, self-help resources and individual counselling consultation where appropriate.

#### Academic and disability Support

We can help with personal and academic issues affecting your studies, including advice on writing techniques, managing your time, exam preparation, dyslexia support and support for other specific learning differences, as well as arranging support and access for disabled students.

nottingham.edu.my/ wellbeing

#### Faith provision

Prayer rooms are available 24 hours for Muslim students on the ground floor of the Computer Centre and Islamic Centre. The nearest mosque is in Semenyih and a free bus service is provided for Muslim students for Friday prayers. Buddhist, Christian and Hindu places of worship are located in Semenyih and our facilities are also available to support and host these activities.

# Your perfect home

Finding the right place to live while you study is an important consideration in your choice of university. Our Accommodation Office offers a free and friendly service in helping you find a place to live that not only suits your needs but lets you get on with university life – both studying and having fun.



#### **On-campus** accommodation options

We offer various room types within our 11 halls of residence with total 2,400 beds to suit your budget. The rooms range from single ensuite, twin share to four shared bedrooms. All the halls are within easy walking distance to the academic buildings, sports facilities, food, retail and leisure facilities. Each residential hall has its own Hall Wardens (staff) and Hall Tutors (postgraduate students) who will be available to provide assistance related to your safety and welfare.

#### **Facilities include:**

- cleaning services
- communal student area (student village south J1-I5)
- communal student hub\*
- convenience store\*
- laundromat
- mini fridge in each room\*
- outdoor gym (student village north and south)
- pantry facilities
- room repair and maintenance services
- wireless internet connection

\* only available in student village north J1-J6

Accommodation fees include utilities and internet connection. The room rental will be billed on a quarterly basis and students in rooms with air-conditioning will be billed on a quarterly basis for air-conditioning usage based on a meter reading.

Coin operator laundry washing machines and dryers are available at both Student Village North and South. Clothes line and drying areas are also available within the residential halls. Students can use the coin-operated launderette services at own expenses.

#### Find out more

i

6 +60 3 8924 8604

> accommodation@ nottingham.edu.my nottingham.edu.my/ accommodation

#### Students with specific requirements

If you have a physical disability or have special needs, kindly indicate when applying via OLAA and provide written supporting documentation or medical reports from a registered physician/doctor. These will be forwarded to our Student Wellbeing and Learning Support Office for further advise and assessment. You may also indicate your room preference to be within an "All Female" hall of residence.

#### How to apply

New students may apply for oncampus accommodation as soon as you have your University student ID which is usually issued after you have submitted your programme application.

Current students who are progressing/continuing their studies (Returning Residents) are encouraged to apply in January (and accept with payment by end February) for the new academic year starting in September and

enjoy the option to request for the same room in the new academic year. Confirmation of your room is on first accepted with payment basis.

On-campus accommodation will be allocated to Returning Residents based on availability of a room and on a "first come first served with payment basis.

Rental per student

#### Room types

Deluxe single en-suite bathroom with air-conditioning	RM750 per month
Single en-suite bathroom with air-conditioning	RM680 per month
Single shared en-suite bathroom with air-conditioning	RM615 per month
Single shared bathroom in five room flat with air-conditioning	RM585 per month
Single shared en-suite bathroom	RM510 per month
Single shared bathroom in five room flat	RM480 per month
Twin shared in six bed flat	RM455 per month
Four shared bedroom	RM395 per month



As long as you have your Student ID, you can register with OLAA, the University's online accommodation application portal, which will allow you to:

- indicate your date and time of arrival
- manage your offer (accept, decline or apply for an extension)
- preview and select the various types of rooms available
- submit your application

OLAA will also provide you with other important information on how and when you can check-in.

#### **Room Preferences and Allocation**

Different room types are available to suit your budget and preference. Applicants must prioritise their choice of room type from 1 (first) to 5 (fifth). Accommodation Office cannot process your application if you selected less than five choices. Kindly be reminded that we follow a "first come first served with payment" policy to confirm the room type.

#### Apply here



your preferred room type, it is recommended that you accept what is been offered to prevent further delay. You will have the chance to change to your preferred room type by applying for room transfer after you have checked-in to the room offered to you. Your room transfer request will be processed according to room availability due to "No Show".

applyaccommodation.nottingham.edu.my

In the event that you do not get

#### International student support

# "Selamat Datang, Huān Yíng and Vanakkam!"

University of Nottingham Malaysia welcomes you to one of the most diverse nations in Asia.



#### Welcome to Malaysia

Covering an area of 127,350 square miles, Malaysia consists of two regions separated by the South China Sea: Peninsular Malaysia and Malaysian Borneo (also known as West and East Malaysia respectively). Peninsular Malaysia extends southeast from the border of Thailand. Malaysian Borneo consists of the states of Sabah and Sarawak which are located on the north-western coastal region of the island of Borneo. The country's population is over 30 million to date.

Malaysia is a country with a unique blend of cultural influences and ethnic groups. The country is home to three main ethnic groups: Malays, Chinese and Indians, as well as the native Orang Asli.

Having been colonised by the Portuguese, Dutch and British, see these influences in the architecture, hear them in Malay language and taste them in the internationallyacclaimed Malaysian cuisine. Visitors to Malaysia are also left awestruck by the tropical beauty of the country - with pristine beaches, some of the world's best underwater wildlife, ancient rainforests and UNESCO world heritage sites to explore, nature enthusiasts will find an exciting home in Malaysia.

#### The capital city

The Malaysia campus is a 45-minute drive away from Kuala Lumpur (KL), one of Asia's most vibrant cities. KL is a true metropolis with some of the world's tallest buildings, largest shopping havens and modern infrastructure. However, Kuala Lumpur also has pockets of historical sites, traditional villages (known as kampung) and greenery which are fun to explore on the weekends. The city is served by a comprehensive transportation system including buses, trains, a monorail and a number of airports.

Kuala Lumpur lies in the heart of Southeast Asia, and due to the number of low-cost and international carriers transiting in the country, it is an inexpensive starting point for travel around Southeast Asia and Australia.

### International student support services

Our international student support service promotes the wellbeing and social interaction of international students. We provide invitations for visas and opening bank accounts, advice on any problems you have with living and studying in Malaysia and information on the professional support services available at the University.

#### **Medical insurance**

Medical insurance coverage is compulsory and arranged for you by International Student Support department. The coverage takes effect from the point of registration on campus.

nottingham.edu.my/international/health-andinsurance

#### Student visa support

All non-Malaysian nationals who wish to study at an educational institution in Malaysia are required to hold a valid Student Pass. We assist international students in arranging dependant passes for spouse or family members, renewing the student visa while transferring schools within Malaysia and any other visa-related issues.

i apply.visa@nottingham.edu.my

#### Airport pick-up

We offer an airport pick-up service for new international students on designated days prior to the registration week. Email us at:



#### Meet us

Members of the International Office frequently travel to different countries to meet with prospective students and their families. We also have overseas representatives in a number of countries who can help you find the right programme, and offer support and advice through the application process. If you would like to visit the University in person, we will be happy to arrange it for you.

nottingham.edu.my/international/overseas

If you are an international student with a query about studying with us in Malaysia, please contact us:



nottingham.edu.my/international

International campuses

# Our international campuses

During your time with us, you might have the chance to study at one of our campuses in the UK or China. All our campuses offer a warm and friendly environment, interesting landscapes and first-rate facilities.



<image>

#### **UK campuses**

#### University Park Campus

Set around a lake with beautifully kept gardens, the 330-acre University Park is the University's principal campus. Receiving Green Flag Award status every year since 2003, it is one of the most attractive campuses in the country and features a mixture of period buildings and modern teaching and research facilities, with 12 halls of residence, a conference and exhibition centre, sports facilities and Nottingham Lakeside Arts.

#### **Jubilee Campus**

Jubilee Campus opened in 1999 and is just one mile from University Park. It is an exemplar in sustainable brownfield regeneration and has won numerous awards for its environmentally friendly design. The modern, purpose-built buildings include teaching and research facilities, residences, retail, social and support amenities, libraries and a sports hall.

Aspire, one of the country's tallest free-standing works of public art, soars to 60 metres above the campus. The adjoining Innovation Park was launched in 2008 and continues to expand and evolve, hosting specialist facilities for global satellite navigation systems, renewable energy technologies, mental health research and aerospace technologies.



#### **Sutton Bonington Campus**

Located in the beautiful countryside of south Nottinghamshire, Sutton Bonington Campus occupies a spacious 100-acre site with its own teaching and learning facilities, sports centre, student guild, social amenities and halls of residence.

Ten miles south of University Park, the campus benefits from state-of-the-art teaching and research facilities including purpose-built plant, food and nutrition science buildings, specialised laboratories, a 24-hour learning resource centre, extensive library, University farm and a dairy centre with 180 robotically milked cows. The campus also houses the School of Veterinary Medicine and Science which opened in 2006 as the first in Britain for more than 50 years.

#### China Campus

#### University of Nottingham Ningbo China

China campus became the first British university to establish and run a campus independently within mainland China when the first intake of students were admitted in 2004.

Around two-and-a-half hours by car from Shanghai, the China Campus is based at the Higher Education Park in Ningbo, a historic port city on China's eastern coast. The campus covers 144 acres of landscaped parkland, with a central lake and its own version of Nottingham's famous Trent Building. There are academic, residential and support facilities for almost 8,000 students including academic offices, a library, a fully equipped sports centre, a Students' Union, restaurants and shops.

#### Overseas opportunities

# **Overseas** opportunities

Nottingham has an extensive network of exciting exchange links. We offer life-enhancing opportunities to study abroad at our campuses in the UK and China as well as the chance to study for a period of time at partner universities across the globe.

#### Inter-campus exchange

As an undergraduate student, one unique feature of Nottingham Malaysia is the opportunity for you to spend one or two semesters during your second year of study at University of Nottingham UK, or University of Nottingham Ningbo China, while paying Malaysia Campus tuition fees. Participation is subject to the programme or programme being taught at our international campuses – please check with the relevant faculty about the programmes available.

#### e Universitas 21/partner university exchanges

The Universitas 21/partner university exchange is a competitive programme that offers undergraduate students the opportunity to study at a partner university for one semester or one academic year as part of their Nottingham degree. To be eligible you must have completed one year of your degree at Nottingham Malaysia and achieved a minimum pass mark of 60%. You must also be taking a degree programme that is also offered at the host university. Current host universities include:

- Aarhus University, Denmark
- Bocconi University, Milan Italy
- Chungbuk National University , Korea
- Concordia University, Canada
- Korea Advanced Institute of Science and Technology (KAIST)
   Munich University of Applied
- Science, Germany
- National Taiwan University
   Sciences Po Toulouse, France
- Sciences Po Toulouse, Pra
   Shiga University Japan
- Tech De Monterrey, Mexico
- The University of Groningen, The
- Netherlands
- Universidad Del Desarrollo, Chile
- University of Birmingham, UK
   University of Glasgow, UK
- University of Queesland, Australia

nottingham.edu.my/ studyabroad/byschool

Jubilee Campus, UK



#### University Park Campus, UK



#### David Ross Sports Village

+60 3 8924 8193/8036/8684/8750

If you are registered for your

of Nottingham Malaysia, you

can access opportunities to

study for a period of time

periods at our UK campus.

and students meeting the requirements.

International Summer Schools Two-week programmes, based at our campuses in

the China and Malaysia, will provide you with the

degree programme at University

outside of Malaysia. Some of our

programmes include compulsory

Inter-campus transfer programme

Students registered at the Malaysia Campus are also

eligible to transfer to University of Nottingham UK or

year at the Malaysia Campus, provided there is space

University of Nottingham Ningbo China after at least one

international.support@nottingham.edu.my

China: nottingham.edu.cn/international/summer Malaysia: nottingham.edu.my/international/summer

nottingham.edu.my/studyabroad

opportunity to study something new while meeting people from all over the world, and learning about different cultures. You will be taught by world-class academics, take part in exciting cultural and social activities, and form new friendships lasting a lifetime. The Summer Schools are open to anyone who fulfils the academic entry requirements.

# RM15 million worth of scholarships

We grant RM15 million worth of scholarships to deserving and academically excellent students. Applicants are selected based on their academic achievements and the socio-economic status of their family. In addition, there are various sources of financial assistance available to help fund your education.

#### **Full scholarships**

#### The Star Education Fund

The University pledges several scholarships via The Star Education Fund for foundation and undergraduate programmes of study for Malaysian students only. Visit The Star for details:



#### Sin Chew Daily Education Fund

This fund offers several full scholarships for undergraduate programmes for Malaysian only. Visit Sin Chew for details:

sinchew.com.my

#### **Partial scholarships**

25% High Achievers' Scholarship

This is an automatic scholarship for foundation and undergraduate programmes of study to all students [except Computer Science with Artificial Intelligence (2+1)]. Students who meet the criteria will receive 25% discount on the first year of their tuition fees.

#### 25% Dean's Excellence Scholarship

This scholarship entitles top achieving students a discount of 25% in their tuition fees at the point of progression [except Computer Science with Artificial Intelligence (2+1)].

#### 10% Automatic scholarships

We offer several automatic scholarships for alumni of University of Nottingham, children of alumni, siblings, spouses and alumni of Universitas 21 (U21) institutions.

#### Sports and Arts Scholarship

This scholarship is to acknowledge students' excellence in sports/arts to reward amateur athletes/artistic talent at national or international level, one award a year.

Scholarships will be divided into two categories:

- 50% discount for national level
- 75% discount for international level

All current students are eligible to apply for these scholarships, however, it cannot be backdated.

Not applicable to BSc Computer Science with Artificial Intelligence and Master of Pharmacy (MPharm)

## Partial scholarships for Malaysian students

#### 50% Tinggi Foundation Scholarship

Tinggi Foundation offers 50% scholarships from semester 2 onwards to deserving Malaysian students in undergraduate programmes [except MPharm and Computer Science with Artificial Intelligence (2+1)].

February intake students (if they are considered) will only get the scholarship from their Year 2 until completion of undergraduate course.

#### Other finance options

Other finance options for undergraduate students include:

- Employees Provident Fund (EPF) withdrawal scheme for education – for Malaysian students pursuing diploma and higher level
- National Higher Education Fund (PTPTN loan) for Malaysian students doing undegraduate programmes only

Students with outstanding academic results can also seek sponsorship from other sponsoring bodies. More information on sponsoring bodies can be found at our website.





# See for yourself

#### **Open days**

Each year we run open days, information days and counselling sessions where you can visit our campus, experience our facilities, meet students and staff, attend talks and presentations as well as participate in activities.

Some faculties and schools also run their own open days throughout the year.

#### Independent visits

You are welcome to arrange a visit to the campus and meet our staff for more information. Please contact us to arrange for a visit.



#### **Education fairs**

We participate in a number of education fairs throughout the year all over Malaysia. You can talk to our staff to find out the University and our programmes.

nottingham.edu.my/study/events



Members of our International Office visit many countries to meet prospective students and attend international exhibitions. We also work with a number of international academic services, educational agencies and counsellors in countries across the globe.

These agents and counsellors can help you to find the right programme, providing support and advise throughout the application process.





# Foundation programmes

Engineering Science

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# Foundation programmes



#### Overview

At the University of Nottingham Malaysia, we offer four foundation programmes: Arts and Education, Business and Management, Engineering and Science. These are an ideal entry pathway for our degree programmes and will provide you with the academic skills and confidence to further your education. Upon successful completion of your foundation programme, progression to an undergraduate degree is automatic and unconditional.

While all foundation programmes have an English language component, each programme is designed to target the specific needs of the student. Foundation in Science, for example, covers topics such as biology, computing, mathematics and psychology, whereas the Foundation in Arts focuses largely on language and communication skills. We will guide you through non-academic tutorials, and assist you on a one-to-one basis with personal or academic issues.

### Two or three-semester programme

Each semester consists of 10-12 weeks of teaching and an additional one to three weeks of assessment. Your foundation route depends on your skills and the amount of formal education you have undertaken. The three-semester programme is ideal if you have completed a minimum of 11 years of formal education, whereas the twosemester programme is suitable if you have completed at least 12 years of formal education but need to enhance your skills in order to undertake an undergraduate degree.

If you study for the three-semester programme, you will take all modules, and if you take the twosemester programme you will take all modules offered in the second and third semesters.

#### Progression opportunities

Successful completion of our engineering or science foundation programme will enable you to go on to take a bachelor degree in any engineering or science subject at Nottingham Malaysia.

There are two foundation programmes within the Faculty of Arts and Social Sciences: Foundation in Arts and Education and Foundation in Business and Management. Each undergraduate degree in the faculty has its preferred foundation programme, with content tailored for that programme. In addition, alternative pathways are open to other degrees, should your academic interest change in the programme of your foundation year.

#### At a glance

- As a foundation student you will be a full member of the University and have access to all the opportunities, support and facilities on offer.
- Our programmes are carefully designed to prepare you for degree-level study and have a high rate of progression.
- Our foundation programmes are an opportunity to gain the skills and knowledge needed to undertake a range of bachelor degrees while studying at a world-class university.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.** edu.my/foundation

# +60 3 8924 8686

- nottingham.edu.my/makean-enquiry
- y UoNMalaysia
- nottingham.edu.my/ foundation

Foundation	Duration	Intake	Malaysian fees	International fees
Engineering KPT/JPS(R/010/3/0394)02/21	2 or 3 semesters full-time	April and June (3 semester), September (2 and 3 semester)	RM9,500 per semester	RM11,200 per semester
Science UNM/KPM-JPT(R2/010/3/0312)9/24	2 or 3 semesters full-time	April (3 semester), September (2 and 3 semester)	RM9,000 per semester	RM10,600 per semester



		requirements
Engineering		IELTS (Academic): 6.0 (with
3-Semester Entry		no less than 5.5 in each element)
SPM	5 Bs including additional mathematics, mathematics and physics, excluding moral studies and religious studies. Consideration to be made based on relevant subjects.	TOEFL (iBT): 79 (minimum 17 in Writing and Listening, 18 ir
GCSE/IGCSE	1 A in mathematics and 4 Bs including physics. Consideration to be made based on relevant subjects. Applicants who have fallen short in obtaining the minimum mathematics grade requirement by a very narrow margin, but have obtained grade B in additional mathematics, will be considered on a case-by-case basis.	Reading, 20 in Speaking) PTE (Academic): 55 (with no less than 51 in each element) SPM: grade B+
IB Middle Years Programme (IB MYP)	6 in mathematics and 5,5,5,5 including physics, excluding Personal Project. Consideration to be made based on relevant subjects.	1119 (GCE O): grade C
Canadian Ontario Grade 11 Secondary	70% average with 75% in relevant academic subjects (including mathematics and physics).	GCSE O-Level: grade C
School	Canadian Grade 11 from other provinces are acceptable and to be assessed based on the University's requirements.	grade C
2-Semester Entry		grade B
A Level	CCC, including mathematics and physics, excluding critical thinking and general studies.	IB MYP: 4
AS Level	BBB, including mathematics and physics, excluding critical thinking and general studies.	MUET: Band 3
STPM	BBB, including mathematics and physics, excluding Pengajian Am.	UEC: grade B3
UEC	4 B3s and 1 B4, including mathematics and physics, excluding Bahasa Malaysia and Chinese language.	
IB Diploma	24 points, with 4,4,4 at Higher Level including mathematics and physics.	
SAM or other Australian Matriculations	ATAR 74 including mathematics and physics (consideration to be made based on relevant subjects).	
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	70% average based on 6 subjects, including Advanced Functions, Calculus and Vectors and relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required.	
	Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	
High School Diploma (US Style Curriculum)	Minimum final GPA of 3.0 (out of 4) in High School Diploma with grade B in mathematics or pre-calculus and physics in grade 11 or 12	

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

For more detailed programme content, visit **nottingham.edu.my/foundation** 

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Entry requirements		English language requirements
Science		IELTS (Academic): 6.0 (with
3-Semester Entry		element)
SPM/GCSE/IGCSE	5 Bs including mathematics and 2 science subjects (biology, chemistry or physics), excluding moral studies and religious studies. Consideration to be made based on relevant subjects.	TOEFL (iBT): 79 (minimum 17 in Writing and Listening, 18 in Reading, 20 in Speaking)
IB Middle Years Programme (IB MYP)	5, 5, 5, 5, 5 including mathematics and 2 sciences subjects (biology, chemistry or physics), excluding Personal Project. Consideration to be made based on relevant subjects.	PTE (Academic): 55 (with no less than 51 in each element)
Canadian Ontario Grade 11 Secondary School	70% average with 75% in relevant academic subjects (including mathematics and 2 science subjects).	SPM: grade B+
	Canadian Grade 11 from other provinces are acceptable and to be assessed based on the University's requirements.	1119 (GCE O): grade C
2-Semester Entry		GCSE O-Level: grade C
A Level	CCC, including mathematics and 2 science subjects (biology, chemistry or physics), excluding critical thinking and general studies.	IGCSE (First Language): grade C
AS Level	BBB, including mathematics and 2 science subjects (biology, chemistry or physics), excluding critical thinking and general studies.	IGCSE (Second Language): grade B
STPM	BBB, including mathematics and 2 science subjects (biology, chemistry or physics), excluding Pengajian Am.	IB MYP: 4
UEC	4 B3s and 1 B4, including mathematics and 2 science subjects (biology, chemistry or physics) excluding Bahasa Malaysia and Chinese language.	UEC: grade B3
IB Diploma	24 points with 4,4,4 at Higher Level, including mathematics and 2 science subjects (biology, chemistry or physics).	
SAM or other Australian Matriculations	ATAR 74 including mathematics and 2 science subjects.	
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	70% average based on 6 subjects, including mathematics and 2 relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	
High School Diploma (US Style Curriculum)	Minimum final GPA 3.0 (out of 4) with Grade B in mathematics or pre-calculus and two science subjects (biology, chemistry or physics) in grade 11 or 12.	
Applicants who have so will vary according to so programme, may be eli	uccessfully completed 12 years of education (definitions ichool system) and meet the entry requirements for the igible to apply for the 2-Semester entry. Acceptance is at the	

discretion of the University.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

Entry requirements		English languag requirements
Foundation in Science	leading to MPharm (Hons) Pharmacy - (3-Semester Entry Only)	
SPM/GCSE/IGCSE	5 Bs in relevant academic subjects, including biology, chemistry, physics and either mathematics or additional mathematics, excluding moral studies and religious studies.	
Other Qualifications	Acceptance is at the discretion of the School and must meet the prerequisite requirement of the programme.	
All progressing Founda programme are expect the School of Pharmac	tion candidates into Master of Pharmacy (Honours) ed to fulfil the English language requirement as stipulated by y at the Malaysia Campus.	

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.



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Foundation programmes

#### Foundation in Engineering

The Foundation in Engineering will give you a broad understanding of the fundamentals of engineering and a solid grounding in mathematics and other subjects, enabling you to successfully proceed to a BEng or MEng undergraduate engineering degree. You will have opportunities to interact with students and lecturers across the Faculty of Engineering, which will help you to make an informed decision on the branch of engineering that you would like to pursue. As an engineering student you will spend a significant amount of time performing lab work, as well as participating in tutorials, written assignments and attending lectures. There is a strong emphasis on the teaching of mathematical and physical sciences. You will also be introduced to computer language and programmes, as well as study and research techniques essential for undergraduate level programmes.

#### **First semester**

#### Typical core modules

- Computer Methods for Engineers
- Light, Waves and Electron
- Principles of Chemistry
- Probability and Statistics
- Study Skills for Engineers

#### Second semester

- Typical core modules
  Calculus
- Electricity and Magnetism
- Mathematics for Engineers
- Mechanics and Matter

#### **Third semester**

#### Typical core modules

- Advanced Calculus
- Programming for Engineers
- Thermal Physics and Circular Motion

#### **Typical optional modules**

- You may choose **one** of the following optional modules:
- Applications of Electromagnetism
- Thermal Chemistry

Our suite of foundation programmes offer the ideal preparation for undergraduate study, ensuring students are fully prepared for a degree in a world-class university.



#### **Foundation in Science**

To fully prepare you for your chosen area of study, the Foundation in Science covers topics in biology, chemistry and mathematics as well as specialist modules for Pharmacy, Bioscience, Environmental and Geographical Science, Computer Science, Mathematical Science and Psychology pathways. You will also be given extra support in study skills, so you can progress to undergraduate level with confidence. You will follow a dedicated pathway through the foundation programme based on your choice of degree programme-for example, psychology or computer science.

You will take all compulsory modules and some optional modules according to your selected degree pathway. With plenty of opportunities to interact with students and staff, you will be given the chance to fully explore the Faculty of Science. This will help support you to identify, and then pursue, a degree in the science field of your choice.

#### Typical core modules

- Academic and Professional Skills for Foundation
- Biology 1
- Chemistry 1
- Communications and Networks
- Fundamentals of Computing
- Introduction to Psychology 1
- Mathematics 1
- Mathematics 2

#### Typical optional modules

- Biology 2
- Biology 3Chemistry 2
- Chemistry 3
- Fundamentals of Programming
- Internet Programming

Foundation programmes

- Introduction to Psychology 2
- Mathematics 3
- Mathematics 4
- Principles of Education

The modules offered are subject to change.

#### Pathways for progression

#### Engineering

Chemical and Environmental Engineering (BEng/MEng) Chemical Engineering (BEng/MEng) Civil Engineering (BEng/MEng) Electrical and Electronic Engineering (BEng/MEng) Mathematics and Management (BSc) Mechanical Engineering (BEng/MEng) Mechatronic Engineering (BEng/MEng)

Foundation programmes

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Biomedical Sciences (BSc) Biotechnology (BSc) Computer Science (BSc) Computer Science with Artificial Intelligence (BSc) Environmental Science (BSc) Mathematics and Management (BSc) Nutrition (BSc) Pharmaceutical and Health Sciences (BSc) Pharmacy (MPharm) Psychology (BSc) Psychology and Cognitive Neuroscience (BSc) Software Engineering (BSc)



# Engineering

Chemical and Environmental Engineering	4
Civil Engineering	5
Electrical and Electronic Engineering	5
Mathematical Sciences	5
Mechanical, Materials and Manufacturing Engineering	6

Engineering

### Chemical and Environmental Engineering

# What is chemical engineering?

Chemical engineering can be defined as the processing of materials on a commercial scale, ranging from traditional commodities and utilities through to modern, high added-value products. This involves the integration of engineering principles and applications with chemistry and other sciences.

Chemical engineers work in a range of companies manufacturing products as diverse as bulk chemicals, drinks, fine chemicals, food, petroleum products, pharmaceuticals and synthetic fabrics. Their job is to transform raw materials into useful products with a minimum environmental impact. Our Chemical Engineering with Environmental Engineering programme is intended to equip you with the skills to specialise in environmental aspects of the discipline.

#### How will I study?

The BEng and MEng degree programmes have common first, second and third years, with all students following the same programme of study for three years. At the end of your second year, you can choose to continue for either a three-year BEng degree or a four-year MEng degree. Both the BEng and MEng will provide you with the same core skills but by choosing to study for the MEng, you will undertake a more substantial project with greater opportunity for specialisation and experience of research methods. We strongly recommend the MEng route if you wish to pursue an engineering career.

#### Industrial training

Industrial training is compulsory if you pursue the MEng degree curriculum. You will be expected to participate in industrial training during the summer vacation after the second year of study, although participation in other years or multiple-participation is also allowed. All industrial training must last at least 12 consecutive weeks in the same company or institution. If you pursue the BEng degree, you are not required to participate but will be strongly encouraged to do so. Industrial training also provides a great way to identify top career prospects.

### Professional accreditation

Our MEng programme is accredited by the Board of Engineers Malaysia (BEM) and is recognised under the Washington Accord. The MEng degree is also accredited by the Institution of Chemical Engineers as fully satisfying the educational base for a Chartered Engineer (CEng). Our BEng programme is accredited by the Institution of Chemical Engineers as partially satisfying the educational base for a Chartered Engineer (CEng).



- Chemical engineering has been established at the University of Nottingham for over 50 years
- In the Guardian University Guide 2019, we are ranked second in the UK
- We have a long history of collaboration with industry, and graduates gain jobs with major companies such as ExxonMobil, Shell and Unilever.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham. edu.my/ugstudy** 

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nottingham.edu.my/ engineering/chemical

# Realise it

**Investigate it** 

**TOV** 

#### **Career prospects**

**Chemical and Environmental Engineering** 

With our unique combination of chemical and environmental engineering, we are well placed to provide multi-skilled graduates the opportunity to work in a diverse range of industries including energy, environmental services, food, oil and gas and the pharmaceutical sector, as well as government agencies and departments around the world.

You will be equipped for a career in chemical engineering, working as a professional in areas such as process and product design or plant management or for work in other disciplines benefitting from the technical and problem-solving skills you will have acquired. Additionally, the chemical engineering with environmental engineering degree equips you for a career in environmental engineering, perhaps working as a professional in environment-related functions, such as materials recycling, pollution control or waste treatment.

Project work on our programmes allows students to apply what they have learned to solve real industry problems.



BEng/MEng (Hons)	Duration	Intake	Malaysian fees	International fees
BEng Chemical Engineering KPT/JPS(R/524/6/0059)3/21	3/4 years full-time	February and September	RM47,500 per year	RM55,500 per year
MEng Chemical Engineering KPT/JPS(R/524/6/0059)3/21	3/4 years full-time	February and September	RM47,500 per year	RM55,500 per year
BEng Chemical Engineering with Environmental Engineering KPT/JPS(R/524/6/0058)3/21	3/4 years full-time	February and September	RM47,500 per year	RM55,500 per year
MEng Chemical Engineering with Environmental Engineering KPT/JPS(R/524/6/0058)3/21	3/4 years full-time	February and September	RM47,500 per year	RM55,500 per year

Entry requirements		English language requirements
A Level	BBB, including mathematics and either chemistry or physics, excluding critical thinking and general studies.	IELTS (Academic): 6.0 (with no less than 5.5 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level, including mathematics and either chemistry or physics.	element)
STPM	B+B+B+, including mathematics and either chemistry or physics, excluding Pengajian Am.	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	2 As including mathematics and either chemistry or physics, and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 55 (with no less than 51 in each element)
SAM or other Australian Matriculations	ATAR 86 including mathematics and either chemistry or physics.	GCE A Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects, including Advanced Functions, Calculus and Vectors and relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's	Literature: grade C GCE AS Level English Language or English Literature: grade C
	requirements.	SPM: grade B+
Advance Placement (AP)	4, 4, 4, including AP Calculus and AP Chemistry or AP Physics. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced	1119 (GCE O): grade C
	Placement level.	GCSE O-Level: grade C
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and	IGCSE (first language): grade C
	previous studies must meet the prerequisite requirements to the programme.	IGCSE (second language): grade B
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant	MUET: Band 3
	subjects), and previous studies must meet the prerequisite requirements to the programme.	UEC: grade B3
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Engineering programme.	IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

**Related programmes** 

BSc Biomedical Sciences (page 70) BSc Environmental Science (page 81) BSc Pharmaceutical and Health Sciences (page 86) MPharm Pharmacy (page 86)

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#### BEng/MEng Chemical Engineering BEng/MEng Chemical Engineering with Environmental Engineering

and engineering knowledge coupled with a range

of transferrable skills - analysis, communications,

information technologies, management, problem-

minerals processing, petrochemicals, petroleum

refining, pharmaceuticals or water treatment. If you

opt to take the BEng/MEng Chemical Engineering

with Environmental Engineering, you will acquire

engineering enhanced with an emphasis on the minimisation of environmental impacts, enabling you

the essential core knowledge and skills of chemical

to create environmentally responsible solutions to the

solving and teamwork - to prepare you for a career

in areas such as commodity and specialty chemicals, fertilisers, food processing, fuels and energy production,

These programmes will provide you with core scientific

#### Year one

- Typical core modules
- Chemistry for Engineers
- Fluid Mechanics
- Fundamentals of Engineering Design

engineering challenges of tomorrow.

- Introductory Geology
- Mathematical Methods for Chemical and Environmental Engineering
- Process Engineering Principles
- Thermodynamics and Heat Transfer

#### Year two

- Typical core modules
- Advanced Mathematical Methods for Chemical and Environmental Engineering
- Analytical Measurement
- Chemical and Phase Equilibrium
- Environmental Assessment\*\*
- Interfacial Chemistry\*
- Materials and Sustainable Processes
- Process Design and Control
- Process Engineering Project\*
- Separation and Particle Technology

#### Year three

- Typical core modules
- Air Pollution\*\*
- Biochemical Engineering\*
- Industrial Process Analysis\*
   Multi-Component Separations and Transport Processes
- Plant Design and Project Management
- Process Engineering Laboratories
- Process Simulation 1
- Reactor Design and Process Control
- Water Treatment\*\*

#### Year four (MEng only) Typical core modules

MEng Project

#### Typical optional modules

- Advanced Biochemical Engineering\*
- Advanced Computational Methods
- Advanced Environmental Assessment
- Advanced Process Control
- Advanced Reaction Engineering
- Advanced Rheology and Materials
- Air Pollution 2\*\*
- Contaminated Land\*\*
- Food Processing Technology
- Fats and Oils Processing Technology
- Nanotechnology
- Palm Oil and Oleochemicals
- Petroleum Refining and Gas Processing
- Power Generation and Carbon Capture
- Process Design and Optimisation
- Process Synthesis and Design
- Professional Engineer in Society
- Statistical Process Control and Quality Improvement\*
- Water Treatment Engineering\*\*
- \* Chemical Engineering students only.
- \*\* Chemical Engineering with Environmental Engineering students only.

## Civil Engineering

# What is civil engineering?

Every day we rely on some aspect of civil engineering to enable us to live our lives. As a civil engineer you will be socially aware and interested in working with people to solve problems and meet challenges. Whether it is building the Millau Viaduct in southern France, the London Eye, the Petronas Towers in Kuala Lumpur or life-saving water treatment plants in developing countries, civil engineering is the core discipline that enables such projects to happen.

Civil engineers must consider many factors in the design process, from the construction costs and expected lifetime of a project to government regulations and potential environmental hazards such as earthquakes. Touching just about every kind of structure you can think of – bridges, roads, skyscrapers, tunnels, water supply facilities and even the coast and flood defences that protect homes – civil engineering is fundamental to the world around us and underpins a modern society.

#### How will I study?

The BEng and MEng degree programmes have common first and second years, with all students following the same programme of study for two years. At the end of your second year you can choose to continue for either a three-year BEng degree or four-year MEng degree.



Both the BEng and MEng will

provide you with the same core

substantial project with greater

opportunity for specialisation and

We strongly recommend the MEng

experience of research methods.

route if you wish to pursue an

Industrial training is compulsory

if you pursue the MEng degree

curriculum. You will be expected

to participate in industrial training

during the summer vacation after

participation in other years or

multiple-participation is also

the second year of study, although

allowed. All industrial training must

last at least 12 consecutive weeks

in the same company or institution.

If you pursue the BEng degree you

are not required to participate but

will be strongly encouraged to do

so. Industrial training also provides

a great way to identify top career

prospects.

Industrial training

engineering career.

skills but by choosing to study for

the MEng you will undertake a more

#### At a glance

- During your studies you will have the opportunity to spend up to two semesters at the UK or China Campuses (at Malaysia fees) and the option to transfer to the UK after your first, second or third year (at UK fees).
- Our programme is informed by the world leading research that ranked the Faculty of Engineering 3rd in the UK for research power in engineering in the Research Excellence Framework 2014.
- You will follow the same highquality degree curriculum that has helped civil engineering at University of Nottingham, UK, to be consistently rated among the top civil engineering departments in the UK.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham**. **edu.my/ugstudy** 



- an-enquiry
- UoNMalaysia
- nottingham.edu.my/ engineering/civil

**Civil Engineering** 

# Professional accreditation

**Civil Engineering** 

Our MEng programme is accredited by Board of Engineers Malaysia for meeting the minimum academic requirements for registration as a graduate engineer with the Board of Engineers, Malaysia (BEM). The MEng degree is also accredited by the Joint Board of Moderators (Institution of Civil Engineers,

Institution of Structural Engineers, Institute of Highway Engineers and Chartered Institution of Highways and Transportation) as fully satisfying the educational base for a Chartered Engineer (CEng). Our BEng programme is accredited by Joint Board of Moderators as partially satisfying the educational base for a Chartered Engineer (CEng).

#### **Career prospects**

Civil engineers are needed all over the world in construction, design and management positions. By the end of the programme you will be equipped to embark on a career in civil engineering or other discipline that requires numerate, problem-solving graduates who are perfectly prepared





BEng/MEng (Hons)	Duration	Intake	Malaysian fees	International fees
BEng Civil Engineering	3/4 years	September	RM47,500	RM55,500
UNM/KPM-JPT(R2/526/6/0076)10/24	full-time		per year	per year
MEng Civil Engineering	3/4 years	September	RM47,500	RM55,500
UNM/KPM-JPT(R2/526/6/0076)10/24	full-time		per year	per year

Entry requirements		English language requirements
A Level	BBB, including mathematics and physics, excluding critical thinking and general studies.	IELTS (Academic): 6.0 (with no less than 5.5 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level, including mathematics and physics.	element)
STPM	B+B+B+, including mathematics and physics, excluding Pengajian Am.	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	2 As including mathematics and physics, and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 55 (with no less than 51 in each element)
SAM or other Australian Matriculations	ATAR 86 including mathematics and physics.	GCE A Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects, including Advanced Functions, Calculus and Vectors and relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	GCE AS Level English Language or English Literature: grade C SPM: grade B+
Advance Placement (AP)	4, 4, 4, including AP Calculus and AP Physics. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	1119 (GCE O): grade C
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	GCSE O-Level: grade C IGCSE (first language): grade C IGCSE (second language):
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	grade B MUET: Band 3 UEC: grade B3
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Engineering programme.	IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

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#### **BEng/MEng Civil Engineering**

The main areas and principles of civil engineering are introduced in the first and second years. More advanced subjects are included in later years, together with optional modules. You will undertake a range **Civil Engineering** of activities, including field programmes, groupbased design work, laboratory work, CAD work and individual projects in your second and third years. Assessment at the end of each semester combines coursework, examinations, laboratory work and projects. Progression through each programme is based on an annual appraisal covering all modules from the preceding year. In the fourth year of the MEng, you will be able to choose from a range of optional modules and undertake an individual investigative project. You will also complete a group design project, designing and planning a civil engineering project that aims to integrate all the disciplines covered on the programme.

#### Typical core modules

- Geotechnics 1
- Group Design Project
- Hydraulics 1
- Mathematical Methods for Civil Engineering
- Portfolio of Civil Engineering Studies
- Structural Analysis 1

#### Year two

- Typical core modules

- Hydraulics 2
- Portfolio for Civil Engineering Studies
- Steel Design Project
- Structural Analysis 2

#### Year three

- Typical core modules
- Building Information Modelling (BIM) Project
- Geotechnics 3
- Hydraulic Design and Experiment
- Industrial Training (MEng only)
- Investigative Project (BEng only)
- Structural Concrete Design

#### Typical optional modules

- Advanced Properties of Concrete
- Applied Construction Project Management
- Coastal Engineering
- Railway Technology
- Traffic Engineering

#### Year four (MEng only)

- Typical core modules
- Group Design Project
- Investigative Project
- Typical optional modules
- Advanced Structural Design
- Dynamics and Wind Engineering
- Finite Element Analysis in Structural Mechanics
- Geotechnical Modelling
- Highway and Pavement Design
- Sustainable Construction and Life Cycle Analysis

### **Electrical** and **Electronic** Engineering

#### What is electrical and electronic engineering?

Electrical and electronic engineering continues to transform the way we live - from the latest consumer products through to sophisticated scientific and industrial technologies. It can form a platform for many different disciplines ranging from renewable energy to nanotechnology and provide you with a thorough grounding in both academic and practical aspects.

Our programmes enable you to specialise in a particular branch of the subject dependent upon your interests and talents. One of these branches, mechatronic engineering, is a professional discipline that encompasses electrical, electronic and mechanical engineering with intelligent embedded control. Mechatronic engineers explore and utilise new technologies in automation and robotics to allow tasks in hazardous environments or precise positioning to be accomplished for the benefits of health, safety, society and economy.

#### How will I study?

Our BEng or MEng option will provide you with the same core skills, however, the MEng will offer added advantage in terms of a more substantial project with greater opportunity for specialisation and experience of research methods. We strongly recommend the MEng route if you wish to pursue an engineering career.



Lectures, practical laboratory

sessions and project work are

solving workshops and tutorials.

Additionally you will undertake

independent work and complete

necessary reading in preparation

for writing reports and laboratory

experiments. You will be assessed

including coursework, dissertation

and oral presentations, as well as

Industrial training is compulsory

if you pursue the MEng degree

curriculum. You will be expected

to participate in industrial training

during the summer vacation after

the second year of study, although

allowed. All industrial training must

last at least 12 consecutive weeks

in the same company or institution.

If you pursue the BEng degree you

are not required to participate but

will be strongly encouraged to do

so. Industrial training also provides

a great way to identify top career

prospects.

participation in other years or

multiple-participation is also

through a range of methods

tests and examinations.

Industrial training

supplemented by problem-

#### At a glance

- A Nottingham degree has a high reputation within the electrical and electronic engineering industry, opening up a world of opportunity and prospects.
- Our programmes will equip you with a variety of skills that allow for adaptation and improvisation in the fastchanging world of technology.
- We have links with a range of companies which provide exciting opportunities for industrial collaboration. These include: Dyson, Intel, MIMOS Berhad, Motorola Solutions Malaysia, Rohde and Schwarz, Significant Technologies, and Telekom Malaysia.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit nottingham. edu.my/ugstudy

2	+60 3 8924 8686
i	nottingham.edu.my/make an-enquiry
f	UNM Electrical
y	@UoNEngineering
	nottingham.edu.my/ enginering/electrical

ectrical and Electronic Engineering

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Typical projects include highway schemes, retail parks,

residential complex development and water works.

- Advanced Mathematical Methods for Civil Engineering
- Fundamentals of Materials
- Geotechnics 2

# Professional accreditation

All of our BEng and MEng undergraduate programmes are fully accredited by the Institution of Engineering and Technology (IET). Our MEng programmes are also currently accredited by the Board of Engineers Malaysia (BEM).

#### **Career prospects**

**Electrical and Electronic Engineering** 

Electrical and electronic engineering continue to be buoyant industries. Many of our graduates pursue engineering careers in a range of industries such as devices and systems design and development, electrical and electronic design, electrical and electronic equipment, manufacturing, systems design and fabrication, power plants and transmission. Others enter the management and commerce sector or software and IT. Some also choose to continue their studies with further education.



BEng/MEng (Hons)	Duration	Intake	Malaysian fees	International fees
BEng Electrical and Electronic Engineering UNM/KPM-JPT(R2/523/6/0238)3/25	3/4 years full-time	September	RM47,500 per year	RM55,500 per year
MEng Electrical and Electronic Engineering UNM/KPM-JPT(R2/523/6/0238)3/25	3/4 years full-time	September	RM47,500 per year	RM55,500 per year
BEng Mechatronic Engineering KPT/JPS(R/523/6/0276)3/21	3/4 years full-time	September	RM47,500 per year	RM55,500 per year
MEng Mechatronic Engineering KPT/JPS(R/523/6/0276)3/21	3/4 years full-time	September	RM47,500 per year	RM55,500 per year

Entry requirements		English language requirements
A Level	BBB, including mathematics and physics, excluding critical thinking and general studies.	IELTS (Academic): 6.0 (with no less than 5.5 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level, including mathematics and physics.	element)
STPM	B+B+B+, including mathematics and physics, excluding Pengajian Am.	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	2 As including mathematics and physics, and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language	PTE (Academic): 55 (with no less than 51 in each element)
SAM or other Australian Matriculations	ATAR 86 including mathematics and physics.	GCE A Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects, including Advanced Functions, Calculus and Vectors and relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	GCE AS Level English Language or English Literature: grade C SPM: grade B+
Advance Placement (AP)	4, 4, 4, including AP Calculus and AP Physics. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	1119 (GCE O): grade C
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	GCSE O-Level: grade C IGCSE (first language): grade C IGCSE (second language):
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	grade B MUET: Band 3 UEC: grade B3
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Engineering programme.	IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

### BEng/MEng Electrical and Electronic Engineering

This degree offers you the chance to study a range of topics while still allowing you to specialise in the later years of the programme. Topics including communications, computer modelling, electrical machines, electronic design, instrumentation, microelectronics, power generation and distribution, signal processing, software engineering and renewable energy systems make this a truly multidisciplinary degree.

#### Year one

Electrical and Electronic Engineering

#### Typical core modules

- Applied Electrical and Electronic Engineering: Construction Project
- Computer Aided Engineering
- Engineering Mathematics
- Information and Systems
- Power and Energy

#### Year two

- Typical core modules
- Contemporary Engineering Themes
- Electrical Energy Conditioning and Control
- Electronic Processing and Communications
- Modelling: Methods and Tools
- Practical Engineering Design Solutions and Project Development

#### Year three

- Advanced Engineering Mathematics
- Analogue Electronics
- Digital Communications
- Electrical Machines, Drive Systems and Applications
- Embedded Computing
- Group Project
- Mobile Technologies
- Power Electronic Applications and Control
- Power Networks
- Professional Studies
- Renewable Generation Technologies
- VLSI Design

(optional modules may change subject to available expertise)

#### Year four (MEng only)

- Advanced AC Drives
- Advanced Control System Design
- Advanced Power Electronics
- Artificial Intelligence and Intelligent Systems
- Digital Signal Processing
- HDL for Programmable Logic
- Industrial/Research Orientated Project

(optional modules may vary subject to available expertise)

#### BEng/MEng Mechatronic Engineering

There has been a growing interest and demand in industry for professional mechatronic engineers in recent years and the principal aim of the programme is to equip you to work at a professional level in related industries. You will develop practical knowledge and skills to examine and programme basic mechatronic integrated systems with practical experiments in instrumentation, measurement and control of hydraulic and pneumatic and electric systems. You will also be introduced to practical concepts in robotics. Studying the MEng enables you to conduct a group project to develop mechatronic products.

#### Year one

#### Typical core modules

- Applied Mechatronic Construction Project
- Engineering Mathematics
- Engineering Design and Design Project
- Information, Signals and Computing
- Power and Energy
- Statics and Dynamics for Mechanical Systems

#### Year two

#### Typical core modules

- Applied Mechatronic Engineering Project 2
- Design, Manufacture and Project
- Electrical Energy Conditioning and Control
- Electronic Processing Robotics
- Modelling: Methods and Tools
- Thermodynamics and Fluid Mechanics 1

#### Year three

- Additive Manufacturing and 3D Printing
- Advanced Dynamics and Vibration
- Computer Aided Engineering
- Control System and System Dynamics
- Electrical Machines, Drive System and Application
- Embedded Computing
- Industrial training
- Introduction to Automotive Technology
- Mathematics for Engineering Management
- Mechatronics Group Project (only for MEng students)
- Professional Studies
- Renewable Generation Technologies
- Risk and Reliability
- Thermodynamics and Fluids 2
- Third year project (for BEng students)
- Stress Analysis and Material Models

(optional modules may vary subject to available expertise, core modules may be combined to form 20 credits year long modules)

- Aerial Robotics
- Advanced AC Drives
- Advanced Control System Design
- Artificial Intelligence and Intelligent System
- Computational Fluid Dynamics
- Computer Modelling Techniques
- Digital Signal Processing
- Finite Element Analysis
- HDL for Programmable Logic
- Introduction to Aerospace
- Lean Manufacturing
- Mechatronics Individual Project
- Smart Vehicle Control SystemThermodynamics and Fluids 2
- (optional modules may vary subject to available expertise, core modules may be combined to form 20 credits year long modules)



#### At a glance

- In the latest QS World University Ranking, the University of Nottingham is amongst the top 100 in Statistics and Operation Research.
- Specific pathways within this programme are accredited by the Royal Statistical Society (RSS) as being of the appropriate breadth and depth to provide a foundation for a career as a professional statistician.
- Studying mathematics and management at the University of Nottingham will expand your mathematical knowledge backed up by sound business awareness, helping you to gain a wide range of problem-solving skills, which will help you to become a sought-after graduate wherever there is a call for logical thinking and statistical or strategic managerial knowledge.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.** edu.my/ugstudy

# +60 3 8924 8686 nottingham.edu.my/makean-enquiry UNM.Maths UoNMalaysia

## Mathematics and Management

The ability to reason quantitatively and logically lies at the heart of many management decisions. This programme is designed to equip students with the key skills for a Data Analyst needed to succeed in a wide range of business and management careers.

This degree is designed for a comprehensive education in mathematics, probability and statistics integrated with the theory and practice of business management and entrepreneurship. No previous knowledge of management or business studies is assumed.

#### How will I study?

Our programme is carefully designed to allow you to acquire the high level of cognition required to comprehend complex mathematical theories and rules, as well as the fundamentals of management and the most recent trends in business thinking. The joint disciplinary nature of the programme appeals to students who are mathematically inclined and who also wish to develop a knowledge of management topics such as human resources management, marketing, company finance and strategic management. The Mathematics and Management programme is evenly divided between the two main subject areas, except in the first year when mathematics accounts for two-thirds of the programme. It draws upon the expertise of both the School of Mathematical Sciences and Nottingham University Business School (NUBS).

#### **Industrial training**

Although industrial training is not a compulsory module under the current programme structure, students are encouraged to look for a placement opportunity during the summer vacation after the second year of study. Industrial training provides a great way to help students to identify top career prospects and enhance their soft skills. The School of Mathematical Sciences has strong industrial linkages, and the Industrial Advisory Board of the School consists of senior professionals from major organizations including Maybank and the Malaysian Institute of Microelectronic Systems (MIMOS).

#### **Career prospects**

This programme is a joint honours degree offered in conjunction with Nottingham University Business School. It prepares students for careers in data analytics finance, commerce, as well as professions in mathematical and statistical modelling, and education. Students may choose to undergo further specialist training to qualify as actuaries and teachers, or work in areas such as insurance, research and development, administration and management.

This degree provides careers-related skills development, and it is also an excellent preparation for PhD study.

Our mathematics and management degree equips students with analytical and managerial skills that are the most in-demand in the global job market.

For more information about our programmes, visit nottingham.edu.my/ugstudy

BSc (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Mathematics and Management	3 years	September	RM37,000	RM45,500
KPT/JPS(N/461/6/0010)4/22	full-time		per year	per year

Entry requirements		English language requirements
A Level	BBB, including mathematics, excluding critical thinking and general studies.	IELTS (Academic): 6.5 (with no less than 6.0 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level, including mathematics.	element)
STPM	B+B+B+, including mathematics, excluding Pengajian Am.	TOEFL (iBT): 87 (minimum 20 in Speaking and 19 in all
UEC	2 As including mathematics and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language.	otner elements) PTE (Academic): 62 (with no
SAM or other Australian Matriculations	ATAR 86 including mathematics and other relevant subjects.	GCE A Level English
Canadian Ontario Grade 12 Secondary	80% average based on 6 subjects with at least 70% in Advanced Functions and Calculus and Vectors.	Literature: grade C
School Diploma (OSSD)	Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	GCE AS Level English Language or English Literature: grade C
Advance Placement (AP)	4, 4, 4, including AP Calculus. Applicants taking non- preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	SPM: grade A-
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and	1119 (GCE O): grade B GCSE O-Level: grade C
	previous studies must meet the prerequisite requirements to the programme.	IGCSE (first language): grade C
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	IGCSE (second language): grade B
University of	Successful completion of the Foundation in Engineering	
Nottingham Malaysia Foundation	ttingham Malaysia         or Science programme with a minimum of 50% in all           undation         mathematics modules.	UEC: grade A2
		IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points

IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

#### **BSc Mathematics and Management**

In each year of the Honours programme, students must take modules accruing 120 credits. In the first year, 80 of these credits are in mathematics and 40 credits in management studies. In the second and third years, the students take 60 credits in each of the two disciplines.

During the first year (qualifying year), students will study core mathematics with modules in analytical and computational foundations, calculus and linear mathematics, as well as modules in probability and statistics. In management studies, students take modules such as work and society, business economics and organisational behaviour.

In the second and third years, the focus will be equally split between mathematics and management, with the opportunity to study a range of optional modules so much so that students can tailor the programme to their own interests.

#### Year one

Typical core modules

- Analytical and Computational Foundations
- Business Economics
- Calculus
- Linear Mathematics
- Organisational Behaviour
- Probability
- Statistics
- Work and Society

#### Year two

- Typical core modules
- Introduction to Scientific Computation
   Human Resource Management with International
- Perspectives
- Probability Models and Methods
- Statistical Models and Methods
- Technology and Organisation

#### Typical optional modules

- Consumers and Market
- Entrepreneurship: Theory and Practices
- Fundamentals of Financial and Management Accounting
- International Business
- Managing Operations in the Digital Enterprise
- Marketing Management

#### Year three

Typical core modules

- Applied Statistical Modelling
- Business Ethics and Sustainability
- OptimizationStatistical Inference
- Strategic Management

#### Typical optional modules

- Consumers and Market
- Entrepreneurship: Theory and Practices
- Finance in the Global Market
- Fundamentals of Financial and Management Accounting
- International Business
- Managing Operations in the Digital Enterprise
- Marketing Management
- New Venture Creation

**Mathematical Sciences** 

### Mechanical, Materials and Manufacturing Engineering

- Our close links with the industry, such as Materialise, Dyson, and Panasonic, as well as our research-led teaching ensure that our programmes are well-aligned with the latest technology developments and are relevant to the industry today.
- Our comprehensive, wellstructured programme will help you develop your potential to become a world class engineer.
- Our programmes are highlyrecognised by the world leading research community whereby the Faculty of Engineering is ranked 3rd in the UK for research power in Engineering in the Research Excellence Framework 2014.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For up to date information and further details of each programme please visit nottingham.edu.my/ugstudy



# What is mechanical engineering?

Mechanical engineering is a uniquely broad-based profession. Mechanical engineers apply their scientific knowledge to solve problems and design machines or systems to help us enjoy a better life. In addition to areas traditionally associated with the discipline, such as aerospace, automotive, manufacturing, and the power engineering industries. mechanical engineers also work within interdisciplinary teams solving problems in areas such as bioengineering, electrical and electronic systems, environmental protection, food, nanotechnology and the clean energy industry.

#### How will I study?

The first two years of the BEng and MEng degree programmes are common and at the end of your second year, you can choose to pursue either a three-year BEng degree or a four-year MEng degree, provided you meet the minimum MEng performance benchmark. Both the BEng and MEng options will provide you with the same core skills and knowledge but with the MEng, you will undertake a more substantial project with greater opportunity for specialisation and exposure to relevant research skills and methods in Mechanical Engineering. The wide range of optional modules in your third year (or fourth year for MEng students) allows you to follow specific themes and to develop areas of expertise and interest along that theme. We strongly recommend the MEng route if you wish to pursue an engineering career.

#### **Industrial training**

Industrial training is compulsory if you pursue the MEng degree. You will be expected to participate in industrial training during the summer vacation after the second year of study, although participation in other years or multipleparticipation is also allowed. All industrial training must last for at least 12 consecutive weeks in the same company or institution. If you pursue the BEng degree, you are not required to participate but will be strongly encouraged to do so. Industrial training also provides a great way to identify potential career prospects.

### Professional accreditation

Our mechanical engineering degrees are accredited by the Institution of Mechanical Engineers (IMechE) and the Institution of Engineering Designers (IED), which means that our degrees are recognised under the Washington Accord and the qualification can be used towards your registration as a Chartered Engineer with the Engineering Council, UK. In Malaysia, the MEng Mechanical Engineering is accredited by the Engineering Accreditation Council (EAC). Malaysia.

#### Career prospects

Our graduates commonly hold multiple job offers from some of the world's leading companies in sectors such as:

- Aerospace
- Agriculture
- Automotive
- BiotechnologyFinance
- Foundries
- Information technology
- Marine
- Medicine
- Mining
- Oil and gas
- Power generation
- Robotics

Typical roles include

- Computer modellers
- Consultants
- Designers
- Maintenance engineers
- Manufacturing engineers
- Project engineers
- Project managers
- Quality control managers plus a whole range of related roles

An undergraduate student working on his experiment at the department's wind tunnel.

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BEng/MEng (Hons)	Duration	Intake	Malaysian fees	International fees
BEng Mechanical Engineering	3/4 years	September	RM47,500	RM55,500
KPT/JPS(R/521/6/0125)3/21	full-time		per year	per year
MEng Mechanical Engineering	3/4 years	September	RM47,500	RM55,500
KPT/JPS(R/521/6/0125)3/21	full-time		per year	per year

Entry requirements		English language requirements
A Level BBB, including mathematics and physics, excluding critic thinking and general studies.		IELTS (Academic): 6.0 (with no less than 5.5 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level, including mathematics and physics.	element)
STPM	B+B+B+, including mathematics and physics, excluding Pengajian Am.	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	2 As including mathematics and physics, and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 55 (with no less than 51 in each element)
SAM or other Australian Matriculations	ATAR 86 including mathematics and physics.	GCE A Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects, including Advanced Functions, Calculus and Vectors and relevant science subjects. Consideration to be made based on relevant individual grades if specific subjects are required.	GCE AS Level English Language or English
	Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	SPM: grade B+
Advance Placement (AP)	4, 4, 4, including AP Calculus and AP Physics. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	1119 (GCE O): grade C
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	GCSE O-Level: grade C IGCSE (first language): grade C IGCSE (second language):
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	grade B MUET: Band 3 UEC: grade B3
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Engineering programme.	IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

#### **BEng/MEng Mechanical Engineering**

Design is a key integrating element in all years of the programme. You will learn real-world engineering, the importance of communication, team-working skills, and entrepreneurship initiatives, with emphasis for environmental sustainability, a mind-set for lifelong learning, appropriate management principles and business acumen. Engineering science and design are core disciplines in this programme whilst other important areas are control, electronics, IT, manufacturing technology, and mathematics. Project work will form a significant part of your final year. In year three, MEng students undertake a major group project. Up to four students will work as a multidisciplinary team to design, manufacture, and test their prototype, as well as develop a business plan to market their product. All students will undertake an individual project in their final year. The project is commonly experimental, computational or analytical in nature and it will provide a link relating academic understanding, research methods, and professional ethics. You will be able to choose your individual project topic, most of which are based upon real industrial problems.

#### Year one

Typical core modules

- Engineering Design and Design Project
- Materials and Manufacturing
- Mathematics for Engineers
- Programming, Professional and Laboratory Skills
- Statics and Dynamics
- Thermodynamics and Fluid Mechanics 1

#### Year two

Typical core modules

- Advanced Mathematics and Statistics for Mechanical Engineers
- Design, Manufacture and Project
- Dynamics and Control
- Electromechanical Devices
- Engineering Management 1
- Materials in Design
- Mechanics of Solids
- Thermodynamics and Fluid Mechanics 2

#### Year three (BEng and MEng)

Typical core modules

- Computer Modelling Techniques
- Engineering Management 2
- Group Design and Make (MEng only)
- Individual Project (BEng only)

#### Year four (MEng only)

Typical core modules

- Advanced Technology Review
- Individual Project
- Integrated Systems Analysis

#### Typical optional modules (for year three and year four)

- Additive Manufacturing and 3D Printing
- Advanced Dynamics and Vibration
- Advanced Mathematical Techniques in Ordinary Differential Equations for Engineers

Mechanical, Materials and Manufacturing Engineering

- Air Pollution
- Aircraft Propulsion System
- Computer Aided Engineering
- Computational Fluid Dynamics
- Conservation and Recycling of Materials
- Control and Instrumentation
- Fibre Reinforced Composites Engineering
- Finite Element Analysis
- Internal Combustion Engine
- International Business
- Introduction to Aerospace Technology
- Introduction to Automotive Technology
- Lean Manufacturing
- Making Metals Perform
- Management Studies 3
- Mathematics for Engineering Management
- Mathematical Techniques in Partial Differential Equations for Engineers
- Marketing Management
- Polymer Engineering
- Risk and Reliability
- Robotics and Automation Technology
- Stress Analysis and Materials Models
- Technology and Organisation
- Thermofluids 3

Mechanical, Materials and Manufacturing Engineering

# Science

Science

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### Biomedical Sciences

## What is biomedical sciences?

Biomedical sciences is the study of the human body in normal and diseased states. If you are interested in science, especially biology and chemistry, then biomedical sciences could be for you. It will maximise your career options and lead to a wide range of eventual specialisations.

The dynamic world of biomedical sciences underpins much of modern healthcare. As illnesses and treatments become more sophisticated, so too does the need for more advanced understanding of the human body and the effects drugs and diseases have on it. Biomedical sciences is made up of several key disciplines, providing a thorough grounding in a range of areas covering anatomy, biochemistry, neuroscience, pharmacology and physiology of the human body, the chemical processes in living organisms and the effect of drugs. The programme will also incorporate specialised topics of interest such as the structure and function of the brain and spinal cord.

#### How will I study?

From the outset of the biomedical sciences programme, you will be encouraged to develop your intellectual and study skills. In addition to lectures, your skills are developed through the use of problem-based workshops and laboratory classes in which you will gather and interpret data and summarise results, essays and dissertations. You will be assessed through a range of methods including examinations, laboratory reports, dissertation, coursework, oral and poster presentations and project reports.

#### Career prospects

Our MQA-approved biomedical sciences degree is purposely designed to maximise your career options, leading to a range of eventual specialisations. It will equip you with skills that enable you to undertake handson science careers in medical research and development in laboratories of institutions such as in the pharmaceutical industry and universities. As a medical technologist under the allied health profession, you are able to assist in medical diagnosis in the public health services sector. There are also a number of hands- off science career paths, scientific journalism, medical information officer or patent advisor. You will develop a range of sought-after skills and competencies applicable in the nonscientific fields such as analytical and critical thinking, as well as learnability.

## Graduate entry into medicine

If you are seeking to pursue medicine, you can apply for graduate entry medicine following completion of our biomedical sciences degree. The scientific knowledge and skills developed during our programme prepares a student well to proceed onto a medical programme.



#### At a glance

- Our innovative programme is taught by scientists who have vast experience in their field of expertise, providing you with valuable scientific knowledge and practical skills for use in the future.
- The Department of Biomedical Sciences has a reputation for powerful, research informed teaching.
- We offer plenty of

opportunities for academic involvement beyond the official curriculum, including research seminars, talks and workshops by visiting academics and professionals including our own successful alumni, insight visits to research and healthcare institutions, clinical rotational placements in industry and summer research internships.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.** edu.my/ugstudy

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BSc (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Biomedical Sciences	3 years	September	RM45,000	RM53,000
KPT/JPS(R/545/6/0079)10/21	full-time		per year	per year

Entry requirements		English language requirements
A Level	BBB, including biology and chemistry, excluding critical thinking and general studies.	IELTS (Academic): 6.5 (with no less than 6.0 in each
IB Diploma	30 points with 5, 5, 5 at Higher Level including biology, chemistry and another relevant subject.	element)
STPM	B+B+B+ including biology and chemistry, excluding Pengajian Am.	20 in Speaking and 19 in all other elements)
UEC	2 As including biology and chemistry and grade B3 in 3 further academic subjects, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 62 (with no less than 55 in each element)
SAM or other Australian Matriculations	ATAR 86 including biology and chemistry.	GCE A Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects including biology and chemistry. Consideration to be made based on relevant individual grades if specific subjects are required. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	GCE AS Level English Language or English Literature: grade C
Advance Placement (AP)	4, 4, 4, including AP Biology and AP Chemistry. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	1119 (GCE O): grade B
Diploma - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	GCSE O-Level: grade C IGCSE (first language): grade C
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	IGCSE (second language): grade B MUET: Band 4
University of Nottingham Malaysia	Successful completion of the Foundation in Science programme.	UEC: grade A2
Foundation		IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points

In addition to the entry requirements listed above, those who have taken SPM/ GCSE/IGCSE High School Diploma or equivalent must have grade B in relevant mathematics and at least credit in related science subjects.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

IB English B (Standard Level):

5 points

#### **Related programmes**

BSc Biotechnology (page 73) BSc in Nutrition (page 74) BSc Pharmaceutical and Health Sciences (page 86) MPharm Pharmacy (page 86)

#### **BSc Biomedical Sciences**

During your first year, you will gain a broad coverage in biomedical sciences. You will be introduced to key systems and pathways in the human body and be able to relate these to diseases. Your second year will focus on scientific research techniques, including modules on drug usage and their mechanisms of action. During summer vacation before your final year, you will be placed on a clinical rotation across different healthcare laboratories, gaining real-working experience in areas of amongst others, haematology, chemical pathology, histopathology and cytology. Specialised modules in your final year will present you with current content in, and future directions of, medical and health sciences.

You will also complete an independent research project, which will develop your laboratory, data analysis and critical thinking skills. You will also have the exchange opportunity to study at our UK campus during your three years with us.

#### Year one

- Typical core modules Applied Genetics
- Core Skills in Biomedical Sciences
- Fundamentals of Neuroscience
- Genes and Cells
- Human Diseases
- Human Physiology
- Microbial Physiology
- Scientific Basis of Medicine

#### Year two

- Typical core modules
- Higher skills in Biomedical Sciences
- Medical Microbiology and Parasitology
- Pharmacological Basis of Therapeutics
- Structure, Function and Analysis of Genes
- Structure, Function and Analysis of Proteins

**Biomedical Sciences** 

- Signalling and Metabolic Regulation
- Summer Industrial Internship

#### Year three

Typical core modules

- Biochemistry of Diseases
- Cancer Biology
- Cellular Pathology
- Final Year Research Project
- Pharmacogenetics and Toxicology
- Principles of Immunology
- Therapeutic Immunology

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### **Biosciences**

#### At a glance

- The School of Biosciences is recognised globally for its excellent teaching and research in the fundamental and applied biological sciences.
- Our degree programmes are accredited by professional bodies in Malaysia and the UK.
- Our presence in Malaysia enables us to conduct research to address global challenges of the 21st century, including food and nutrition insecurity and human health in a changing world.
- We have excellent links with our colleagues in the UK, and you will have the opportunity to study in the UK if you wish.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.edu.** my/ugstudy

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nottingham.edu.my/ bioscience

#### What is Bioscience?

Rapid advances in technology and knowledge have a daily impact on our lives, from the air we breathe to the food we eat and the environment in which we live.

Biosciences at Nottingham encompasses a range of areas as diverse as genetic engineering of microorganisms and plants, environment and its protection; modern therapeutic applications in the medical and pharmaceutical field; the growth, development and reproduction of plants and animals; the production and preservation of agricultural and food commodities; food manufacture, nutrition and safety.

#### How will I study?

Our degree programmes are all modular, which allows you a certain degree of flexibility to select modules that are of personal interest. Essential core modules have been specified for each degree programme - these ensure you have the core skills, knowledge and competencies required in your chosen discipline of Biotechnology or Nutrition. After the first year of study, you can select complementary modules that are of interest to you.

Coursework and exams will be used to assess your progress during and at the end of each semester. Most of your learning will be via lectures, which are supported by practical classes and tutorial sessions. You are encouraged and facilitated to become independent learners. Your personal tutor and the module convenors will guide you through the modules and assist with any difficulties you might face.

#### **Career prospects**

Our graduates are highly sought after and the majority secure employment or continue with further studies within six months of graduation. As a Biosciences graduate, you will find a range of opportunities such as research scientist, analyst, technician, project manager, consultant, educator and advocator in both the public and private sectors.

Your skills and knowledge can be applied in laboratories, hospitals, research organisations, agricultural and plantation companies, bio-production and manufacturing plants, the food and health industry, the development sector and many others. Our graduates have found employment with local and international companies including CCM chemicals, Danone, Dutch Lady, Johnson and Johnson, Pharmaniaga, Merck Sharp and Dohme (MSD), Syngenta and Unilever.

BSc (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Biotechnology	3 years	September	RM45,000	RM53,000
UNM/KPM-JPT(R2/545/6/0040)8/24	full-time		per year	per year
BSc Nutrition	3 years	September	RM41,500	RM46,000
UNM/KPM-JPT(R2/545/6/0041)8/24	full-time		per year	per year

Entry requirements		English language requirements
A Level	BBC, including biology and chemistry, excluding critical thinking and general studies.	IELTS (Academic): 6.0 (with no less than 5.5 in each
IB Diploma	28 points with 5, 5, 4 at Higher Level, including biology and chemistry.	element)
STPM	B+B+B including biology and chemistry, excluding Pengajian Am.	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	1 As and 4 B3s, including biology and chemistry, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 55 (with no
SAM or other	ATAR 82 including biology and chemistry.	less than 51 in each element)
Matriculations		GCE A Level English
Canadian Ontario Grade 12 Secondary Sebaol Diploma	80% average based on 6 subjects including biology and chemistry. Consideration to be made based on relevant individual grades if apopiës subjects are required	Literature: grade C
(OSSD)	Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	GCE AS Level English Language or English Literature: grade C
Advance Placement (AP)	4, 4, 3, including AP Biology and AP Chemistry. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level	SPM: grade B+
Diploma - Other	Acceptance to the second year is on a case by case basis (and	1119 (GCE O): grade C
Institutions	at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects) and previous studies	GCSE O-Level: grade C
	must meet the prerequisite requirements to the programme.	IGCSE (first language): grade C
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.0 (out of 4) or 65%	
	and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	IGCSE (second language): grade B
University of	Successful completion of the Foundation in Science	MUET: Band 3
Nottingham Malaysia Foundation	programme.	UEC: grade B3
		IB English A1 or A2 (Standard or Higher Level): 4 points
		IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points
In addition to the entr GCSE/IGCSE High Sci mathematics and at lea	y requirements listed above, those who have taken SPM/ nool Diploma or equivalent must have grade B in relevant ast credit in related science subjects.	

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

Biosciences

Bioscience

#### **BSc Biotechnology**

Biotechnology aims to apply the latest molecular approaches to develop technologies and novel products to address modern-day problems in food production, healthcare, industrial and environmental sectors. This degree places emphasis on the application of advances in biotechnology to address global issues such as food security, reduction of hunger, enhancement of crops, bio-production and bioprocesses for industrial applications, novel drug discovery and therapeutic biotechnology. Topics covered include genomics and proteomics; genetic engineering of microorganisms and crops; detection of food pathogens and development of novel industrial products, nutraceuticals and pharmaceuticals. The programme allows a high degree of specialisation into three specialist areas of biotechnology in years two and three: plant, industrial, and medical/pharmaceutical biotechnology. The programme includes an optional industrial placement in year 2, which will enable you to gain industry experience, crucial for your career development and employment. In year 3, you will carry out a research project which will help to develop specialist knowledge in an area of your choice and transferable skills including data analysis and presentation, effective communication and independent thinking.

#### Year one

- **Typical core modules**
- Applied Genetics
- Biochemistry: The Building Blocks of Life
- Bioscience Tutorials (Academic Development)
- Genes and Cells
- Human Physiology
- Introduction to Biotechnology
- Microbial Physiology
- Plant Science

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The Biosciences and Global Food Security

#### Year two

- Typical core modules
- Epigenetics and Developmental Biotechnology
- Molecular Biology and the Dynamic Cell
- Molecular Pharming and Biotechnology
- Principles of Immunology
- Professional Skills for Bioscientists
- Research Skills for Biotechnologists

#### Typical optional modules

- Applied Plant Physiology: From Cell to Crop
- Biochemical Engineering
- Biotechnology for Industries
- Global Environmental Change: Part 1
- Global Environmental Change: Part 2
- Introductory Plant Pathology
- Microbial Biotechnology
- Microbial Mechanisms of Foodborne Diseases
- Pharmacological Basis of Therapeutics
- Structure, Function and Analysis of Genes
- Structure, Function and Analysis of Proteins

#### **Year three**

- **Typical core modules**
- Undergraduate Research Project
- Typical optional modules
- Advanced Biochemical Engineering
- Advanced Industrial and Environmental Biotechnology
- Advanced Postharvest Technology
- Applied Bioethics: Sustainable Food Production, Biotechnology and Environment
- Basic Introduction to Omic Technologies
- Biotechnology in Animal Physiology
- Commercialisation in Biotechnology
- Current Issues in Biotechnology
- Medical and Pharmaceutical Biotechnology
- Molecular Nutrition
- Molecular Plant Pathology
- Nanotechnology
- Plants and Their Environment
- Therapeutic Immunology
- Postharvest and Preservation Technology

#### **BSc Nutrition**

What we eat and how much we eat, has a profound effect on our health. Undernutrition and hunger are still prevalent in some parts of the world. However, in many other countries, the population suffers from ill health due to overconsumption of inappropriate foods. The diet we consume will influence the health of our offspring, our ability to participate fully in an active and productive life, the rate at which we age and the development of chronic diseases such as heart disease, obesity and diabetes.

One of the Sustainable Development Goals of the United Nations is for a world free from hunger by 2030. This ambitious target can only be achieved by coordinated efforts and teamwork across a range of disciplines, one of which is nutrition.

In your fist year, you will learn the basic principles of nutrition, biochemistry, food chemistry, physiology, genetics and microbiology. This strong foundation will be the basis for more in-depth study of the key subjects of nutrition, metabolism and disease; the regulation of food intake through endocrine control; the impact of external factors on diet and food choices; an understanding and awareness of global issues in nutrition; nutritional requirements throughout the lifespan and the molecular basis of nutrition in your second and third years of study. You will also acquire a range of practical, analytical and professional skills in nutritional assessment, communication and counselling, that are essential tools for a nutritionist.

During the second year, you have the opportunity to study at our UK campus for either one or two semesters. Not only does this opportunity broaden your outlook and contribute to your personal development, it introduces you to nutrition issues that predominate in the west. Our course also includes an optional industrial placement at the end of the second year, which will enable you to gain valuable experience in a related industry, crucial for your career development and employment.

In your final year, you will plan and carry out a year-long research project under the guidance of one of our academic staff. The project allows you to gain an in-depth understanding of a food or nutrition-related topic, while developing a number of transferable skills. You will develop your ability to work independently, to use your initiative, manage your time effectively, collect and critically analyse data and to sharpen your writing and communication skills. These transferable skills are highly valued by employers and will help in your search for employment.

This course is accredited by the Association for Nutrition (AfN) UK. After graduation you will be eligible to join the Association of Nutritionists' Register as an Associate and use the ANutr qualification.

#### Year one

- Typical core modules
- Applied Genetics
- Biochemistry: The Building Blocks of Life
- Bioscience Tutorials (Academic Development)
- Food Materials and Ingredients
- Genes and Cells
- Human Physiology
- Introduction to Nutrition
- Microbial Physiology

#### Year two

Typical core modules

- Global Issues in Nutrition
- Nutrition, Metabolism and Disease
- Nutritional Regulation, Physiology and Endocrinology
- Personal and Professional Skills for Nutritionists
- Practical Techniques in Human Nutrition
- Principles of Immunology

#### **Typical optional modules**

- Global Food Security Summer School
- Microbial Mechanisms of Foodborne Diseases
- Molecular Biology and the Dynamic Cell
- The Individual I: Cognition, Memory and Perception
- The individual II: Individual Differences

#### Year three

#### Typical core modules

- Molecular Nutrition
- Nutrition and the Health of Populations
- Undergraduate Research Project

#### Typical optional modules

- Advanced Postharvest Technology
- Applied Bioethics: Sustainable Food Production, Biotechnology and Environment
- International Nutrition
- Introduction to Counselling
- People, Groups and Society
- Postharvest and Preservation Technology

Biosciences



#### At a glance

- A computer science degree from Nottingham will leave you perfectly placed not only to understand and program today's computer technology, but also to design and create systems of the future.
- Our degrees produce highly employable graduates and provide the basis for rewarding and lucrative careers in a range of industries – new computer science graduates frequently command some of the highest paid entry-level positions.
- We offer specialist modules and exciting undergraduate project work based on our worldclass research – the School of Computer Science, UK, was ranked in the country's top 10 in the UK's Research Excellence Framework 2014.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.edu. my/ugstudy** 



## What is computer science?

Computer science is intimately concerned with knowing, in detail, how computers and computer systems work. Building on that knowledge helps us understand how we can create computer systems and program them to do what we want them to do. It is also about the way computers store and process information and how humans and computers interact with each other. It is currently hard to think of an area of human endeavour in which computers don't play an integral role. Computing professionals are the architects of this new information age.

#### How will I study?

The school provides high quality teaching and a well-equipped and supportive learning environment. Hands-on programming sessions, computer-aided learning tools, web-based teaching materials and tutorials support traditional lecture programmes. Project work, both individual and in groups, is a key feature of all our programmes. The modules on our programmes place emphasis on how computers work and how they may be used to solve real-world problems.

# Professional accreditation

Computer

**Science** 

The BSc Computer Science and BSc Computer Science with Artificial Intelligence are accredited by the British Computer Society (BCS). This is an external recognition of the excellence of our teaching. It is also a recognition that the skills you learn while studying our degrees are of relevance to industry. Graduates from these degrees may join the BCS and, after typically five years of industry experience, may achieve UK chartered engineer (CEng) status.

#### **Career prospects**

While many computer science graduates become programmers, others are employed in a variety of jobs. These include computer analysts, IT consultants and planners, network/systems designers and engineers, researchers, software designers and engineers, web designers, web developers and producers as well as roles across accountancy and investment/merchant banking, advertising and marketing, business and financial analysis, and legal and quality assurance professions. Some of our graduates have gone on to work for companies such as Adobe, Google, Hewlett-Packard, IBM and Microsoft. Others have found jobs with employers such as Accenture, Experian and Ocado.

BSc (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Computer Science	3 years	September	RM39,500	RM46,000
KPT/JPS(R/481/6/0733)2/21	full-time		per year	per year
BSc Computer Science with Artificial Intelligence* KPT/JPS(R/481/6/0771)5/21	3 years full-time	September	RM39,500 per year (If studying in the UK, GBP 23,760 for year 3)	RM46,000 per year (If studying in the UK, GBP 23,760 for year 3)
BSc Software Engineering	3 years	September	RM39,500	RM46,000
KPT/JPS(R/481/6/0745)05/21	full-time		per year	per year

\* There is an opportunity to study 2 years in Malaysia and 1 year in the UK, subject to the selection criteria and cap on the numbers

Entry requirements		English language requirements
A Level	BBB, including mathematics, excluding critical thinking and general studies.	IELTS (Academic): 6.0 (with no less than 5.5 in each element)
IB Diploma	30 points with 5, 5, 5 at Higher Level, including 5 points in mathematics at Higher Level.	TOEFL (iBT): 79 (minimum 17
STPM	B+B+B+, including mathematics, excluding Pengajian Am	in Writing and Listening, 18 in Reading, 20 in Speaking)
UEC	2 As including mathematics and grade B3 in 3 other academic subjects, excluding Bahasa Malaysia and Chinese language.	PTE (Academic): 55 (with no less than 51 in each element)
SAM or other Australian Matriculations	ATAR 86 including mathematics and other relevant subjects.	GCE A Level English Language or English Literature: grade C
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects with at least 70% in Advanced Functions and Calculus and Vectors. Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements	GCE AS Level English Language or English Literature: grade C SPM: grade B+
Advance Placement (AP)	4, 4, 4, including AP Calculus. Applicants taking non- preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	1119 (GCE O): grade C
Diploma - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	GCSE (first language): grade C IGCSE (second language):
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	grade B MUET: Band 3 UEC: grade B3
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Science or Engineering programme.	IB English A1 or A2 (Standard or Higher Level): 4 points IB English B (Higher Level):
		4 points
		IB English B (Standard Level): 5 points

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

#### BSc Computer Science Our BSc Computer Science degree forms the core of

our teaching portfolio. It focuses on how computers

work and how they may be used to solve real-world

problems. You will develop a sound knowledge of

the fundamentals of computer science, including

technology, and knowledge of the professional

standards and ethics of the computer industry,

together with the skills and confidence to react

appreciations of the interaction between hardware

and software, an understanding of human-computer

interaction and the sociological impact of information

#### Year one

#### Typical core modules

- Computer Fundamentals
- Databases and Interfaces
- Fundamentals of Artificial Intelligence

to its ever-increasing rate of change.

- Mathematics for Computer Scientists
- Programming and Algorithms
- Programming Paradigms
- Software EngineeringSystems and Architecture

#### Year two

Typical core modules

- Algorithms Correctness and Efficiency
- Languages and Computation
- Operating Systems and Concurrency
- Software Engineering Group Project
- Software Maintenance

#### Typical optional modules

- Artificial Intelligence Methods
- C++ Programming
- Introduction to Human Computer Interaction
- Introduction to Image Processing
- Software Specification

#### Year three

- Typical core modules
- Computer Security
- Professional Ethics in Computing

#### Typical optional modules

- Autonomous Robotic Systems
- Compilers
- Computer Vision
- Development Experience
- Fundamentals of Information Visualisation

For more detailed programme content, visit

nottingham.edu.my/ugstudy

- Individual Dissertation
- Information Visualisation Project
- Machine Learning
- Mobile Device Programming
- Software Quality Assurance
- School Experience

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### BSc Computer Science with Artificial Intelligence

Our computer science with artificial intelligence programme is designed to develop both your general understanding of computer science and more specialist skills and knowledge in artificial intelligence (Al). In addition to fundamental computer science modules, the programme covers topics including computer vision, expert systems, heuristic optimisation, the history and philosophy of artificial intelligence, intelligent agents, machine learning, neural networks and other intelligent systems. By following this programme, you will learn how to develop new methodologies and novel computational techniques for the creation of human-like intelligence.

#### Year one

Typical core modules

- Computer Fundamentals
- Databases and Interfaces
- Fundamentals of Artificial Intelligence
- Mathematics for Computer Scientists
- Programming and Algorithms
- Programming Paradigms
- Software Engineering
- Systems and Architecture

#### Year two

#### Typical core modules

- Algorithms Correctness and Efficiency
- Artificial Intelligence Methods
- Language and Computation
- Operating Systems and Concurrency
- Software Engineering Group Project
- Software Maintenance
- Typical optional modules

#### C++ Programming

- Introduction to Human Computer Interaction
- Introduction to Image Processing
- Software Specification

#### Year three

- Typical core and optional modules
- Autonomous Robotic Systems
- Computer Vision
- Designing Intelligent Agents
- Individual Dissertation
- Knowledge Representation and Reasoning
- Machine Learning

#### **BSc Software Engineering**

Our BSc Software Engineering degree has common modules with our computer science degrees, but is tailored to focus more on the design and implementation of large software systems - particularly those with interactive or multimedia components. It is built around four themes: the design and implementation of software systems; the use and development of networked and distributed systems; user interface principles; and evaluation and testing. If you enjoy building things, and want to learn to construct software systems - including the consideration of people as well as machines - then this programme is a good option. You will gain general knowledge and understanding of computer and software systems; specialised knowledge of the design, implementation, user interfaces and evaluation of software systems; experience in using a variety of problems encountered in the area of software engineering; and an understanding of the professional, legal and ethical aspects of the discipline.

#### Year one

#### Typical core modules

- Computer Fundamentals
- Databases and Interfaces
- Fundamentals of Artificial Intelligence
- Mathematics for Computer Science
- Programming and Algorithms
- Programming Paradigms
- Software Engineering
- Systems and Architecture

#### Year two

#### Typical core modules

- Algorithms Correctness and Efficiency
- Languages and Computation
- Operating Systems and Concurrency
- Software Engineering Group Project
- Software Maintenance
- Software Specification

#### Typical optional modules

- Artificial Intelligence Methods
- C++ Programming
- Introduction to Human Computer Interaction
- Introduction to Image Processing

Compilers

Computer Vision

Machine Learning

Computer Security

Professional Ethics in Computing

Information Visualisation Project

Parallel and Distributed Computing

Mobile Device Programming

Fundamentals of Information Visualisation

For more information about our programmes, visit

nottingham.edu.my/ugstudy

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**Computer Science** 

Software Quality Assurance

Typical optional modules

Individual Dissertation



#### At a glance

- An environmental science degree from Nottingham will leave you perfectly placed to understand how humans are changing our environment, and to develop solutions for the associated global challenges facing society.
- All academic staff are active researchers and you will learn from experts who are pushing the boundaries of knowledge.
- Our programme will equip you with the broad set of transferable skills that are keenly sought by employers as well a thorough grounding in environmental science.
- Our undergraduate programme offers you the chance for an international education through exchange options for study at both Nottingham's UK and China campuses.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit nottingham.edu. my/ugstudy



## **Environmental** and Geographical **Sciences**

#### What is environmental and geographical science?

Environmental science is concerned with the state of the environment, how it is changing. and the processes involved in those changes. With an increasing human footprint on the environment, and associated natural, societal and economic costs, this is a field of great importance and relevance for the 21st century. Environmental science encompasses aspects of atmospheric, climate, soil and water sciences, biogeochemistry, conservation biology, ecology, and sustainable development. Our BSc Environmental Science incorporates all of these topics, as well as an emphasis on both fieldwork and analysis tools such as computer modelling and geospatial mapping technologies. The programme also features a strong interdisciplinary focus with insights from the social sciences to understand human behaviour and our impacts on natural processes.

#### How will I study?

**Our Environmental Science** programme comprises a range of compulsory and optional modules, enabling you to select topics that are of the most interest to you. The first year focuses on the key principles, theories and current knowledge in environmental science. Over the programme you will develop skills in the collection, processing, analysis and presentation of environmental data, and in scientific analysis and communication for the development and evaluation of policy.

Additionally, you will undertake practical training in the techniques of environmental management, including several field programmes to learn environmental concepts and techniques in real-world scenarios. Exposure to a wide range of perspectives on environmental processes and issues play an important part in your academic development and career prospects. Our programme will also provide the option to study modules contributed by other schools as well as inter-campus through exchange with Nottingham's UK campus.

#### **Career prospects**

University of Nottingham environmental science graduates are working in environmentally-related fields all over the world. Our graduates acquire the key skills and confidence for employment in environmental consultancies, conservation and research agencies, local authorities, government agencies and universities. Many graduates go on to undertake postgraduate research degrees in environmentally-related areas. You will also develop a range of sought-after communication, thinking skills and competencies that are applicable in non-scientific fields.

BSc (Hons)		Duration	Intake	Malaysian f	ees	International fees
BSc Environmental Science KPT/JPS(R/422/6/0014)05/21	ence	3 years full-time	September	RM39,500 per year		RM46,000 per year
Entry requirements					Engli requi	sh language irements
A Level	BBC, including 2 science subjects preferably biology, chemistry, geography, mathematics or physics; other science subjects may be considered on a case-by-case basis, excluding critical thinking and general studies.		IELTS no les elem	6 (Academic): 6.0 (with ss than 5.5 in each ent)		
IB Diploma	28 points with 5, 5, 4 at Higher Level (including specified grades in science subjects).			TOEF in Wr	L (iBT): 79 (minimum 17 iting and Listening, 18 in	
STPM	B+B+B, including 2 science subjects preferably biology, chemistry, geography, mathematics or physics; other science subjects may be considered on a case-by-case basis, excluding Pengajian Am.		Read PTE ( less t	Ing, 20 in Speaking) Academic): 55 (with no han 51 in each element)		
UEC	1 As and 4 B3s, including 2 science subjects preferably biology, chemistry, geography, mathematics or physics; other science subjects may be considered on a case-by-case basis, excluding Bahasa Malaysia and Chinese language.		GCE Lang Litera	A Level English uage or English ature: grade C		
SAM or other Australian Matriculations	ATAR 82 subjects)	ATAR 82 (consideration to be made based on relevant ubjects).		GCE Lang Litera	AS Level English uage or English ature: grade C	
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% aver based on Canadiar are accep requirem	0% average based on 6 subjects (consideration to be made ased on relevant subjects). anadian Secondary School Diplomas from other provinces re acceptable and to be assessed based on the University's equirements.		SPM: 1119 (	grade B+ GCE O): grade C	
Advance Placement (AP) 4,4,3 including 2 relevant science subjects. Applican non-preferred subjects may be made an offer across than three subjects at Advanced Placement level.		licants taking cross more el.	GCSI	E O-Level: grade C E (first language):		
					arade	C

		10.001 (	
Diploma - Other Institutions	Acceptance to the second year is on a case by case basis (and at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	grade C IGCSE (second language): grade B	
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.0 (out of 4) or 65% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	MUET: Band 3 UEC: grade B3 IB English A1 or A2 (Standard	
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Science programme.	or Higher Level): 4 points IB English B (Higher Level): 4 points IB English B (Standard Level): 5 points	

In addition to the entry requirements listed above, those who have taken SPM/ GCSE/ IGCSE High School Diploma or equivalent must have grade B in relevant mathematics and at least credit in related science subjects.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

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Environmental and Geographical Sciences

#### **BSc Environmental Science**

Another much sought after discipline in an ever changing landscape. Environmental science crosses many subject boundaries and we provide a programme which benefits from an entirely multidisciplinary and research based approach. You will develop an understanding of environmental processes and systems and gain skills in a range of ecological survey techniques through practical classes and field programmes. Topics covered include key environmental principles such as atmospheric, climate, soil and water sciences. biogeochemistry, conservation biology, ecology, environmental modelling, geospatial mapping and technologies, and sustainable development. Your final year research project will utilise and further advance these skills and you will also benefit from gaining knowledge and practical experience of issues and techniques applicable both to Southeast Asia and global environments.

#### Year three

#### Typical core modules

Undergraduate Research Project

#### Typical optional modules

- Advanced Environmental Assessment Advances in Remote Sensing and GIS for the
- **Environmental Sciences**
- Environmental Modelling
- Environmental Policy and Economics
- Environmental Pollution and Remediation
- Introduction to Tropical Conservation Science
- Landscape Ecology and Spatial Conservation Planning
- Tropical Ecology
- Wildlife Behaviour

## **Pharmacy**



#### What is pharmacy?

Pharmacists are experts in medicines, their development and clinical usage. Pharmacy is a professional role requiring in-depth knowledge across a range of biological, chemical and professional disciplines. It requires a range of skills and knowledge and these are delivered through the themes of biology and physiology, clinical and pharmacy practice, chemistry, pharmaceutics, professionalism and leadership and pharmacology and therapeutics. Pharmaceutical scientists are central to the discovery and development of new drug entities, the design of novel drug delivery systems and therapeutics.

#### How will I study?

You will experience an integrated range of teaching and learning styles - from lectures and tutorials to practical classes, workshops and case studies. Our programmes develop a range of transferable skills and you will be taught to work to the highest professional and ethical standards. You will be allocated a personal tutor to help with personal and academic issues. The school also has a Learning Community Forum that provides an opportunity for you to discuss programmerelated issues with academic staff. All students are strongly encouraged to take advantage of one of the many vacation work experience placements that the school secures each year.

Practising community, hospital and industrial pharmacists contribute to teaching and visiting academics from the University of Nottingham, UK deliver lectures, workshops and practical classes. This will provide you with an invaluable insight into the profession of pharmacy. MPharm students will study in the UK for the final two years of their programme, providing an unrivalled opportunity to learn and experience the UK aspects of clinical pharmacy as part of the programme.

#### **Professional** accreditation

The four-year MPharm degree is accredited by the General Pharmaceutical Council (UK) and was the first 2+2 Pharmacy programme to be recognised by the Pharmacy Board of Malaysia.

#### Code of conduct/ fitness to practise

As with all fully accredited UK MPharm programmes, students are required to abide by a code of conduct and are subject to fitness to practise regulations. Appropriate health and good character checks will be required when you join us as a student. You will be provided with further information when you are made an offer.

#### At a glance

- In the UK 2014 Research **Excellence Framework, our** School of Pharmacy was judged as the UK's top research institution under the category of allied health professions, dentistry, nursing and pharmacy.
- Our research-active staff are drawn from Nottingham's UK Campus as well as research institutions and governmental organisations across the globe.
- Our students can take advantage of one of the many vacation work experience placements that the school secures each year.
- The UK Pharmacy schools has been rated as one of the UK's top School of Pharmacy for ten consecutive years (2010-2020) in the Complete University Guide and the Guardian University Guide.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit nottingham. edu.my/ugstudy

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nottingham.edu.my/makean-enquiry **UNMPharmacy UoNMalaysia** 

nottingham.edu.my/pharmacy

#### Year one

#### Typical core modules

- Dissertation in Environmental Science
- Environmental Science and Society
- Global Environmental Processes
- Introduction to Geographic Information Systems
- Introduction to Sustainable Development
- Introductory Geology
- Natural Resources of Malaysia
- Plant Science
- The Ecology of Natural and Managed Ecosystems

#### Year two

- Typical core modules
- Environmental Data Analysis
- Global Environmental Change

#### Typical optional modules

- Earth Observation
- Environmental Assessment
- Forests, Environment and Society
- Glacial Environments Field Course
- Patterns of Life
- Tourism and the Environment
- Tropical Environmental Science Field Course
- Tropical Soil and Water Science

#### **Career prospects**

Pharmacy

Our MPharm programme is your passport to a pharmacy career in many countries around the world. Graduates of the 2+2 MPharm can be found working as community and hospital pharmacists in the UK and Malaysia. The industrial sector allows pharmacists to work in clinical trials, drug discovery and development, marketing, product registration and quality assurance. Numerous pharmacists are employed in the regulation of medicines. MPharm graduates may also pursue careers in academia or as medical journalists or scientific writers.

Our BSc Pharmaceutical and Health Sciences programme puts you in an ideal position to pursue a career in Malaysia's burgeoning pharmaceutical industry. Graduates can embark upon a range of careers including: pharmaceutical, chemical or cosmetic industries; medical sales and marketing; research managers in the biotechnology sector; academics in higher education institutions; scientific writing; and other appointments which require a general science background.



BSc/MPharm (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Pharmaceutical and Health Sciences UNM/KPM-JPT(R2/421/6/0021)8/24	3 years full-time	September	RM45,000 per year	RM53,000 per year
MPharm Pharmacy UNM/KPM-JPT(R2/727/6/0066)9/26	4 years full- time (2 years in Malaysia and 2 years in the UK)	September	RM49,700 per year for years 1 and 2; GBP £23,760 per year for years 3 and 4	RM58,000 per year for years 1 and 2; GBP £23,760 per year for years 3 and 4

Entry requirements		English language requirements
BSc Pharmaceutical a	IELTS (Academic): 6.0 (with	
A Level	BBB, incuding chemistry and 2 other academic subjects (such as biology, physics or mathematics).	no less than 5.5 in each element)
IB Diploma	30 points with 5, 5, 5 at Higher Level including chemistry and 2 other academic subjects (such as biology, physics or mathematics) and 5 points in mathematics at Standard Level.	TOEFL (iBT): 79 (minimum 17 in Writing and Listening, 18 in Reading, 20 in Speaking)
STPM	B+B+B+, including chemistry and 2 other academic subjects (such as biology, physics or mathematics).	PTE (Academic): 55 (with no less than 51 in each element)
UEC	2 As (including chemistry) and grade B3 in 3 further academic subjects (including biology, mathematics or physics), excluding Bahasa Malaysia and Chinese language.	GCE A Level English Language or English Literature: grade C
SAM or other Australian Matriculations	ATAR 86 including chemistry and 2 other academic subjects (such as biology, physics or mathematics).	GCE AS Level English Language or English
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	80% average based on 6 subjects with at least 70% in chemistry and must include other academic subjects (such as biology, physics or mathematics). Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	Literature: grade C SPM: grade B+ 1119 (GCE O): grade C
Advance Placement (AP)	4,4,4, including AP chemistry and 2 other academic subjects (such as AP Biology, AP Physics or AP Calculus). Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	GCSE O-Level: grade C IGCSE (first language): grade C
Diploma - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	IGCSE (second language): grade B MUET: Band 3
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies must meet the prerequisite requirements to the programme.	UEC: grade B3 IB English A1 or A2 (Standard or Higher Level): 4 points
University of Nottingham Malaysia Foundation	Successful completion of the Foundation in Science programme.	IB English B (Higher Level): 4 points
		IB English B (Standard Level): 5 points

In addition to the entry requirements listed above, those who have taken SPM/GCSE/IGCSE/ High School Diplom or equivalent must have grade B in mathematics.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

<sup>83</sup> For more detailed programme content, visit **nottingham.edu.my/ugstudy** 

For more information about our programmes, visit nottingham.edu.my/ugstudy

Entry requirements		English language requirements
MPharm Pharmacy *Interview required		1119 (GCE O): grade A
A level	ABB in biology, chemistry and physics/mathematics.	GCSE O-Level: grade B
IB Diploma	32 points with 6, 5, 5 at Higher Level including biology and chemistry, plus 3 other subjects at Standard Level (mathematics with further mathematics counts as 1 Higher Level and 1 Standard Level).	IGCSE (first language): grade B
STPM	AB+B+ in chemistry and biology, excluding Pengajian Am.	grade A
UEC	3 As, including biology and chemistry, and grade B3 in 2 other academic subjects, excluding Bahasa Malaysia and Chinese language.	IELTS (Academic): 7.0 (with no less than 6.0 in each
SAM or other Australian Matriculations	ATAR 89, including biology and chemistry.	TOEFL (iBT): 100 (minimum
Canadian Ontario Grade 12 Secondary School Diploma (OSSD)	85% average based on 6 subjects with biology and chemistry above 80% (consideration to be made based on relevant subjects). Canadian Secondary School Diplomas from other provinces are acceptable and to be assessed based on the University's requirements.	other elements)
Advance Placement (AP)	5,4,4, including AP Biology and AP Chemistry. Applicants taking non-preferred subjects may be made an offer across more than three subjects at Advanced Placement level.	
Diploma - Other Institutions	Acceptance is at the discretion of the School and previous studies must meet the prerequisite requirements to the programme.	
Foundation - Other Institutions	Acceptance is at the discretion of the School and previous studies must meet the prerequisite requirements to the programme.	
University of Nottingham Malaysia Foundation	Average mark of 65% in the Foundation in Science programme with no failed modules, and a minimum of 60% in all chemistry modules. All progressing Foundation candidates into MPharm are expected to fulfill English language requirement as stipulated by the School of Pharmacy at the Malaysia Campus.	

In addition to the entry requirements listed above, candidates with Matriculatio Diploma/Foundation must have 5 Bs (including biology, chemistry, physics and either mathematics or additional mathematics) for SPM/ GCSE/ IGCSE/ High School Diploma or equivalent.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

#### **Related programmes**

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Pharmacy

BSc Biomedical Sciences (page 70) BEng/MEng Chemical Engineering (page 49) BEng/MEng Chemical and Environmental Engineering (page 49)

### BSc Pharmaceutical and Health Sciences

The BSc programme is distinct from the MPharm degree. You will study core modules delivered by the School of Pharmacy, the Department of Biomedical Sciences and the School of Biosciences, as well as optional modules from both inside and outside of the Faculty of Science. For example, in the final year you can take advanced modules in areas such as drug discovery, drug design and molecular pharmacology, as well as optional modules in areas such as business, entrepreneurship and marketing.

#### Year one

#### Typical core modules

- Biochemistry: The Building Blocks of Life
- Fundamentals of Neuroscience
- Genes and Cells
- Human Physiology
   Laboratory Studies in Pharmaceutical Sciences 1
- Pharmaceutical and Biological Chemistry
- Pharmaceutical and biological chemistry
   Pharmaceutics 1: Physiochemical Science and
- Medicines Design

#### Year two

Typical core modules

- Biopharmaceutics
- Concepts in Medicinal Chemistry and Drug Discovery
- Laboratory Studies in Pharmaceutical Sciences 2
- Neurobiology of Disease
- Pharmaceutical Analysis and Spectroscopy
- Pharmaceutical Microbiology
- Pharmaceutics 2: Pharmaceutical Technology
- Pharmacological Basis of Therapeutics
- Principles of Immunology

#### **Year three**

Typical core modules

- Advanced Drug Delivery
- Commercialisation in Biotechnology
- Medicinal Chemistry and Drug Design
- Therapeutic Immunology
- Pharmaceutical Sciences Research Project

#### Typical optional modules

- International Business
- Molecular Pharming and Biotechnology
- Organisational Behaviour
- Technology and Organisation
- Environmental Awareness
- Evolutionary Psychology

#### **MPharm Pharmacy**

The Master of Pharmacy (MPharm) is a four-year programme that provides you with a unique opportunity to study in Malaysia and the UK. After finishing your degree, you must spend a salaried year in pharmacy practice and this can take place in the UK, Malaysia or other countries. You will then be required to pass the relevant accrediting body's registration exam before registering as a pharmacist.

The first two years of the modular pharmacy programme will be taught at the Malaysia Campus and will involve the development of core pharmacy skills and knowledge. You will then transfer to the UK for the final two years of study and learn more about the clinical and legal aspects of the pharmacy profession. In your third year, you will have the opportunity to be involved in pharmaceutical research by working under the supervision of a member of academic staff.

#### Year one

- **Typical core modules**
- Bacterial and Fungal Infections
- Being a Pharmacist
- Dyspepsia
- Essential Skills for Pharmacists
- Professional Competencies 1

#### Year two

#### Typical core modules

- Asthma, Allergies and Immune Diseases
- Cardiovascular
- Gastrointestinal and Liver Disorders
- Pain
- Professional Competencies 2
- Renal and Endocrine Diseases
- Sexual Health and Pregnancy

#### Year three

#### **Typical core modules**

- Cancers
- Central Nervous System Disorders
- Professional Competencies 3
- Research Project 40 or 60 credit options
- Viral and Parasitic Infections

If you take the 40-credit research project, you may also take optional modules from within and outside of the School of Pharmacy.

#### Year four

- Typical core modules
- Advanced Drug Discovery
- Future Medicines
- Integrated Pharmaceutical and Patient Care 1 and 2
- Managing the Pharmacy
- Professional Competencies 4

#### At a glance

- Our academic staff members are active researchers who frequently publish in the world's top psychology research journals. As a student you will be taught by international experts in their field.
- Our BSc Psychology and BSc Psychology and Cognitive Neuroscience programmes were the first ones at any university outside of the UK to be fully accredited by the British Psychological Society.
- We are an integral part of the School of Psychology UK, which is consistently ranked among the top psychology schools in the UK and is one of the leading centres for research and teaching in the world.
- We offer opportunities to study in the UK for part of your degree (in the second year) and summer internships within the school (in the UK or Malaysia campus) between your second and third year.

All entry requirements, fees, school and programme information are intended as a guide and were accurate at the time of printing. For the most up to date information and further details of each programme please visit **nottingham.edu. my/ugstudy** 



# Psychology

#### What is psychology?

Students are taught to acquire a range of knowledge and skills including the ability to analyse and assess contemporary theories, empirical studies and practical applications.

Over the past two decades, psychology has become one of the most popular degree subjects in the world. It is a fascinating subject that helps us to understand the ways in which our brains, minds, relationships and societies work. Psychology is the science of mental processes and covers the actions, feelings, memories, perceptions and thoughts of people from infancy to old age, ranging in focus from individuals to groups, organisations and societies.

Psychology is multidisciplinary, crossing boundaries between biology, medicine, philosophy, psychiatry and social science and has a vast number of real-world applications. Cognitive neuroscience is a related scientific discipline concerned with the study of the brain and the mechanisms that determine how we perceive, combine and process information.

#### How will I study?

You will be taught through lectures, tutorials, practical classes and seminars. Practical and project work will also develop your problemsolving skills, including the ability to design, conduct and analyse various types of psychological research. Additionally, the programme will improve your oral and written communication skills and as well as your ability to use information technology and information retrieval systems. You will be assessed through a variety of methods including formal exams and coursework. On completion of your programme you will have acquired a range of knowledge and skills including the ability to analyse and assess contemporary theories, empirical studies and practical applications.

#### **Career prospects**

A recent report by the Higher **Education Careers Services** Unit (UK) found that psychology graduates are among the most employable, and least likely to be unemployed, of any degree programme. A psychology degree helps prepare graduates for many types of work, providing an impressive range of skills that make them highly sought-after. A degree in psychology will provide rigorous training in critical thinking, the ability to communicate effectively and other key employment-related skills. Psychologists work in many areas in the public and private sector, from hospitals and schools to management consultancies, high-tech industries and even professional sports teams.

Many of our graduates will go on to choose psychology as a career -as researchers and teachers of the subject or as practitioners in a range of sub-disciplines of psychology, such as clinical and counselling, educational and school, engineering, forensic, health, industrial, organisational and sports. Psychology graduates can also progress to a career in research, in either the public or private sector, for example Google, Facebook and Oculus. Some less typical, yet potential options in the corporate sector include careers in human resources, marketing, and media and advertising.

BSc (Hons)	Duration	Intake	Malaysian fees	International fees
BSc Psychology KPT/JPS (R/311/6/0078) 3/21	3 years full-time	September	RM39,500 per year	RM46,000 per year
BSc Psychology and Cognitive Neuroscience KPT/JPS(R/311/6/0079)4/21	3 years full-time	September	RM39,500 per year	RM46,000 per year

Entry requirements		English language requirements	
A Level	BBC in either arts or science subjects, excluding critical thinking and general studies. A levels with a strong academic component will rank higher than those without and Psychology A level is not required.	IELTS (Academic): 6.5 (with no less than 6.0 in each element)	
IB Diploma	28 points with 5, 5, 4 at Higher Level, including 5 points in mathematics at Standard Level.	20 in Speaking and 19 in all other elements)	
STPM	B+B+B, excluding Pengajian Am.	PTE (Academic): 62 (with no	
UEC	1 A and 4 B3s, excluding Bahasa Malaysia and Chinese language.	less than 55 in each element)	
SAM or other Australian Matriculations	ATAR 82 (consideration to be made based on relevant subjects).	GCE A Level English Language or English Literature: grade C	
Canadian Ontario Grade 12 Secondary School Diploma	80% average based on 6 subjects (consideration to be made based on relevant subjects). Canadian Secondary School Diplomas from other provinces	GCE AS Level English Language or English Literature: grade C	
(OSSD)	are acceptable and to be assessed based on the University's requirements.	SPM: grade A-	
Advance Placement	4,4,3 in relevant subjects. Applicants taking non-preferred	1119 (GCE O): grade B	
	subjects at Advanced Placement level.	GCSE O-Level: grade C	
Diploma - Other	Acceptance to the second year is on a case by case basis (and	IGCSE (first language): grade C	
Institutions	at the discretion of the School) but normally would require an overall GPA of 3.3 (out of 4) or 70% and above (consideration to be made based on relevant subjects), and previous studies	IGCSE (second language): grade B	
	must meet the prerequisite requirements to the programme.	MUET: Band 4	
Foundation - Other Institutions	Acceptance is at the discretion of the School but normally would require an overall GPA of 3.0 (out of 4) or 65% and above (consideration to be made based on relevant	UEC: grade A2	
	subjects), and previous studies must meet the prerequisite requirements to the programme.	IB English A1 or A2 (Standard or Higher Level): 4 points	
University of Nottingham Malaysia Foundation	Successful completion of any foundation programme and meeting mathematics requirements.	IB English B (Higher Level): 4 points	
		IB English B (Standard Level): 5 points	

In addition to the entry requirements listed above, those who have taken SPM/ GCSE/ IGCSE High School Diploma or equivalent must have grade B in mathematics and at least a credit in a science subject.

Students who do not meet these entry requirements may be considered on a case-by-case basis. Please see our entry requirement guidelines on page 92.

#### **BSc Psychology**

#### **BSc Psychology and Cognitive** Neuroscience

During your first year, you will be introduced to the

core areas of biological, cognitive, developmental and

social psychology. As well as theoretical principles, the

and how to plan, conduct and report on psychological or

modules cover the applied aspects of these subjects,

for example in clinical, education and engineering settings. You will learn statistical methods of analysis

cognitive neuroscience experiments. You will also have the flexibility to select up to two modules from other schools. The BSc Psychology and BSc Psychology and Cognitive Neuroscience programmes are identical in the first year to give you a good grounding in psychology. It is possible to change between the two degree programmes at the end of the first year. Both degree programmes offer equally good career opportunities.

The main difference between the two degrees is that

psychology and cognitive neuroscience is relatively

more focused on biological processes. In your second year, you will expand your understanding, deal with more advanced theoretical problems, continue training in relevant research methods and be given greater independence in undertaking research. Practical sessions run in a series of five-week group projects and are accompanied by further statistics programmes. Psychology and cognitive neuroscience students have specialist practical classes, focusing on neuroscience-based topics, as well as a series of extra lectures focusing on contemporary neuroimaging techniques. There are opportunities to spend one or two semesters in your second year at our campus in the UK.

The final year allows you to choose from a variety of advanced topics. If you are studying for the psychology and cognitive neuroscience degree, you will need to take 40 credits of cognitive neuroscience modules and the remaining credits can be any of the other modules on offer. Psychology students, on the other hand, have the flexibility to choose from both psychology and cognitive neuroscience modules.

You are also required to conduct an independent research study during your final year. Acting under the supervision of a lecturer, you will be expected to take the initiative in designing and conducting the research yourself, and completing a full research project report.

#### Year one

- Typical core modules
- Biological Psychology
- Cognitive Psychology 1
- Introduction to Developmental Psychology
- Introduction to Social Psychology
- Practical Methods in Psychology
- Statistical Methods 1

#### Typical optional modules

- Entrepreneurship and Business
- Introduction to Applied Psychology
- Introduction to Counselling
- Language programmes
- Linguistics

#### Year two

#### Typical core modules

- Cognitive Psychology 2
- Conceptual and Historical Issues in Psychology
- Neuroscience and Behaviour
- Personality and Individual Differences
- Practical Methods in Psychology 2
- Practical Methods in Psychology and Cognitive Neuroscience
- Social and Developmental Psychology
- Statistical Methods 2

#### Year three

- Typical core modules
- Research Project

#### Typical optional modules

- Active Vision
- Autism
- Autobiographical Memory
- Bilingualism
- Evolutionary Psychology
- Introduction to Clinical Psychology
- Introduction to Psychological Assessments
- Neuropsychology A
- Neuroscience of Illusions
- Psychology of Music
- Scientific Computing with Matlab



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# How to apply

#### mynottingham.nottingham.edu.my

You can apply online via our Online Admissions

Application Portal (MyNottingham). To create an

application, you will need to register to create an

You can also download an application form from the website. Paper copies are also available. We can mail it to you or you can visit in person to collect one.

account or log in if you have previously applied online.

#### nottingham.edu.my/applications

We are only able to accept applications via post or through MyNottingham. If you have any queries, please contact us.



nottingham.edu.my/make-an-enquiry

#### **Application Fee**

The University charges an application fee of RM100 for Malaysian applicants and RM200 for international applicants for all programmes. This fee applies to online and paper applications.



#### Step 1

Apply online or complete the paper application form (details above).

#### Supporting documents needed

- Copy of ID page of passport for international
- Copy of NRIC for Malaysian applicants
- Programme syllabus (for those applying for entry into the second year of study)
- English language qualifications (if applicable)
- Official SPM/GCSE, AS level results and predicted STPM/UEC/A level grades or equivalent

#### Step 2

An acknowledgement email (with Nottingham ID) will be sent to you upon receipt of your application.

#### Step 3

Your application will be considered by our admission tutors and a decision will be made within two working weeks. A confirmation email will be sent to applicants once a decision has been made. Successful applicants will receive a notification through email and will be able to log in to MyNottingham to download the following documentation (hard copies are not provided): Offer Letter

 Offer pack (containing next steps, accommodation, student visa, Wellbeing and Learning Support Services and payment of tuition fees information) - link will be provided in the offer letter

Applicants and agents will be able to view the progress of applications and make payments online through MyNottingham.

#### Step 4

Offer holders will be given a four-week deadline to accept offer and pay a tuition fee deposit of RM1,000 (Malaysian offer holders) or RM2,000 (International offer holders) before the lapsed date in the offer letter.

For further information on the offer acceptance and refund of tuition fee deposit, visit our website:

nottingham.edu.my/study/offer-acceptance

#### Step 5

You will be able to apply for the on-campus accommodation and student visa after you have accepted your offer and paid the tuition fee deposit.

#### Step 6

Prior to registration day, you will receive an email which contains registration information.

It is important to note that University of Nottingham Malaysia requires all offer holders to complete two different parts of the registration process - Part 1: Online Registration and Part 2: In Person Registration.

#### **International students**

As an international student, we advise that you submit your application at least three months before your intake as your visa can take three months to process. If we receive your application after this date it will still be processed, but we cannot guarantee accommodation availability or that the visa processes will be completed in time for the last date of registration. Your application cannot be processed untill all of the required forms and documents have been completed and sent in and you have paid the application fee. For further information, please contact us.

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#### What are we looking for?

Consideration will be given to whether applicants will be able to fulfil the objectives of their programme of study and achieve the standards required. A range of factors additional to, and in some cases instead of, formal examination of results are considered in the selection process. These can include:

- additional evidence of achievement, motivation and potential gathered through an interview, assessment of written materials or additional selection tests
- other factors as appropriate to the discipline, such as employment or voluntary work in relevant fields and sustained critical engagement with relevant issues
- the personal statement and reference

#### Intake

#### February

only applicable for selected undergraduate programmes

#### April

three-semester foundation programme

#### June

 three-semester foundation programmes (excluding Foundation in Science)

#### September

- all foundation programmes
- all undergraduate programmes





We strongly encourage all interested students to apply. Our students come to us with a diverse range of qualifications and we also consider applicants' personal statement, references and interview performance (if you have one) when making a decision. The only way for us to fully determine eligibility is through the submission of a completed application.

IELTS and TOEFL test results must be less than two

years old and all IELTS must be the academic version

MUET results are valid for five years from the date of

**English language** 

the release of results.

of the test.

requirement guidelines

How to apply

# Where to find us

University of Nottingham Malaysia can be reached easily by train, bus, car or taxi. The University provides bus services for staff and students to/from Kajang KTM station and Terminal Bersepadu Selatan (TBS) next to Bandar Tasik Selatan LRT station.

#### nottingham.edu.my/maps







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#### nottingham.edu.my/ugstudy

Where there is a difference between the contents of this study guide and our website, the contents of the website take precedence and represent the basis on which we intend to deliver our educational services to you.

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