

# **UNIVERSITI TEKNOLOGI BRUNEI**

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\* The university reserves the right to change the information in this prospectus without prior notice.

# Welcome From The Vice-Chancellor

السلام عليكم ورحمة الله وبركاته

A Warm Greeting from Universiti Teknologi Brunei.

It is with great pleasure to introduce Universiti Teknologi Brunei's prospectus for the year 2023.

Today, Universiti Teknologi Brunei (UTB) is ranked at 340th place in the Quacquarelli Symonds (QS) World University Rankings 2023 (QSWUR), ranked 136th in the QS Asia University Rankings 2023 (QSAUR). It has also ranked UTB 27th in the QS Asia University Rankings 2023 for South-Eastern Asia universities. UTB was also among the top 18% university in the QSAUR.

Additionally, UTB will also be offering 2 new and 1 rebranded programmes namely Bachelor of Science (Hons) in Food Science and Human Nutrition, Bachelor of Science (Hons) in Digital Media (Major in Digital Content Design/ Game Development and Bachelor of Engineering (Hons) in Energy Engineering. UTB will also be offering 2 new postgraduate programmes namely Master of Science (By Coursework) in Food Science and Technology and Masters in Architecture.

At UTB, we are committed to continue creating a learning environment that is intellectually stimulating, diverse and rewarding. I hope you will choose UTB and it is definitely the BEST university to embark on your academic journey that will define your future career. We uphold our mission that is:

"To nurture socially responsible talents deeply rooted in MIB values, and committed to building a global and entrepreneurial society in pursuit of innovation, industry-relevant capabilities, towards the fulfilment of Brunei Vision 2035"

This prospectus provides brief information about our programmes. Should you wish to discuss your future with us at UTB, feel free to talk to our academics during UTB Open Day 2023 on 15th – 16th February 2023 at Multipurpose Hall UTB. Alternatively, you can talk to us virtually during Higher Education Virtual Expo 2023 from 13th to 16th February 2023.



Datin Paduka Professor Dr Dayang Hajah Zohrah binti Haji Sulaiman Vice-Chancellor Universiti Teknologi Brunei

Thank You.

# Brunei Darussalam

Brunei Darussalam is a small sovereign state located on the northern shore of the island of Borneo. With a land area of 5,765 km<sup>2</sup>, it has a population of 459,500 (2019) which grows at a rate of 3.9% per annum. Brunei Darussalam has a multi-racial society, comprising of 65.8% Malays and 10.3% Chinese. Other races such as Indians, indigenous ethnic groups and expatriates make up the rest of the country's population. Malay is the official language, but English is widely spoken.

Brunei Darussalam enjoys an equatorial climate with an average temperature of about 28° celsius, high humidity and heavy rainfall.

The Brunei Government provides free education to all Brunei Darussalam citizens and permanent residents who attend government schools. While the current education policy prioritizes the Malay Language as the official national language, English is most commonly used as the medium of instruction. The literacy rate in Brunei Darussalam is about 97.21%, which is among the highest in the world. Brunei is ranked 47<sup>th</sup> in the 2020 United Nation's Human Development Index.

Brunei Darussalam has a small but wealthy economy. The people of Brunei Darussalam enjoy a high quality of life with an estimated GDP of B\$40,700 per capita – the second highest in the ASEAN region.

Brunei Darussalam's economy has been dominated by the oil and gas industry for the past 80 years. Hydrocarbon resources account for over 90% of its export and more than 50% of its Gross Domestic Product. Today, Brunei is the fourth largest oil producer in South East Asia and the ninth largest exporter of liquefied natural gas in the world.

In Brunei Vision 2035, the country aspires to be recognised everywhere for the accomplishments of its well-educated and highly skilled people, the quality of life and the dynamic and sustainable economy.

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Source:

Brunei Darussalam Key Indicators (Department of Economic Planning and Development) www.bedb.com.bn



# Universiti Teknologi Brunei

Universiti Teknologi Brunei (UTB) is an Engineering and Technology University in Brunei Darussalam that specialises in the niche areas of Engineering, Business, Computing, Applied Sciences & Mathematics, Design and Comunication.

UTB was first established in 1986 as Institut Teknologi Brunei (ITB), a higher learning institution offering Higher National Diploma programmes in Engineering, Business and Computing. In 2008, ITB was upgraded to a university and was renamed Universiti Teknologi Brunei (UTB) on 1 March 2016.

Since the upgrade, the university has seen tremendous development including the expansion of its academic programmes portfolio, establishment of partnerships with industries and universities, embarking on the process of programme accreditation by professional bodies, and intensification of research activities.

UTB's ethos has always been based on the idea that effective instruction, a hands-on approach, and industry-based programmes equip students with fundamental knowledge, competence, and marketable skills. This guiding principle has helped UTB produce graduates highly valued by local employers and readily accepted by universities in the UK, Australia, Canada, and around the world.

In research, UTB strives to become a university that contributes to the enrichment of knowledge and solving contemporary issues with research focused on Energy, Sustainable Built Environment, Agrifood, Digital and Creativity, Society and Enterprise, and Wellness. These Research Thrusts provide platforms for academic staff from various faculty and schools and centre to collaborate. UTB Research Centres perform active research in multidisciplinary expert teams and engage external stakeholders such as government agencies, companies and other stakeholders to

# A Global University Impacting Society

## MISSION

win grants, consultancies and others. This includes Centre for Innovative Engineering (CIE) - which aims to become a dynamic centre for multidisciplinary and innovative translational research; the Centre for Transport Research (CfTR) - established to carry out research activities that include policy studies, transport modelling and intelligent transport system, and focuses on the areas of Transport Safety, Highway & Geotechnics, and Traffic; and the Centre for Research in Agri Food Science & Technology (CrAFT) – a new research centre that aims to support the nation's aspiration to diversify its economy by strengthening the Agrifood industry using science and technology.

Currently, UTB is ranked 340 worldwide by the Quacquarelli Symonds World University Ranking (QSWUR). This has placed UTB at 40 for Young Global University under 50 years of age.

In Asia, UTB is among the top 200 universities ranked at 126 among a total of 687 institutions across the continent. This achievement has placed UTB amongst the top 8 Engineering and Technology universities in Southeast Asia.

UTB has also marked another milestone after being awarded the 5-Plus Star rating for excellence by QS. This achievement has placed UTB amongst the fifteen universities in the world and the only university in Southeast Asia to receive the prestigious QS 5-Plus Star Award. The 5-Plus Star Award recognises the University as an elite destination for the very best students and faculty worldwide and acknowledges UTB's research excellence, quality in teaching, globalisation experience for students, and capacity for nurturing student talent

UTB's vision is to become a global university impacting society and its mission is to nurture socially-responsible talents that are deeply-rooted in MIB values and committed to building a global and entrepreneurial society in pursuit of innovation and industryrelevant capabilities, towards the fulfilment of Brunei Vision 2035.

To nurture socially responsible talents deeply rooted in MIB values, and committed to building a global and entrepreneurial society in pursuit of innovation, industry-relevant capabilities, towards the fulfillment of **Brunei Vision 2035** 

# Values



#### **Pious**

Embracing and cultivating the value of Malay Islamic Monarchy (MIB). The aspiration to uphold Islamic faith and patriotism with full commitment and honesty. To practice noble, disciplined personality and cultural values with the guidance of Allah SWT.

#### Professional

Upholding the code of ethics governing our behaviour in all our endeavours. To provide services with a high degree of professionalism in all aspects of our work.

#### Passionate

A strong drive to be intrinsically motivated and consistently committed to align, pursue and realise UTB's vision and mission. It creates a conviction and provides an impetus for excellence.

#### Innovative

An ability to bring creative ideas to life resulting in enhanced performance and growth through efficiency, quality and productivity. To promote 21st century skills in teaching and learning. To optimise the use of available resources. To transform research into great innovation. To improve operational efficiency.

## Engaging

Upholding the code of ethics governing our behaviour in all our endeavours. To provide services with a high degree of professionalism in all aspects of our work.

## Scholarly

Disseminating of work and life skills, and knowledge through high quality teaching, learning, research and innovation. To promote independent learning and develop knowledgeable society towards Brunei Vision 2035.

Universiti Teknologi Brunei | UTB Prospectus Book 2023

# Milestones

## 1986

UTB was established at a temporary campus in Jalan Muara. The first intake of students comprised of 57 students enrolling in BTEC HND programmes in Electrical and Electronic Engineering, Business and Finance, and Computing.

## 2008

UTB upgraded to a university by His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam on 18 October 2008.

## 2010

The UTB constitution was gazetted.

## 2012

- Introduction of nine new undergraduate degree programmes and two new Foundation Degree programmes.
- Format of the articulation degree programmes with UNSW was changed from 1+3 to 2+2.
- Enrolment of the last student intake for the HND programmes in Business and Computing.

## 2012

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- Format of the articulation degree programmes with UNSW was changed from 1+3 to 2+2.
- Enrolment of the last student intake for the HND programmes in Business and Computing.

## 2014

- The Pro-Chancellor o
   UTB.
- UTB became the first member of the Assoc Business Internationa
- The UTB School of Bu Informatics were form
- Establishment of the
- Enrolment of the last
- Foundation Degree p • Strategic plan of UTB

## 2004

UTB pioneered and organized the first Crown Prince CIPTA Award competition to encourage creativity and innovation in Brunei Darussalam.

## 2011

- Introduction of Masters by Research and PhD programmes.
- Introduction of part-time study mode for Business and Computing undergraduate degree programmes.
- Enrolment of the last student intake for the UTB-QUB twinning programmes in Civil Engineering.
- Establishment of the Centre for Road Safety Studies (renamed to the Centre for Transport Research in 2014).

## 2009

- As a university, UTB began offering four undergraduate degree programmes.
- The 1+3 articulation undergraduate degree programmes with the
- University of New South Wales in Petroleum Engineering and Chemical Engineering commenced in UTB.

## 20

- CIPTA G
- research
- Introdu
- The UTE
- First col
- Introduce
   Introduce

## 2013

- His Majesty the Sultan and Yang Chancellor of UTB graced the UTB
- Installation of HRH the Crown P Minister's Office as the Pro-Char
- Graduation of the first intake of
- Construction of UTB Phase 3 wa
- Introduction of five new under
- The UTB Materials Testing Centre
- The inaugural issue of the ITB Pu

School of Design Complex officiated.

UTB awarded five stars by OS.

• UTB debuted in the QS World University Ranking at 442 and positioned at 57 for universities under 50 years of age.

 The Centre for Research on Agri-Food Science and Technology (CrAFT) was established.

• UTB Strategic Plan 2019 – 2023 endorsed by Council.

• UTB Satellite Partners Bridging Programme was introduced.

UTB inaugurated the first 'Pesta Konvo' of

- university in Brunei to be accepted as a iation to Advance Collegiate Schools of I (AACSB)
- siness and School of Computing & ned
- Centre for Innovative Engineering.
- student intake for the HND and
- rogrammes in Engineering
- 2013-2018 was endorsed by Council.

## 2016

- Institut Teknologi Brunei renamed to Universiti Teknologi Brunei
- School of Applied Sciences and Mathematics was established.

- rand Prize won by a team of Singaporean cancer
- ction of Taugh<u>t Masters Degree in UTB</u>
- Pro-Chancellor consented to officiate the ISLE Garden.
- nort of Masters by Research students graduated.
- ction of the UTB Staff Excellence Award.
- ction of the Vice-Chancellor's Award and the Dean's List.
- Di-Pertuan of Brunei Darussalam,
- TB Convocation for the first time.
- ince and Senior Minister at the Prime
- ncellor of UTB.
- degree students.
- s completed.
- raduate degree programmes.
- e was officiated.
- Ilse newsletter was published

- UTB ranked at 350 in QSWUR & 40 for University under 50 years UTB Ranked at 128 in QS Asia.
  - UTB ranked at 128 in QSAUR.
  - Network Infrastructure upgraded to 10G.
    - UTB Mushaf was Launched.
    - Huawei ICT Academy was Established.
  - Graduation of the of first PhD Students.

## 2017

- QS 4-Star Rating
- UTB Ranked at 165 in QS Asia
- UTB preceded its vision by being the best 9 universities for Engineering & Technology in Southeast Asia.
- Establishment of School of Design.
- Accreditations by ACCA (The Association of Chartered Certified Accountants), BCS (British Computer Society) and JBM (Joint Board of Moderators).
- STI labs-Industry in campus.
- Donation of \$300k for FEng.

## 2019

- UTB certified with ISO 9001:2015 Quality Management System Certification by Bureau Veritas.
- UTB climbed 63 places in QS World University Ranking at 379 and positioned at 51 for universities under 50 years of age.
- UTB climbed 44 places in QS World University Ranking for Asia at 137.
- Kingdom of Saudi Arabia Award for Environmental Management in the Islamic World.

## 2(0)21

- UTB Awarded OS 5-Plus Star.
- UTB Ranked at 344 in OSWUR.
- UTB Ranked at 126 QSAUR.
- Huawei ICT Academy Launched at UTB.

## 2022

- UTB Micro-credentials was introduced
  - First cohort for UTB-MIC articulation programme at UTB
- Mechanical Engineering Programmes accredited by IMechE, UK
- MSc in Civil Engineering accredited by JBM
  - 340<sup>th</sup> in QS World University Ranking
- 136th QS World University Ranking for Asia



# General Entry Requirements For Undergraduate Programmes

Applicants for admission to undergraduate degree programmes must satisfy the following minimum entry requirements:

i. At least a Credit Six in the Malay language at GCE Ordinary Level (applicable only for Bruneians applying for a Government Scholarship).

ii. At least a Credit Six in English Language at GCE Ordinary Level or an IELTS score of 6.0 or TOEFL minimum overall score 550 or its equivalent.

iii. A relevant qualification which meets the specified programme-specific entry requirements.

Students who wish to be admitted as a <u>mature</u> <u>candidate</u> must satisfy the following minimum requirements:

- Applicants must be at least 21 years of age on the date of admission to the programme
- At least a credit 6 in English Language at GCE 'O' Level Examination or a grade 'C' in IGCSE English (as a Second Language) or a valid IELTS score of 6.0 or a TOEFL minimum overall score of 550.

- A minimum of credit 6 at GCE 'O' Level Mathematics or equivalent, unless exempted by the programme
- At least passed 1 GCE 'A' Level or equivalent examination in a subject relevant to the programme

OR

Obtained a relevant Level 4 Diploma or Higher National Technical Education Certificate (HNTec) or equivalent, recognised by the Senate

- At least 3 years of relevant working experience in related fields
- Satisfactory interview

Any other acceptable qualifications will be decided on a case-by-case basis, with reference to the programme entry requirements.

The following points are used as a basis for programme specific requirements:

**A**\* 140 **A** 120 **B** 100 C 80D 60 E 40

## Programmes Offered At UTB

## **UTB-SP Bridging Programme**

BriTE BriBUS BriCOMP

## **Undergraduate Programmes**

## **Faculty of Engineering**

## **Civil Engineering**

Bachelor of Engineering (Hons) in Civil Engineering Bachelor of Engineering (Hons) in Civil Engineering with Structural Engineering

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

Bachelor of Engineering (Hons) in Electrical and Electronic Engineering

- Major in Electronic and Communication

- Major in Electrical Power Bachelor of Engineering (Hons) in Mechatronics Engineering

#### Mechanical Engineering

Bachelor of Engineering (Hons) in Mechanical Engineering

#### **Petroleum and Chemical Engineering**

Bachelor of Engineering (Hons) in Chemical Engineering Bachelor of Engineering (Hons) in Energy Engineering

## **UTB School of Business**

#### Accounting

Bachelor of Business (Hons) (Major in Accounting and Information Systems) Bachelor of Business (Hons) (Major in Finance & Risk Management)

## **Economics**

Bachelor of Business (Hons) (Major in Marketing and Information Systems) Bachelor of Business (Hons) (Major in Applied Economics and Finance)

#### Management

Bachelor of Business (Hons) (Major in Business Technology Management) Bachelor of Business (Hons) (Major in Business Information Management) (Full Time & Part Time)

## **School of Computing and Informatics**

## **Creative Computing**

Bachelor of Science (Hons) in Digital Media

- Major in Digital Content Design
- Major in Game Development

## **Computer and Information Systems**

Bachelor of Science (Hons) in Computing

- Major in Data Analytics
- Major in Software Development

#### **Computer Network and Security**

Bachelor of Science (Hons) in Information Security Bachelor of Science (Hons) in Computer Networking

## **School of Applied Sciences and Mathematics**

## Agrotechnology

Bachelor of Science (Hons) in Agrotechnology (Minor in Business)

#### **Applied Mathematics and Economics**

Bachelor of Science (Hons) in Applied Mathematics and Economics Bachelor of Science (Hons) in Mathematical Finance

#### **Food Science and Technology**

Bachelor of Science (Hons) in Food Science and Technology Bachelor of Science (Hons) in Food Science and Human Nutrition

## **School of Design**

**Product Design** Bachelor of Science (Hons) in Product Design

**Architecture** Bachelor of Science (Hons) in Architecture

#### Fashion Design and Technology

Bachelor of Science (Hons) in Fashion Design and Technology

## **Centre for Communication, Teaching and Learning**

Bachelor of Science (Hons) in Communication

## **Graduate Programmes**

Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)

## **Faculty of Engineering**

Master of Science (MSc) in Civil Engineering (Full Time & Part Time) Master of Science (MSc) in Electrical and Electronic Engineering (Full Time & Part Time) Master of Science (MSc) in Mechanical Engineering (Full Time) Master of Science (MSc) in Water Resources and Environmental Engineering (Full Time)

## **UTB School of Business**

Master of Science (MSc) in Management & Technology (Full Time & Part Time)

## **School of Computing and Informatics**

Master of Science (MSc) in Computing and Information Systems (Full Time) Master of Science (MSc) in Cyber Security (Full Time & Part Time)

## **School of Applied Sciences and Mathematics**

Master of Science (MSc) in Food Science and Technology (Full Time & Part Time)

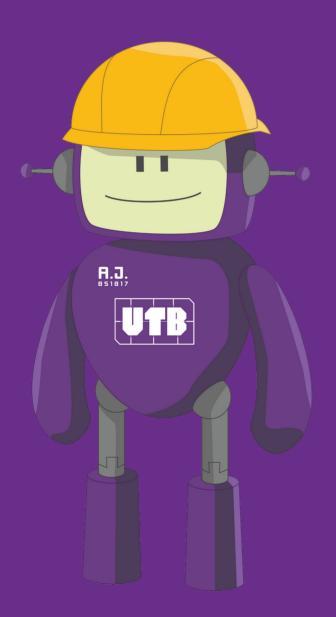
## **School of Design**

Masters in Architecture (Full Time)

## The Centre for Communication, Teaching and Learning

Master of Science (MSc) in Communication (Full Time & Part Time)

# Faculty of Engineering



The UTB Faculty of Engineering is the foremost provider of engineering higher education in Brunei Darussalam. It offers Bachelor of Engineering programmes in Chemical Engineering, Civil Engineering, Electrical & Electronic Engineering, Mechanical Engineering, Mechatronic Engineering, and Energy Engineering.

The Faculty of Engineering consists of four programme areas:

- Civil Engineering
- Electrical and Electronic Engineering
- Mechanical Engineering
- Petroleum and Chemical Engineering

In addition to the Bachelor degree programmes, the Faculty offers Master and PhD degrees by research, as well as Master degree programmes by coursework. These include programmes in Civil Engineering, Electrical & Electronic Engineering, Mechanical Engineering, Petroleum Engineering, and Water Resources & Environmental Engineering.

The taught programmes in the Faculty of Engineering are designed to achieve accreditation by professional institutions under the UK Engineering Council. This is reflected by the successful accreditation of Civil Engineering programmes by the Joint Board of Moderators in 2017. This is important for international recognition and for the realisation of UTB's vision to become a global university with meaningful and positive impacts on society.

## Programmes Offered

## **UTB-SP Bridging Programme**

BriTE (please refer to page 116)

## **Undergraduate Programmes**

## **Civil Engineering**

Bachelor of Engineering (Honours) in Civil Engineering Bachelor of Engineering (Honours) in Civil Engineering with Structural Engineering

## **Electrical and Electronic Engineering**

Bachelor of Engineering (Honours) in Electrical and Electronic Engineering

- Major in Electronic and Communication
- Major in Electrical Power

Bachelor of Engineering (Honours) in Mechatronics Engineering

#### **Mechanical Engineering**

Bachelor of Engineering (Honours) in Mechanical Engineering

#### **Petroleum and Chemical Engineering**

Bachelor of Engineering (Honours) in Chemical Engineering Bachelor of Engineering (Honours) in Energy Engineering

## **Graduate Programmes**

Master of Science (by Coursework) in Civil Engineering (Full Time & Part Time) Master of Science (by Coursework) in Electrical and Electronic Engineering (Full Time & Part Time) Master of Science (by Coursework) in Mechanical Engineering (Full Time) Master of Science (by Coursework) in Water Resources and Environmental Engineering (Full Time) Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)

# Civil Engineering

The undergraduate programmes in Civil Engineering and Civil Engineering with Structural Engineering have been developed to address the increasing and evolving requirements for qualified civil engineers in Brunei Darussalam. Each programme contains elements of both theoretical and practical nature, and emphasises on producing quality graduates equipped with sound analytical, problem-solving and transferrable skills necessary to embark on a successful career in civil engineering or other related profession.

The programmes also include a period of industrial placement between the third and fourth year. This industrial placement aims to provide a platform for the students to gain valuable workplace experience under the guidance of an industry mentor.

Career opportunities are available in a wide range of organisations such as in public works, consulting and construction companies, civil aviation, roads and transportation authorities, and environmental protection authorities. Furthermore, graduates are equipped with fundamental problem-solving and numeracy skills which enable them to adapt to the challenges of working in many industries as well as in research and development.

The BEng Civil Engineering and BEng Civil Engineering with Structural Engineering programmes are both accredited by the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT) and the Institute of Highway Engineers (IHE) on behalf of the UK Engineering Council. Both programmes are accredited for the purpose of fully satisfying the educational base for an Incorporated Engineer (IEng), and partially satisfying the educational base for a Chartered Engineer (CEng). A programme of accredited Further Learning will be required to complete the educational base for CEng. See www. jbm.org.uk for further information and details of Further Learning programmes for CEng.



# The Institution of **StructuralEngineers**







## Entry Requirements (either one of the following requirements):

## 'A' Level:

CCC or 240 'A' Level points in 3 'A' Levels including Mathematics (Grade C or higher) and two relevant Subjects (These include Physics, Chemistry, Biology, Further Mathematics, Design and Technology, Computer Science and Geography). Accounting, Economics, Information Technology and Psychology are also acceptable if the applicant has at least a credit in GCE 'O' Level Physics).

## **International Baccalaureate:**

28 points with a minimum of 4 points at higher level or 5 points at standard level in Mathematics, and 4 points at higher level for one relevant science subject (Physics, Chemistry, Biology, Design and Technology and Geography).

## Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics, Soil Mechanics, Hydraulics and Structures.

## For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

## Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case-by-case basis (including successful completion of the BriTE programme).

## Bachelor of Engineering (Honours) in Civil Engineering

Civil Engineering involves the planning, design, construction, management, maintenance, and operation of much of the infrastructure that surrounds us and underpins modern civilisation. Examples of such infrastructure includes buildings, roads, bridges, tunnels, dams, towers, pipelines, retaining walls, sewers, wastewater treatment plants, drainage, flood control and water supply.

The BEng (Honours) programme in Civil Engineering thus develops essential knowledge of engineering principles and enables their application towards the solution of civil engineering problems, with the aim of improving the quality of life of all in the society.

## YEAR 1

- Engineering Drawing
- Effective Communication
- Surveying and GIS
- Engineering Mechanics
- Engineering Mathematics 1
- Melayu Islam Beraja
- Technical Communication
- Computing for Engineers
- Engineering Mathematics 2
- Engineering Design
- Principles of Fluid Mechanics

## YEAR 2

- Professional Ethics
- Engineering Hydrology
- Engineering Mathematics 3
- Mechanics of Solids
- Open Channel Hydraulics
- Construction Materials
- Entrepreneurship
- Sustainability for Engineers
- Engineering Geology
- Structural Analysis
- Soil Mechanics

## YEAR 3

- Structural Design 1
- Geotechnics 1
- Water Supply Engineering
- Geotechnics 2
- Structural Design 2
- Construction Management
- 2 elective modules

## **ExperiencePLUS Industrial Placement**

## YEAR 4

- Final Year Project
- Integrated Civil Design Project
- Highway Engineering
- 3-5 elective modules

## **Career Opportunities**

- Consulting Civil Engineers (either in the private sector or in public works departments) in the fields of: Structural Engineering, Geotechnical Engineering, Hydraulics Engineering, Water Engineering, Environmental Engineering, Sustainability Engineering, and Highway and Transport Engineering
- Construction/Project Managers;
- Contracting civil engineers;
- Site Engineer;
- Other construction-related careers such as in Architecture, Quantity Surveying, sub-contracting, renovation, etc.;
- Professors, lecturers and technicians in Civil Engineering and other fields in higher education institutions;
- Technical and managerial professionals in other engineering fields such as in the Oil & Gas industry, materials production industry, software engineering etc.; and
- Technical and managerial professionals in non-engineering fields such as banking, business administration, management, economics, etc.

## Entry Requirements (either one of the following requirements):

## 'A' Level:

BBC or 280 'A' Level points in 3 'A' Levels including Mathematics (Grade C or higher) and two relevant Science Subjects (These include Physics, Chemistry, Biology, Further Mathematics, Design and Technology, Computer Science and Geography). Accounting, Economics, Information Technology and Psychology are also acceptable if the applicant has at least a credit in GCE 'O' Level Physics).

## **International Baccalaureate:**

30 points with a minimum of 4 points at higher level or 5 points at standard level in Mathematics, and 4 points at higher level for one relevant science subject (Physics, Chemistry, Biology, Design and Technology and Geography).

## Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.7 out of 3, and Merit grade or higher in at least 70% of analytical modules such as Mathematics, Soil Mechanics, Hydraulics and Structures.

## For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

## Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case-by-case basis (including successful completion of the BriTE programme).

## Bachelor of Engineering (Honours) in Civil Engineering with Structural Engineering

The BEng (Honours) programme in Civil Engineering with Structural Engineering develops the knowledge and skills of students in the engineering of structures and buildings, in addition to fundamental civil infrastructure as discussed above. This is achieved through a greater emphasis on analytical and design modules in structural engineering, as well as final year research and design projects focusing on structural engineering.

This programme prepares graduates to meet the challenges of civil and structural engineering in the 21st century, which include the design and construction of sustainable structures and the development and use of innovative materials, processes and practices.

## YEAR 1

- Engineering Drawing
- Effective Communication
- Surveying and GIS
- Engineering Mechanics
- Engineering Mathematics 1
- Melayu Islam Beraja
- Technical Communication
- Computing for Engineers
- Engineering Mathematics 2
- Engineering Design
- Principles of Fluid Mechanics

## YEAR 2

- Professional Ethics
- Engineering Hydrology
- Engineering Mathematics 3
- Mechanics of Solids
- Open Channel Hydraulics
- Construction Materials
- Entrepreneurship
- Sustainability for Engineers
- Engineering Geology
- Structural Analysis
- Soil Mechanics

## YEAR 3

- Structural Design 1
- Geotechnics 1
- Water Supply Engineering
- Geotechnics 2
- Structural Design 2
- Construction Management
- 2 elective modules

## **ExperiencePLUS Industrial Placement**

## YEAR 4

- Final Year Project
- Integrated Structural Design Project
- Advanced Structural Analysis
- 3 elective modules

## **Career Opportunities**

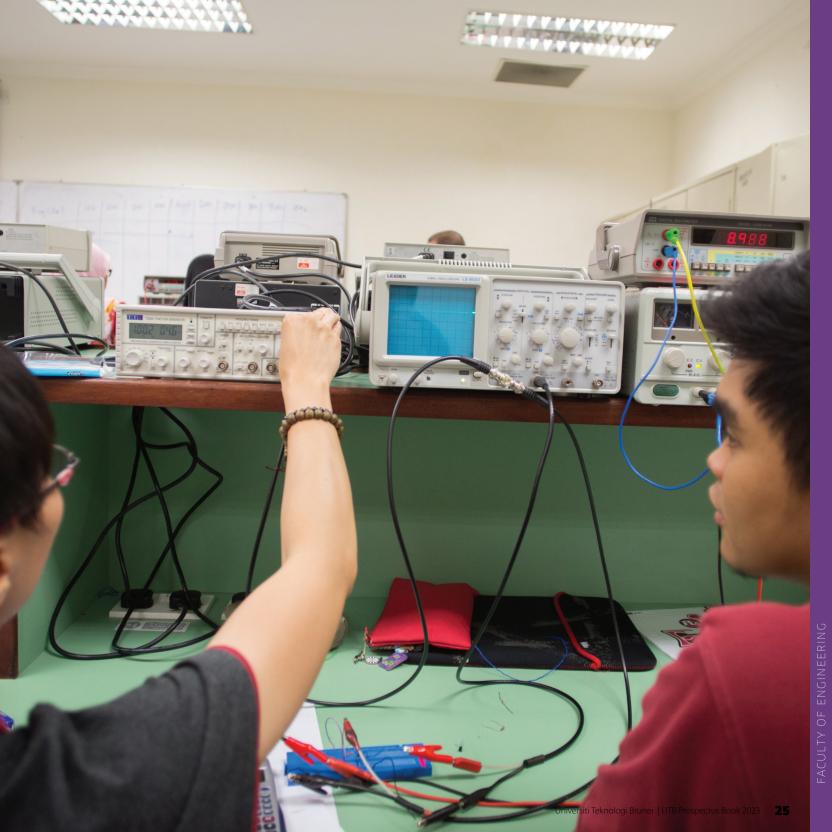
Possible careers for graduates of BEng (Hons) in Civil Engineering with Structural Engineering are similar to those for graduates in BEng (Hons) in Civil Engineering, except that graduates of this programme have more specialist skills in the design and construction of structures such as multi-storey buildings, power transmission towers, storage tanks, etc.

# Electrical and Electronic Engineering

The programmes offered by Electrical and Electronic Engineering are intended to provide education and training which are directly relevant to the manpower needs of Brunei Darussalam.

The programmes lead to a variety of careers in areas as diverse as electrical power, electronics, photonics, communications, control and renewable energy. Professional activities in the programme area are well-established and most faculty members are active in research and development activities. In line with the ethos, vision and mission of Universiti Teknologi Brunei and the values of MIB, our degree programmes aim to provide students with hands-on skills and knowledge which will enable them to make valuable contributions to national and international development.

The programmes are designed in such a way that our graduates will be equipped with up-to-date knowledge on advanced technologies to cope with the challenges of a rapidly changing work environment. In addition, graduates will be able to develop the professional and ethical skills necessary to become effective technopreneurs and innovators to respond to the socioeconomic needs of the nation as well as the world.



## Entry Requirements (either one of the following requirements):

## 'A' Level:

CCD or 220 'A' Level points in 3 'A' Levels including Mathematics or Further Mathematics (Grade C or higher), Physics (Grade C or higher) and one relevant Subject (Chemistry, Biology, Design and Technology, Computer Science, Thinking Skills, Accounting and Geography).

#### or

BC or 180'A' Level points for 2'A' level passes in Mathematics or Further Mathematics and Physics at grade C or higher.

## **International Baccalaureate:**

28 points with minimum of 4 points at higher level or 5 points at standard level, in both Mathematics and Physics, and 4 points at higher level for one relevant subject (Chemistry, Design and Technology, Biology and Geography).

## Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics and Electrical & Electronic Principles.

## For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

## Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case-by-case basis (including successful completion of the BriTE programme).

## Bachelor of Engineering (Honours) in Electrical And Electronic Engineering (Major in Electronic and Communication or Electrical Power)

Electrical and Electronic Engineering uses science, technology, and problem-solving skills to design, construct, and maintain products, services, and information systems. An Electrical and Electronic engineer will have a wide range of job opportunities such as design engineer, project engineer, research engineer, systems and design engineer, software engineer, to name a few.

## YEAR 1

- Electrical Laboratory Skills
- Principles of Computer Systems
- Electrical Principles
- Engineering Mathematics 1
- Effective Communication
- Computing for Engineers
- Digital Electronics
- Semiconductor Devices Fundamentals
- Engineering Mathematics 2
- Technical Communication
- Melayu Islam Beraja
- 1 elective module

## YEAR 2

- Electronic Principles
- Electrical Circuits
- Computer Communication and Networking
- Engineering Mathematics 3
- Professional Ethics
- Instrumentation and Measurement
- Electronic Circuits
- Microcomputer Engineering
- Signals and Systems
- Entrepreneurship
- Engineering Management
- 1 elective module

## YEAR 3

- Group Design Project
- Electromagnetic Fields and Waves
- Communication Systems
- Embedded Systems
- Electrical Power Engineering
- Control Systems
- Data Communications
- Fibre Optics Technology
- Power Electronics
- 2 elective modules

## **ExperiencePLUS Industrial Placement**

## YEAR 4

## **Electrical and Electronic Engineering:**

- Final Year Project
- Optical Communications
- Integrated Circuit Technology
- Power Systems 1
- Mobile Communications
- 4 elective modules

## Major in Electronic & Communication:

- Final Year Project
- Digital Communications
- Optical Communications
- Integrated Circuit Technology
- Mobile Communications
- 4 electve modules in major

## Major in Electrical Power:

- Final Year Project
- Power Electronic Drives
- Electrical Machines 2
- Power System 1
- Power System 2
- 4 elective modules in major

## Entry Requirements (either one of the following requirements):

## 'A' Level:

CCD or 220 'A' Level points in 3 'A' Levels including Mathematics or Further Mathematics (Grade C or higher), Physics (Grade C or higher) and one relevant Subject (Chemistry, Biology, Design and Technology, Computer Science, Thinking Skills, Accounting and Geography).

## or

BC or 180'A' Level points for 2'A' level passes in Mathematics or Further Mathematics and Physics at grade C or higher.

## **International Baccalaureate:**

28 points with minimum of 4 points at higher level or 5 points at standard level, in both Mathematics and Physics, and 4 points at higher level for one relevant science subject (Chemistry, Design and Technology, Biology and Geography).

## Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics, Electrical & Electronic Principles, Electrotechnology, Mechanics and Thermodynamics.

## For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

## Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case-by-case basis (including successful completion of the BriTE programme).

## Bachelor of Engineering (Honours) in Mechatronics Engineering

Mechatronics is a multi-disciplinary study dealing with the integration of mechanical devices, electronics, intelligent controllers and computers. Many new generations of consumer or commercial products can be classified as mechatronic products as they involve mechanical as well as electronic components. The need for mechatronic education has grown due to the increase in the number and importance of such systems and devices. This programme is designed to provide in-depth knowledge in the fundamentals, design, analysis and operation of mechatronic systems and will be conducted by faculty from both the Electrical & Electronic Engineering and Mechanical Engineering departments at UTB.

## YEAR 1

- Electrical Laboratory Skills
- Design, Drafting & Manufacture
- Electrical Principles
- Engineering Mathematics 1
- Effective Communication
- Computing for Engineers
- Digital Electronics
- Engineering Statics
- Engineering Mathematics 2
- Technical Communication
- Melayu Islam Beraja

## YEAR 2

- Electronic Principles
- Electrical Circuits
- Engineering Thermodynamics 1
- Professional Ethics
- Electronic Circuits
- Microcomputer Engineering
- Engineering Dynamics
- Entrepreneurship
- Engineering Management
- Signals and Systems
- 1 elective module

## YEAR 3

- Group Design Project
- Electromagnetic Fields and Waves
- Embedded Systems
- Fluid Mechanics 1
- Manufacturing Engineering
- Instrumentation and Measurement
- Control Systems
- Electrical Machines 1
- Robotics
- 2 elective modules

## **ExperiencePLUS Industrial Placement**

## YEAR 4

- Final Year Project
- Digital Signal Processing
- Mechatronics Laboratory
- Industrial Automation
- Artificial Intelligence for Engineers
- 4 elective modules

# Mechanical Engineering

Mechanical engineering principles and skills are practised in the use, development, and innovations of products, processes, and power. Mechanical engineering is one of the oldest, broadest, and most versatile branches of engineering. Mechanical Engineering in UTB is offered as a broad-based programme built upon the expertise in design, manufacturing, applied mechanics, materials, and thermo-fluid areas.

The programme aims to produce graduate mechanical engineers with high level of competency, leadership quality, and professionalism. The programme can lead to a wide variety of careers, both in Brunei as well as internationally, in various sectors, including energy, manufacturing, agriculture, defence, and transportation. Mechanical Engineers also have the edge in contributing towards the future of energy, transportation, healthcare, and various areas where sustainability and technology converge.

Institution of MECHANICAL ENGINEERS



## Entry Requirements (either one of the following requirements):

## 'A' Level:

CCC or 240 'A' Level points in 3 'A' Levels including Mathematics or Further Mathematics (Grade C or higher), Physics (Grade C or higher) and one relevant Science Subject (Design and Technology, Chemistry, Biology and Computer Science).

#### or

BC or 180 points for 2'A' level passes in Mathematics and Physics at grade C or higher, and a credit in Chemistry at GCE 'O' level or equivalent.

## **International Baccalaureate:**

28 points with a minimum of 4 points at higher level or 5 points at standard level, both in Mathematics and Physics, and 4 points at higher level for one relevant science subject (Chemistry, Design and Technology, Biology and Geography).

## Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics, Mechanics, Thermodynamics, Engineering Design and Air Conditioning.

## For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

## Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a caseby-case basis (including successful completion of the BriTE programme).

## Bachelor of Engineering (Honours) in Mechanical Engineering

The aim of the programme is to produce qualified graduate mechanical engineers to meet the requirements of engineering organisations and industries. Graduates from the programme will be able to enter the workforce immediately or to further their studies in various fields of mechanical engineering at the postgraduate level. The programme is broad based and covers all general areas of mechanical engineering such as design, manufacturing, materials, applied mechanics and thermo-fluids.

## YEAR 1

- Design, Drafting and Manufacture
- Engineering Mathematics 1
- Effective Communication
- Measurement and Instrumentation
- Engineering Materials
- Engineering Statics
- Engineering Mathematics 2
- Technical Communication
- Melayu Islam Beraja
- Computing for Engineers
- 1 elective module

## YEAR 2

- Engineering Thermodynamics 1
- Fluid Mechanics 1
- Mechanics of Materials
- Engineering Mathematics 3
- Professional Ethics
- Design and Manufacture
- Engineering Dynamics
- Modelling and Simulation
- Engineering Management
- Entrepreneurship
- 2 elective modules

## YEAR 3

- Group Design Project
- Engineering Thermodynamics 2
- Fluid Mechanics 2
- Manufacturing Engineering
- Mechanics of Machines
- Heat Transfer
- Mechanical Vibrations
- Design of Machine Elements
- Industrial Automation and Control Systems
- 2 elective modules

## **ExperiencePLUS Industrial Placement**

## YEAR 4

- Final Year Project
- Advanced Engineering Materials
- Heating, Ventilation and Air Conditioning
- Computer Aided Manufacturing
- Power Plant Engineering
- 4 elective modules

# Petroleum and Chemical Engineering

Chemical Engineering is about the design, operation and optimisation of safe, environmentally-friendly, energy-efficient processes which convert raw materials to the useful products which we rely on in our everyday lives. Chemical Engineers have a wide choice of potential careers. They can be found working in a large variety of industries such as oil & gas, chemicals, biotechnology, pharmaceuticals, energy, water, food & drink production and fast-moving consumer goods, to name but a few. In Brunei, with a degree in Chemical Engineering, your career would most likely be in the oil and gas downstream sector. This is becoming an increasingly important growth area within the Brunei economy, and Chemical Engineering students should find themselves well placed amongst their peers to secure a job upon graduation.

For the Energy Engineering, it aims to equip graduates with the skills required to become successful energy engineers within various industries and careers. Students will gain multidisciplinary skills through this program and will be able to manage, improve, and develop energy consumption and use. Upon graduation, students will be able to find employment in a variety of industries, including oil and gas, process, chemical, electricity, renewable energy, operations, and management.

## **Career Opportunities**

#### Chemical Engineers:

- Energy manager
- Quality manager
- Process Engineer
- Chemical Plant and System Operator
- Manufacturing Production Engineer
- Environmental and Healthcare Engineer

## Energy Engineers:

- Energy Engineer
- Energy Manager
- Software Engineer
- Environmental Consultant
- Environmental Engineer
- Engineering Geologist



#### Entry Requirements (either one of the following requirements):

#### 'A' Level:

CCC or 240 'A' Level points in 3 'A' Levels including Mathematics or Further Mathematics (Grade C or higher), Chemistry (Grade C or higher) and one relevant Science Subject (Physics, Biology and Computer Science).

#### **International Baccalaureate:**

28 points with minimum of 4 points at higher level or 5 points at standard level, both in Mathematics and Chemistry, and 4 points at higher level for one relevant science subject (Physics, Design and Technology, Biology and Geography).

#### Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics and Chemistry.

#### For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

#### Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a caseby-case basis (including successful completion of the BriTE programme).

# Bachelor of Engineering (Honours) in Chemical Engineering

#### YEAR 1

- Chemistry 1
- Effective Communication
- Engineering Mathematics I
- Melayu Islam Beraja
- Material and Energy Balances
- Introduction to Chemical Engineering
- Technical Communication
- Engineering Mathematics 2
- Computing for Engineers
- Chemistry 2
- Process Heat Transfer
- Mass Transfer

#### YEAR 2

- Engineering Mathematics 3
- Professional Ethics
- Renewable Energy Technologies
- Separation Processes 1
- Chemical Engineering Thermodynamics 1
- Fluid Mechanics
- Entrepreneurship
- Engineering Management
- Chemical Engineering Laboratory 1
- Separation Processes 2
- Process Control and Instrumentation
- Computing for Process Engineers

#### YEAR 3

- Process Modelling and Simulation
- Reaction Engineering 1
- Chemical Process Technology
- Process Design
- Process Safety and Loss Prevention
- Computer Aided Process Engineering
- Chemical Engineering Thermodynamics 2
- Plant Design
- Mechanical Unit Operation
- Chemical Engineering Laboratory 2
- 2 elective modules

#### **ExperiencePLUS Industrial Placement**

- Final Year Project
- Transport Phenomena
- Energy Engineering and Planning
- Reaction Engineering 2
- Environmental Engineering
- 4 elective modules

## Bachelor of Engineering (Honours) in Energy Engineering

#### YEAR 1

- Chemistry
- Effective Communication
- Engineering Mathematics I
- Melayu Islam Beraja
- Energy Engineering Fundamentals I
- Engineering Mechanics and Materials
- Technical Communication
- Engineering Mathematics II
- Energy Engineering Fundamentals II
- Physics
- Thermodynamics I
- Fluid Mechanics

#### YEAR 2

- Engineering Mathematics III
- Computing for Engineers
- Thermodynamics II
- Electrical Principles
- Process Heat Transfer
- Energy Engineering Design
- Project Management
- Solar Energy
- Wind and Hydro Energy
- Biomass and Biofuels
- Reaction Engineering
- Energy Engineering Laboratory

#### YEAR 3

- Design Project
- Process Safety and Loss Prevention
- Energy Storage Technologies
- Energy Management & Economics
- Energy Systems Modelling and Analysis
- Design Project
- Environmental Engineering
- Process Control and Automation
- Fuel Cell and Hydrogen Technology
- Power Transmission and Distribution
- 2 elective modules

#### **ExperiencePLUS Industrial Placement**

#### YEAR 4

- Research Project
- Entrepreneurship
- Professional Ethics
- Carbon Capture, Utilisation & Storage
- Research Project
- Sustainability Development
- 4 elective modules

# Entry Requirements (either one of the following requirements):

#### 'A' Level:

CCC or 240 'A' Level points in 3 'A' Levels including Mathematics or Further Mathematics (Grade C or higher), Physics (Grade C or higher) and one relevant Science Subject (Chemistry, Biology, Computer Science, and Design and Technology).

#### International Baccalaureate:

28 points with minimum of 4 points at higher level or 5 points at standard level, both in Mathematics and Physics, and 4 points at higher level for one relevant science subject (Chemistry, Design and Technology, Biology and Geography).

#### Relevant BDQF L5 Diploma or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of analytical modules such as Mathematics, Mechanics, Physics, and Reservoir Engineering.

#### For mature applicants:

A relevant BDQF Level 5 Diploma or its equivalent, with relevant engineering-focused work experience to be decided on a case-by-case basis.

#### Work Experience or other qualifications:

Other work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case-by-case basis (including successful completion of the BriTE programme).

#### **Entry Requirements**

A minimum of a Lower Second Class Honours Bachelor's degree, or equivalent, in Civil Engineering or related discipline, recognised by the Senate of UTB.

At least a credit in English Language GCE 'O' Level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent. The IELTS or TOEFL is to be taken within two years of the start date of the programme. The English Language requirements may be waived where qualifying studies in Higher Education was in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application, they will need to show that they have continued to study or work in the medium of English.

Student who wish to be admitted as a mature candidate must satisfy the following minimum requirements;

- Applicants must have at least 3 years of relevant working experience for admission to Master's Degree programme;
- At least a credit 6 in English Language at GCE 'O' Level Examination or a Grade 'C in IGCSE English (as a Second Language) or a valid IELTS score of 6.0 or a TOEFL minimum overall score of 550;
- Satisfactory interview and/or entry test.
- Candidates with other qualifications will be considered on a case by case basis.

## Master of Science (by Coursework) in Civil Engineering

This programme has been developed to deepen students' knowledge and skills in analysis and problem-solving, and therefore their ability to address new issues and challenges in all civil engineering disciplines. The programme thus aims to produce graduates who are equipped for professional roles in the civil engineering industry.

The programme aims to provide civil engineering graduates and practitioners with additional structured, formal training to complete the educational base for UK-SPEC Chartered Engineer under the institutions represented in the Joint Board of Moderators. Accreditation for the programme, as one meeting the requirements of Further Learning for registration as a Chartered Engineer (CEng), will be sought from the Joint Board of Moderators shortly.

#### **Programme Structure**

- Research Methods
- Numerical Analysis in Engineering
- Structural Engineering
- Advanced Geotechnics
- Construction Project Management
- Advanced Concrete Technology
- Research Project
- 2-3 elective modules

The Full-Time programme is one year in duration. The Part-Time programme is two years long, and is expected to run on Saturdays during the Semesters.

# Master of Science (by Coursework) in Electrical and Electronic Engineering

The aim of the MSc in Electrical and Electronic Engineering programme is to prepare students for a career in industry whether in the public or private sector, as well as enable them to pursue further studies to become a researcher. It also aims to provide continuing professional development opportunities related to the electrical and electronic engineering. In addition to the knowledge and understanding of electrical and electronic engineering the programme will provide an integrated understanding of power systems, communications systems, and develop leadership and interpersonal skills.

#### **Programme Structure**

- Research Methods
- Microelectronics
- Advanced Digital Communication
- Power System Analysis
- Insulation Coordination
- Wireless and Mobile Communications
- Advanced Fibre Optic Communication
- Power System Operation & Control
- Advances in Power Systems
- Research Project

The Full-Time programme is one year in duration.

The Part-Time programme is two years long, and is expected to run 1-2 weekdays per week during the Semesters.

#### **Entry Requirements**

A minimum of a Lower Second Class Honours Bachelor's degree, or equivalent, in Electrical and Electronic Engineering or related discipline, recognised by the Senate of UTB.

At least a credit in English Language GCE 'O' Level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent. The IELTS or TOEFL is to be taken within two years of the start date of the programme. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application, they will need to show that they have continued to study or work in the medium of English.

Student who wish to be admitted as a mature candidate must satisfy the following minimum requirements;

- Applicants must have at least 3 years of relevant working experience for admission to Master's Degree programme;

- At least a credit 6 in English Language at GCE 'O' Level Examination or a Grade 'C in IGCSE English (as a Second Language) or a valid IELTS score of 6.0 or a TOEFL minimum overall score of 550;

- Satisfactory interview and/or entry test.

- Candidates with other qualifications will be considered on a case by case basis.

#### **Entry Requirements**

A minimum of a Lower Second Class Honours Bachelor's degree, or equivalent, in Mechanical Engineering or related discipline, recognised by the Senate of UTB.

At least a credit in English Language GCE 'O' Level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent. The IELTS or TOEFL is to be taken within two years of the start date of the programme. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application, they will need to show that they have continued to study or work in the medium of English.

Student who wish to be admitted as a mature candidate must satisfy the following minimum requirements;

- Applicants must have at least 3 years of relevant working experience for admission to Master's Degree programme;
- At least a credit 6 in English Language at GCE 'O' Level Examination or a Grade 'C in IGCSE English (as a Second Language) or a valid IELTS score of 6.0 or a TOEFL minimum overall score of 550;
- Satisfactory interview and/or entry test.
- Candidates with other qualifications will be considered on a case by case basis.

## Master of Science (by Coursework) in Mechanical Engineering

The programme is designed to provide advanced knowledge in mechanical engineering with sound engineering principles, research and communication skills for solving real life problems related to mechanical engineering.

#### **Programme Structure**

- Research Methods
- Advanced Engineering Thermodynamics
- Applied Fluid Dynamics
- Materials Failure Analysis and Prevention
- Product Design & Development
- Advanced Solid Mechanics
- Composite Structures
- Maintenance Management
- Research Project
- 3 elective modules

# Institution of MECHANICAL ENGINEERS

### Master of Science (by Coursework) in Water Resources and Environmental Engineering

This Master's programme in Water Resources and Environmental Engineering has been developed to address the increasing and evolving requirements for water and environmental engineers. The aim of the Master programme is to aid development by carrying out and supporting projects that abate water and environmental related problems and to offer advisory services to the government and other institutions in designing projects and programmes related to water resources and environmental engineering. The programme thus aims to produce graduates who are equipped for professional roles in the water resources and environmental engineering industry.

The MSc in Water Resources and Environmental Engineering programme is accredited by the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Chartered Institution of Highways and Transportation (CIHT) and the Institute of Highway Engineers (IHE) on behalf of the UK Engineering Council.

The programme is accredited as meeting the requirements for Further Learning for registration as a Chartered Engineer (CEng), for candidates who have already acquired a partial CEng accredited undergraduate first degree. Further information regarding JBM accreditation may be found from www.jbm.org.uk.

#### **Programme Structure**

- Research Methods
- Environmental Impact Assessment
- Wastewater Engineering
- Environmental Hydraulics
- Water Resources Engineering and Modelling
- Research Project
- 3 elective modules



#### **Entry Requirements**

A minimum of a Lower Second Class Honours Bachelor's degree, or equivalent, in Civil Engineering or related discipline, as recognised by the Senate of UTB.

At least a credit in English Language GCE 'O' Level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent. The IELTS or TOEFL is to be taken within two years of the start date of the programme. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application, they will need to show that they have continued to study or work in the medium of English.

Student who wish to be admitted as a mature candidate must satisfy the following minimum requirements;

- Applicants must have at least 3 years of relevant working experience for admission to Master's Degree programme;

- At least a credit 6 in English Language at GCE 'O' Level Examination or a Grade 'C in IGCSE English (as a Second Language) or a valid IELTS score of 6.0 or a TOEFL minimum overall score of 550;

- Satisfactory interview and/or entry test.
- Candidates with other qualifications will be considered on a case by case basis.



# Masters by Research and PhD

The Faculty of Engineering welcomes students who are keen to undertake the intellectual challenge of research which contributes to the advancement of engineering knowledge, including the solution of technical challenges and problems faced by industry and society. Through these programmes, the students will develop critical skills in independent learning and problem-solving using advanced methods, enabling them to embark on careers in research and development, whether in industry or in academia.

Please refer to page 131 for the Programme Entry requirements.

#### **Programme Length**

#### MSc by Research (Full Time)

2 years of supervised study inclusive of the writing-up period.

#### MSc by Research (Part Time)

4 years of supervised study inclusive of the writing-up period.

#### PhD (Full Time)

3 years of supervised study inclusive of the writing-up period.

#### PhD (Part Time)

6 years of supervised study inclusive of the writing-up period.

#### **Research Areas**

Research areas include (but are not limited to) the following:

#### **Civil Engineering**

Construction Management Construction Materials Geotechnical Engineering Structural Engineering Transportation Engineering Water and Environmental Engineering

#### **Electrical And Electronic Engineering**

Communications and Electronics Electrical Power Control Systems Computer and Embedded Systems

#### **Mechanical Engineering**

Applied Mechanics and Materials Design and Manufacturing Energy and Fluid Flow

#### **Petroleum and Chemical Engineering**

Modelling and Simulation Petroleum Engineering Process Safety Renewable Energies

#### Matius Anak Belayan BEng (Hons) in Civil Engineering

"UTB has a supportive and friendly ecosystem between the undergraduates and lecturers which helps facilitate learning. It shows constant improvement and I believe it is heading towards the right direction in becoming a well-established higher learning institution within the region."

#### Dayang Affidah binti Darius BEng (Hons) in Mechanical Engineering

"Being the 'mature' student in the class gave me the pressure to work myself forward – especially after leaving school for many years. Alhamdulillah, although it has been a rollercoaster ride, I have managed to work my way through from Foundation Degree to Bachelor Degree in just four years! But bear in mind that with every struggle and hardship comes ease. Of course, I could not have achieved this without my wonderful lecturers and coursemates."

### Awangku Mohammad Zulfakhri bin Pengiran Awang BEng (Hons) in Electrical and Communication Engineering

"I was very fortunate and honoured to be given the opportunity to participate in programmes to represent Brunei Darussalam: Jenesys 2.0 programme in Japan and Huawei Seeds for the Future programme in China. From these programmes, I had the privilege to witness the differences in terms of culture, living and lifestyle, and the latest technologies between our country and theirs. Aside from that, I was also selected as an intern for the UTB ExperiencePLUS at Roxar Flow Measurement Company in Kuala Lumpur. During the internship, I gained the working experience that I believe will be valuable to me in terms of both management and technical aspects."

### Soong Siaw Yin BEng(Hons) in Electrical and Communication Engineering

"Four years passed so fast and I remember clearly how these years were challenging, but with the guidance and support from lecturers I was able to excel. If the opportunity arrives I would want to pursue my further studies after getting a broader view of a workplace. No words can express how thankful I am to the lecturers who groomed me to be who I am today. I believe what I have learnt all these years will take me to another chapter of life."



# UTB School of Business

In line with the ethos, vision and mission of UTB and the philosophy of MIB, all programmes offered by UTB School of Business aim to provide students with the skills and knowledge which will enable them to make practical and valuable contributions to the national development. The programmes are designed so that graduates will be equipped to cope with the challenges of a rapidly changing work environment. Teaching and learning are based on a balanced combination of knowledge acquisition, hands-on practice and work experience. Besides, students will be able to develop the skills necessary to become effective entrepreneurs and innovators and to respond to the changing environmental and socioeconomic needs of the nation.

The combination of business studies and IT opens up a wide range of careers in the public and private sectors of the economy. The degrees also provide a platform for entrepreneurship and/or further study at the graduate level. UTB School of Business offers one undergraduate with six majors, and three graduate degree programmes under the following programme areas:

- Accounting
- Economics
- Management

#### A Member of:









# Programmes Offered

## **UTB-SP Bridging Programme**

BriBUS (please refer to page 116)

### **Undergraduate Programmes**

#### Accounting

Bachelor of Business (Honours) (Major in Accounting and Information Systems) Bachelor of Business (Honours) (Major in Finance and Risk Management)

#### **Economics**

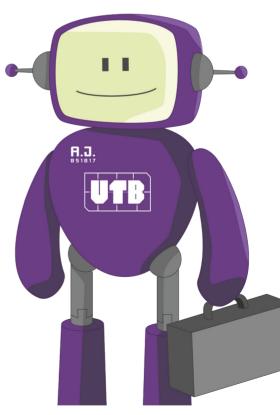
Bachelor of Business (Honours) (Major in Applied Economics and Finance) Bachelor of Business (Honours) (Major in Marketing and Information Systems)

#### Management

Bachelor of Business (Honours) (Major in Business Information Management) (Full Time & Part Time) Bachelor of Business (Honours) (Major in Business Technology Management)

### **Graduate Programmes**

Master of Science (MSc) in Management & Technology (Full Time & Part Time) Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)





# Undergraduate Programme Entry Requirements

#### 'A' Level:

CDD or 200 'A'Level points in 3 'A' Levels in relevant English Medium subjects<sup>\*</sup>.

or

BC or 180 'A'Level points in 2 'A' Levels in relevant English Medium subjects<sup>\*</sup>.

International Baccalaureate: Minimum of 24 points in relevant subjects

#### BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

BTEC/BDTVEC HND or Advanced Diploma in Business or ICT fields with acceptable grades as specified by the faculty.

#### For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' level or equivalent is required for admission to this programme. \*Relevant subjects include:

Accounting Additional Mathematics Biology Chemistry Computing Design and Technology **Economics** English Literature Geography History Law Management/Business Studies Mathematics **Physics** Psychology **Public Affairs** Sociology

# Accounting Programme Area

# Bachelor Of Business (Honours) (Major in Accounting and Information Systems)

This programme combines the detailed orientation of an Accounting degree with focus on information systems to create value for today's business. It is structured to assist in the intellectual, social and personal development of the student as a preparation for entrance to a range of business professions and able to satisfy the academic requirements of accounting professional bodies and it is in the process of getting exemptions from ACCA. This programme prepares students for specialised careers in accounting, auditing, consulting and business analysis. Its graduates work for the government, public accounting firms, insurance companies, financial institutions and other major business corporations. All UTB School of Business Programmes are applied in nature and uses business tools such as SAP, Planners Lab, SPSS and others which are an added value for employability.

#### **Programme Length: 3 Years**



#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- Managerial Accounting
- Financial Management
- Auditing and Assurance
- Research Methodology
  - Major Electives<sup>\*</sup> <sup>\*</sup>Governance and Risk <sup>\*</sup>Islamic Accounting <sup>\*</sup>International Accounting
- Financial Reporting
- International Taxation

- Entrepreneurship
- Strategic Financial Management
- Corporate Reporting
- Performance Management
- Final Year Project/ Incubation Project
- Advanced Performance Management
- Accounting Information Systems
- ExperiencePLUS

# Bachelor Of Business (Honours) (Major in Finance and Risk Management)

This programme combines the detailed orientation of a Finance degree with a specialisation in Risk Management Finance is a fast-growing employment field with roots in accounting and economics but has developed its unique framework of knowledge. There is an increasing demand for graduates who are aware of the connection between finance and risk, and able to properly manage this relationship. This programme provides all the technical tools and knowledge that a risk specialist needs to work in any type of organisation. On completion of this programme, the students will be well prepared to follow a career in the fields of risk management or risk analysis in banks, government agencies, portfolio management companies, corporate treasury, risk management software implementation companies, specialised finance boutiques and hedge funds. All UTB School of Business Programmes are applied in nature and uses business tools such as SAP, Planners Lab, SPSS and others which are an added value for employability.

#### **Programme Length: 3 Years**

#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- Islamic Banking, Takaful and Finance
- Equity Securities
- Debt Securities and Financial Modelling
- Research Methodology
- Major Electives<sup>\*</sup>
  - \*Financial Risk Modeling and simulation \*Financial Economics
- Banking and Enterprise risk management
- · Valuation of Derivatives and Hedging Strategies

- Entrepreneurship
- Strategic Financial Management
- Financial Technology
- Alternative Investment and International Finance
- Final Year Project/ Incubation Project
- Portfolio Analysis and wealth management
- Credit analysis and lending management
- ExperiencesPLUS

# Economics Programme Area

# Bachelor Of Business (Honours) (Major in Marketing And Information Systems)

This programme introduces students to the theoretical and applied concepts in marketing as well as the analysis of business problems to provide solutions in the complex business environment with a critical focus on sales targets and profit maximisation. The rapid emergence of the global Knowledge Economy has changed the marketing concept significantly which produce tangible and intangible products. The course content in this programme has the right mixture of theoretical and application-based marketing, product development, market research, consumer behaviour, digital marketing, project management, and applied marketing-related modules. The career prospects for the students are well diverse. Their skillset can be used either in the private or government sectors in the areas of brand management, retailing, corporate communications, product development, services industry, academic, marketing analyst and media consultancy etc.

#### **Programme Length: 3 Years**

#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- Internet & Multimedia
- E-Business
- Market and Business Research
- Electives<sup>\*</sup>
  - \*Banking and Enterprise Risk Management \*Financial Reporting
  - \*Evolution and Socio-Economic Impact of Technologies
- Research Methodology
- International Marketing
- Interactive Services Marketing

- Entrepreneurship
- Digital Marketing
- Retail Management
- Consumer Behaviour
- Final Year Project/ Incubation Project
- Marketing Communications & Branding
- New Product Development & Commercialisation
- ExperiencePLUS

# Bachelor Of Business (Honours) (Major in Applied Economics And Finance)

Our Applied Economics and Finance degree provides an excellent academic foundation for anyone interested in a career in almost all the sectors of commerce and industry. This programme will give you a strong understanding of economics and finance while developing your ability to apply this knowledge to a range of real-world situations. Today private companies and public organisations need leaders and managers who understand economics and business, as well as technology. This degree programme will provide you with essential economics, finance and technology-related skills and thus prepares you for a wide range of jobs in the private and public sectors. Furthermore, the successful completion of this degree programme prepares you for further study in economics and finance, besides making you eligible for a variety of careers locally and regionally such as business administration, finance, banking, consulting, public sector management and policy, private sector entrepreneurship, education sector and research.

#### **Programme Length: 3 Years**

#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- Money, Banking & Financial Markets
- Quantitative for Economist
- Managerial Economics
- Electives<sup>\*</sup>
  - \*Banking and Enterprise Risk Management \*Financial Reporting \*Evolution and Social Economic Impact of Technolog
  - \*Evolution and Socio-Economic Impact of Technologies
- Research Methodology
- Islamic Economics
- Macroeconomics

- Entrepreneurship
- Islamic Finance & Investment
- Econometrics
- International Economics
- Final Year Project/ Incubation Project
- Natural Resource & Environmental Economics
- Financial Economics
- ExperiencesPLUS

# Management Programme Area

# Bachelor Of Business (Honours) (Major in Business Technology Management)

Business Technology Management programme provides an understanding of technology management techniques and the capability to accept broader and more responsible roles (both technical and managerial) within a continually changing environment. It aims to develop students' practical understanding of the management of technology in organisations and the changing external context in which they operate. It is designed to provide knowledge and skills, both functional and integrative, in the field of business and technology management. It also aims to develop an entrepreneurial community with the application of theories and concepts of technology management. It provides opportunities for the systematic development of the skills, application of theories, tools and practises of management which will enable students to effectively lead and manage in contemporary organisations.

#### **Programme Length: 3 Years**

#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- E-Business
- Introduction to Web Development
- Supply Chain Management
- Change Management
- Electives\*
  - \*Risk Management of E-Business \*Business Application Development
- Research Methodology
- Managerial Decision Making
- Information Systems and Strategic Management
- Evolution and Socio-Economic Impact of Technologies

- Entrepreneurship
- Management of Technology and Innovation
- Total Quality Management
- Service Operation Analytics
- Final Year Project/ Incubation Project
- Business Project Management
- Operations Management
- Industrial Attachment



# Bachelor of Business (Hons) in Business Information Management (Full Time & Part Time)

Business Information Management programme aims to develop students' practical understanding of the management of information in organisations and the changing external context in which they operate. It provides knowledge and skills, both functional and integrative, in the field of business and information management. It aims to develop an entrepreneurial community with the application of theories and concepts of the business information management system. Furthermore, it provides opportunities for the systematic development of the skills, application of theories, tools and practises of management which will enable students to effectively lead and manage modern organisations.

#### **Programme Length: 3 Years**

#### YEAR 1

- Principles of Economics
- Effective Communication
- Principles of Marketing
- Business Statistics
- Information Systems & Database Design
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting
- Business and ICT Law
- Business Strategy, Ethics & CSR

#### YEAR 2

- Introduction to Computer Logics
- E-Business Fundamentals
- Introduction to Web Development
- Innovation Leadership
- System Analysis and Design
- Electives\*
  - \*Risk Management of E-Business
  - \*Change Management
  - \*Business Application Development
- Managerial Decision Making
- Research Methodology
- Information Systems and Strategic Management
- Database Systems

- Entrepreneurship
- Information System Auditing
- Information Security Management
- Customer Knowledge Management and Social Media
   Analytics
- Final Year Project/ Incubation Project
- Business Project Management
- Business Intelligence
- Industrial Attachment

#### Part-Time Programme Structure YEAR 1

- Principles of Economics
- Effective Communication
- Business Statistics
- Information Systems & Database Design
- Principles of Marketing
- Melayu Islam Beraja
- Principles of Management
- Principles of Accounting

#### YEAR 2

- Business and ICT Law
- Business Strategy, Ethics and CSR
- Introduction to Computer Logics
- E-Business Fundamentals
- Electives<sup>\*</sup>
  - \*Risk Management of E-Business
- Managerial Decision Making
- Research Methodology
- Introduction to Web Development

#### YEAR 3

- Supply Chain Management
- Change Management
- Management of Technology and Innovation
- Information Systems and Strategic Management
- Total Quality Management
- Service Operation Analytics

#### YEAR 4

- Evolution and Socio-Economic Impact of Technologies
- Business Project Management
- Operations Management
- Final Year Project/ Incubation Project
- Entrepreneurship

#### Admission Requirements for Part Time

#### General:

At least a credit or equivalent in English Language GCE O-level / IELTS score of 6.0 /TOEFL minimum overall score of 550 or its equivalent. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language, however, where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.t

#### **BTEC/BDTVEC National Diploma:**

BDTVEC/BTEC ND Business or Computing with at least 7 years working experience which is related to Business. Other NDs may be accepted on a case by case basis provided their working experience is related to the programme and also subject to satisfactory admission interview.

#### BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Candidates currently working with a BTEC/BDTVEC Higher National Diploma (HND) or equivalent in Business or Computing. Non-business or computing fields may be accepted subject to satisfactory admission interview. The HND qualification must be obtained within the last 5 years.

#### 'A' Level:

At least 1 (one) 'A' level pass in relevant English medium subjects with at least 7 years working experience which is related to Business.

#### **Entry Requirements**

At least a second-class honours Bachelor's degree, or equivalent, recognised by the Senate of UTB.

At least a credit or equivalent in English Language GCE O-level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent.

The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

For mature applicants: Standard university requirements for mature candidates as prescribed by university regulations apply.

## Master Of Science (Msc) in Management & Technology (Full Time)

The MSc in Management and Technology programme aims to produce executives and managers in both government and private sectors, incubators and start-up companies to be leaders in technology ventures, who are able to apply their knowledge and skills of management in the planning, analysis, and supervision of works in related organisations, solve problems critically, communicate effectively and possess entrepreneurial skills. You will enhance the skills and awareness needed to operate effectively in different types of organisations. The degree provides you with a solid understanding of how organisations work. The programme is an excellent choice as a path into business technology and management. It's also for those looking to gain a competitive edge in today's job market. UTB School of Business is offering Msc in Management and Technology to meet the needs of professionals who aspire to, or hold management posts in technical and nontechnical organisations.

If you have a strong interest in business management and our MSc Management & Technology will be ideally suited to you. Unlike any other, this progressive programme will prepare you for leading technology management roles across all industries. You will find this programme exciting, challenging and rigorous. It combines theory with practical case studies, and encourages learning through research, analysis, and critical discussion. You will also gain an invaluable understanding of the wider social, economic and managerial context in which technology and organisations are developed and managed. Our learning approach places emphasis on theory and critical discussion of academic literature from across a range of scientific fields. We include social theories and frameworks for understanding the processes of information systems-technology and innovation and industry case studies for illustrating issues in particular instances of management and innovation practice.

Programme Length: 1 Year (2 Semesters)

#### **SEMESTER 1**

- Strategic Management
- Research Methodology
- Human Capital Management
- Leadership
- Management of Innovation and Technology

#### **SEMESTER 2A**

- Technopreneurship and Innovation
- Accounting and Finance for Managers
- Production and Operations Management
- Management Information Systems
- Data Science for Business (Elective)

#### **SEMESTER 2B**

Research Project

#### Nur Suaidah Hj Awang Besar

"I found the module offered in the programme very informative motivating and I believe my knowledge and skills have increased from the lecture, tutorial and assignments"

#### Adibah Hj Abidin

"In UTB School of Business, I had collected a lot of good experience that I never had when I studied in UK for my undergraduate. I learnt a lot through writing reports for solving business problems. Tutorials were very helpful in making me understand more in-depth about the subject that was explained in the lecture. I learnt to speak up my mind even it's wrong I can always learn from mistake. These values I believe not only helped me to improve academically but also personally with positive attitude"

#### Diyana Najwa Ali

"The programme has increased my interest in learning all the theoretical parts of all the modules. It has helped a lot in gaining soft skills which is useful for my study and employability. Further, I gained analytical skills in doing the tutorials and working effectively in group. It is quite interesting because we got opportunity to have lecture delivered by industrial experts such General Manager of Telecommunication Company"

#### **Entry Requirements**

At least a second-class honours Bachelors degree, or equivalent, recognised by the Senate of UTB.

At least a credit or equivalent in English Language GCE O-level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent.

The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

Mature candidates who do not meet the above minimum requirements but have significant relevant work experience are encouraged to apply.

Admissions criteria for matured candidates are in place and such applications shall be considered on a case by case basis.

## Master Of Science (Msc) in Management & Technology (Part Time)

The part-time programme format is designed to help you balance your demanding career and commitments with intensive study and professional, as well as personal, development. Building on your first degree and/or professional experience, you'll study contemporary theory on leading and managing people and be exposed to leading industry practises to develop your expertise in the effective management of people and technology in technical and nontechnical contexts. The programme is an excellent choice as a path to business technology and management.

We emphasise translating academic research and learning to real work situations to develop your professional and managerial skills. We do this by engaging you in real-world issues through, for example, case studies based on investigative projects. You'll be prepared for a range of managerial and operational roles, where a key responsibility lies in managing, supporting and developing an organisation's strategy, human resources and technology in global and culturally diverse settings.

The modules offered similar to full-time MSc Management & Technology. The duration of study is two years (four semesters).

#### Programme Length: 2 Years (4 Semesters)

#### **SEMESTER 1 AUGUST (YEAR 1)**

- Strategic Management
- Human Capital Management
- Leadership

#### **SEMESTER 2 JANUARY (YEAR 1)**

- Accounting and Finance for Managers
- Management Information System
- Technopreneurship and Innovation

#### **SEMESTER 3 AUGUST (YEAR 2)**

- Research Methodology
- Management of Innovation and Technology
- Data Science for Business

#### **SEMESTER 4 JANUARY (YEAR 2)**

Research Project

#### Norhawati Hj Zaini

"Although studying as a part timer has its own challenges as we have to juggle between family, work and evening classes, my two years' experience in School of Business was remarkable. The program provided an ideal blend of practical management with the importance of technology. The modules have been carefully designed to meet the industry requirement and relevance. We are fortunate to have been supported by inspiring lecturers who provided the needed challenge in each module, but not without the support to succeed"

#### Siti Nasyroh Mat Nayan

"Lectures conducted in class often portrayed actual life experiences with relation to case studies, which made the students understand the subject better. Usage of case studies and examples are also direct to local Brunei context and neighbouring countries that make it more interesting. The knowledge that I gained is an added value to my current profession that can be shared and practised"

#### **Mohammed Arif Idrus**

"Studying this course is just like entering a whole new world. It has opened my eyes to new perspectives. There are number of interesting frameworks and models that I learnt which is applicable to work practice. The learning environment has given opportunity to discuss and engage with my peers that is very exciting and brain stimulating"

#### Dk Rodzi Pg Hj Abd. Rahman

"The MSc part-time gives me a chance to meet new people and establish network with students of different profession and industry"

# Masters By Research and PhD

#### **Research Areas**

Research areas include (but are not limited to) the following:

#### Management

Human Capital Management Strategy Management Knowledge Management Operations Management Management Information Systems e-Government Business Intelligence Systems Data Science for Business Innovation Management

#### **Economics**

Entrepreneurship Technopreneurship Economics Marketing

#### **Accounting and Finance**

Corporate Finance Financial Risk Management Accounting Information Systems & Reporting Performance Measurement Mathematical Finance and Financial Markets

#### **Programme Length**

#### MSc by Research (Full Time)

2 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

#### MSc by Research (Part Time)

4 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

#### PhD (Full Time)

3 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

#### PhD (Part Time)

6 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# What Did Our Former Students Say?

### Ammie Faryzzah Jappar, Part-Time BBIS graduate in 2019, Tabung Amanah Perkerja (TAP)

"I never thought that I would pursue to continue my study at UTB where I did my undergraduate degree in Business Information System (2015-2019) and currently studying 2 years part-time postgraduate in Management and Technology (2019-2021). I have slowly developed a passion to study the courses and with the dedication, self-discipline, good attitude, mentality and most importantly is support from my family and friends, Alhamdulillah, I am able to managed my time between work and study, though it was difficult at first, especially being a part-time student, however, it does not stop me from learning and venture further. Furthermore, meeting new people from different background is very exciting where we can share opinion and knowledge, especially in class, lecturers and course mates have different perception and opinion and this makes it even more interesting during studying."

Ahmad Zahid Azis, BAIS 1st Class graduate in 2019, Ernst & Young

"When I started in UTB, which is the 3rd semester as I was a direct entry student, the lecturers during that semester were helpful. During the 4th semester, the modules provided to us are more specialised such as audit and assurance as well as financial management. I am interested in these modules and because of that, I am more motivated during this semester. The lecturers handled the modules brilliantly and I can easily understand everything that is taught by them. In my opinion, this semester impacted my choice of job as an auditor due to the practicality of the modules towards my work life."

#### Muhammad Khaliq Syafie Bin Md Don, BFRM graduate in 2020

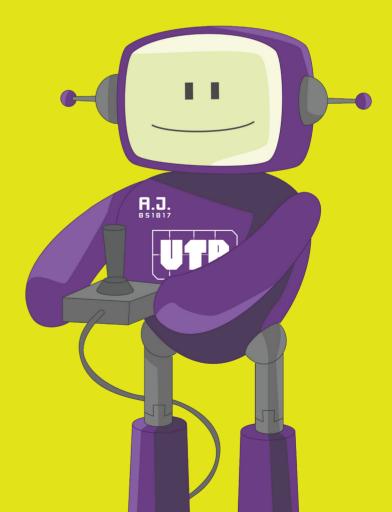
"For instance, despite my pure science background, with zero knowledge of business, I was able to pass all the assessments and fulfil all requirements of the programme. In fact, I graduated with a Second Upper Class Honour while being active in terms of ECA(s). This was possible with the guidance and the knowledge cascaded by our very skillful and knowledgeable lecturers of UTB. They taught us very clearly the contents of modules despite our limited background knowledge in finance. They were always approachable for further clarifications, which helped enhance our understanding. Summarily, as a BFRM student, Alhamdulillah it started off very well and ended very well. Even though most of the modules are very new to me, they were still doable even for me with zero business knowledge."

# School of Computing and Informatics

School of Computing and Informatics (SCI) was originated from the Department of Computing and Information Systems that was established in 1986 when Universiti Teknologi Brunei (UTB) was still at its infancy. It was then made one of the departments under the School of Business and Management in 2003. When UTB was upgraded to a university in 2008, it became a programme area under the Faculty of Business and Computing. Recognising the rapid growth in the fields of dedicated computing systems and creative informatics, SCI was formed in 2014 and consists of three programme areas:

- Creative Computing (CC)
- Computer and Information Systems (CIS)
- Computer Network and Security (CNS)

As part of the journey to the University's aspiration to become a global university impacting society, our mission is to produce graduates with exceptional lifelong-learning skills and relevant competencies through innovative teaching and research. Our school has successfully produced Computing and Informatics professionals and we will continue to be the main driver in the areas of strategic importance nationally and globally. The school is also committed to organise the International Conference on Computational Intelligence in Information Systems (CIIS), held bi-annually. The 4<sup>th</sup> CIIS 2020 was held on 25<sup>th</sup> to 27<sup>th</sup> January 2021. CIIS aims to provide an opportunity to research scholars, academicians, industrialists and research students to interact and share their experience and knowledge in the recent technological advancements in the field of Computing and Information Systems. The school is currently offering undergraduate programmes, postgraduate degree by coursework, and by research, and customised short courses on need basis. SCI is an Educational Affiliate of the British Computer Society (BCS), the Chartered Institute of IT, and three of its undergraduate programmes are accredited by BCS.



# Programmes Offered

## **UTB-SP Bridging Programme**

BriCOMP (please refer to page 116)

## **Undergraduate Programmes**

#### **Creative Computing**

Bachelor of Science (Honours) in Digital Media (Major in Digital Content Design / Major in Game Development)

#### **Computer and Information Systems**

Bachelor of Science (Honours) in Computing (Major in Software Development / Major in Data Analytics) - Full Time and Part Time

#### **Computer Network and Security**

Bachelor of Science (Honours) in Information Security Bachelor of Science (Honours) in Computer Networking

### **Graduate Programmes**

Master of Science in Computing and Information Systems (Full Time)<sup>1</sup> Master of Science in Cyber Security (Full Time & Part Time) Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)



1: This degree has been accredited by BCS (British Computer Society), The Chartered Institute for IT. Accreditation is a mark of assurance that the degree meets the standards set by BCS. An accredited degree entitles you to professional membership of BCS, which is an important part of the criteria for achieving Chartered IT Professional (CITP) status through the Institute.

Some employers recruit preferentially from accredited degrees, and an accredited degree is likely to be recognised by other countries that are signatories to international accords.

# Undergraduate Programme Entry Requirements

At Least a Credit Six in Mathematics at GCE Ordinary Level or its equivalent.

and

#### 'A' Level:

CDD or 200'A'Level points in 3'A'Levels including:

- One subject from Group A1, two from Group A2 or;
- Two subjects from Group A1, one from A2 or;
- Three subjects from Group A1

or

BC or 180'A'Level points in 2'A'Levels including:

- One subject from Group A1, one from Group A2 or;
- Two subjects from Group A1.

Note: Please refer to next page for the subjects group.

#### (BDTVEC/BTEC/NCC) L5 Diploma or its equivalent:

Applicants with BDQF Level 5 (L5) equivalence Diploma in Computing field or Information Technology related fields accredited by Brunei Darussalam National Accreditation Council (BDNAC) with acceptable grades as specified by the School. Applicants with no credit O level Mathematics must show that they have studied Mathematics equivalence in their L5 Diploma. Other L5 Diploma qualifications will be considered on a case-by-case basis. The qualification must be obtained within 2 years of the proposed admission date. Other applicants, who obtained their Level 5 Diploma more than 2 years before the proposed admission date, will be considered on a case-by-case basis, with relevant work or other experience.

#### **International Baccalaureate:**

Minimum of 24 points including:

- One subject from Group B1, two from Group B2 or;
- Two subjects from Group B1, one from B2.

#### For mature applicants:

For mature applicants, standard university requirements for mature candidates as prescribed by university regulations apply.

Mature candidates, both in the public and private sector, who have significant relevant experience in the field, and relevant qualifications at Level 5 Diploma or equivalent level, are eligible to apply and will be considered on a case-by–case basis. Standard university requirements for mature candidates as prescribed by university regulations apply.

#### BSc (Honours) in Computing (Major in Software Development/ Major in Data Analytics) BSc (Honours) in Computer Networking BSc (Honours) in Information Security

#### 'A' Level

#### **Group A1**

Computer Studies / Science Further Mathematics Mathematics Physics Thinking Skills

#### **Group A2**

Applied ICT/IT Accounting Biology Business Studies Chemistry Design & Technology Economics English Literature Geography History Media Studies Psychology Sociology Travel & Tourism

#### International Baccalaureate Diploma

#### **Group B1**

Mathematics Physics Computer Studies / Science

#### **BSc (Honours) in Digital Media**

(Major in Digital Content Design / Major in Game Development)

#### 'A' Level

#### **Group A1**

Computer Studies / Science Further Mathematics Mathematics Physics Thinking Skills

#### **Group A2**

Applied ICT/IT Accounting Art & Design Biology **Business Studies** Chemistry Design & Technology Drama & Theatre Studies **Economics English Literature** Geography History Media Studies Music Technology Psychology Sociology Travel & Tourism

Economics Geography History Psychology English Literature

**Group B2** 

Biology

Chemistry

**Business Management** 

Design & Technology

#### Bachelor of Science (Honours) in Computing (Major in Software Development / Major in Data Analytics) - Part Time

At least a credit or equivalent in English Language GCE O-level / IELTS score of 6.0 /TOEFL minimum overall score of 550 or its equivalent.

The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language, however, where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

#### AND

any one of the following qualifications

A. Level 5 Diploma or equivalent (must be obtained within the last 5 years of the proposed admission date) in
 Computing with at least 3 years of relevant work experience.
 Non-Computing fields may be considered subject to satisfactory admission interview.

B. A Level 4 Diploma or its equivalent in Computing field with at least 7 years of relevant working experience. Other Level 4 qualifications or its equivalent may be accepted on a case-by-case basis provided their working experience is related to the programme and also subject to satisfactory admission interview, if required.

C. At least 1 (one) 'A' level pass in English medium subject relevant to the programme, with at least 7 years

working experience related to Computing field, and subject to satisfactory admission interview, if required.

D. Any other entry requirements will be decided on a case-by-case basis.

For mature applicants, standard university requirements for mature candidates as prescribed by university regulations apply.



# Creative Computing Programme Area

The programme aims to equip students with the knowledge and skills needed to create engaging and impactful digital content and games. From developing creative aesthetic appreciations and mastering technical skills to exploring cutting-edge technologies and inculcating soft skills, our program will prepare students for a dynamic and exciting career in the digital world.

Undergraduate programmes offered:

- Bachelor of Science (Honours) in Digital Media
- Major in Digital Content Design
- Major in Game Development

The Digital Content Design Major aims to provide students the fundamental knowledge of design via creative technological tools, nurture students' creative aesthetic appreciations, practical skills, inculcate communication skills and positive MIB values. Throughout this three-year programme, students will develop aesthetic appreciations, theoretical understanding of design theory, and master technical and practical skills to produce aesthetic artifacts. The programme also inculcates soft skills through various student-centred workshop activities. The Game Development Major aims to provide students the fundamental knowledge of basic game design elements common in games and basic game development skills to create simple games which does not focus on pure entertainment, but rather on serious games as well as educational content. The programme nurtures students' programming skills, explores tools and techniques applicable for effective instruction designs, and inculcate students' communication skills and positive MIB values. Throughout this programme, students learn theory of game design as well as common game mechanics, including gamification process and serious games design for education purposes, and implement a prototype of their concepts. Students will incorporate state-of-the-art technology in their works. The programme instills research attitude by engaging students to various research activities applicable to real solution for academia, training as well as businesses. The programme also inculcates soft skills through various student-centred workshop activities

**Programme Length: 3 Years** 

# **Bachelor of Science (Honours) in Digital Media** (Major in Digital Content Design / Major in Game Development)

# **Career Opportunities**

# For Digital Content Design Major, includes:

- Digital Content Developers
- Interactive Multimedia Applications Developers
- Digital Artists
- 3D Modelers
- 3D Riggers
- 2D/3D Animators
- Graphics Designers
- Sound Designers
- Project Managers
- Creative Directors
- Researchers

# For Game Development Major, includes:

- Game Designers
- Game Developers
- Game Testers
- Level Designers
- Interactive Multimedia Applications Developer
- VR Applications Designers And Developers
- Sound Designers
- Multimedia Project Managers
- Creative Directors
- Researchers

# YEAR 1

- Melayu Islam Beraja
- Effective Communication
- Fundamentals of Information Systems
- Fundamentals of Creative Programming
- Fundamentals of Creative Authoring Tools
- Introduction to Programming
- Systems Analysis & Design
- Ethics, Legal and Professional Issues
- Computational Mathematics
- Instructional Design and Technology

# YEAR 2

- Digital Art & Design
- Introduction to Audio-Visual Production
- Sound Design
- Digital Marketing
- Research Methodology
- Human Computer Interaction
- Modelling in 3D

# Major in

# **Digital Content Design**

- Cinematic Special Effects
- Advanced Audio-Visual
   Production
- Motion Graphics Design

# Virtual & Augmented Reality

Major in

Game Development

Development

Game Design and

Game Design and

Development 2

# YEAR 3

- Entrepreneurship
- Digital Narrative
- Emotions Engineering
- Capstone Project (Industry-based)

# Major in

# **Digital Content Design**

• Animation

# Major in

# Game Development

Serious Games

# SCHOOL OF COMPUTING AND INFORMATICS

# Computer Information Systems Programme Area

The Computer Information Systems (CIS) programme area offers several programmes which are built on a solid foundation of general computing and information technology skills and emphasise practical applications. Teaching and learning are based on a balanced combination of knowledge acquisition, hands-on practice and work experience. Students will be equipped with technical skills, such as: design and programming skills; knowledge of current and emerging technologies; and necessary soft skills in research, communication, teamwork and entrepreneurship to build a rewarding career in this dynamic, exciting and crucial field.

Our undergraduate and postgraduate programmes (by coursework) are reviewed to ensure we maintain academic quality, a good student experience and equip our graduates to meet the challenges of a modern economy and afford the best opportunities in future. Our review process features feedback from students, industry representatives and accrediting bodies. Time to time we revive our existing curriculum and introduce new degree programmes to benefit our students to impart latest technologies as well as to increase their career opportunities. Undergraduate programmes offered: Bachelor of Science (Honours) in Computing (Major in Data Analytics or Major in Software Development) (Full Time and Part Time)

Postgraduate programmes offered: Master of Science in Computing and Information Systems (Full Time)

# Bachelor of Science (Honours) in Computing (Major in Software Development / Major in Data Analytics)

Bachelor of Science (Hons) Computing with a Major in Software Development or a Major in Data Analytics have diverse skills and hence they are highly regarded by employers from various industries. The job market for these graduates include: Programmer, Web designer/Developer, MIS executive, Project officer, Software engineer, IT technical support, Graphics designer.

# **Career Opportunities**

As an added advantage, those with a Major in Software Development could further explore career openings pertaining to Mobile apps development, Project management executive and so on.

On the other hand graduates with a Major in Data Analytics has an added advantage to further explore career openings relevant to Junior data scientist/analyst, Business Intelligence Developer, Al engineer and so on.

# **Programme Length: 3 Years**

# YEAR 1

- Melayu Islam Beraja
- Effective Communication
- Information Security Fundamentals
- Fundamentals of Information Systems
- Computer Systems and Architecture
- Ethics, Legal and Professional Issues
- Systems Analysis and Design
- Introduction to Programming
- Computational Mathematics
- Fundamentals of Data Analytics

# YEAR 2

- Data Structures and Algorithms
- Database Systems Design and Implementation
- Web Development 1
- Introductory statistics
- Research Methodology

# Major in

# Software Development

- IT Project Management
- Human Computer
   Interaction
- Web Development 2

# YEAR 3

- Entrepreneurship
- Capstone Project (Industry-based)
- ExperiencePLUS

# Major in

# Software Development

- Software Engineering
- Mobile Application
- Development
- Elective from Major
   Options\*

## \*Elective Options for Software Development

- Information Systems
   Management
- Big Data Analytics
- Applications of Cloud Computing
- Computer Vision and
   Image Processing
- Evolutionary Algorithms
- Blockchain Technology
- Web Information Retrieval
- People and Security
- Internet of Things

# Major in Data Analytics

- Data Mining & Predictive Modeling
- Data Management and Business Intelligence
- Artificial Intelligence

# Major in Data Analvtics

- Big Data Analytics
- Advanced Data Mining
  - Elective from Major Options\*\*

# \*\*Elective Options for Data Analytics

- Social Influence of IT
- Applications of Cloud
   Computing
- IT Project Management
  - Graph Analytics
- Data-Driven Decision-Making
- Machine Learning
- Process Mining
- Operations Research
   Mobile Application
  - Mobile Application Development

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# Bachelor of Science (Honours) in Computing (Part Time) (Major in Software Development / Major in Data Analytics)

The programme is aimed at:

- HND graduates who are currently employed.
- Mature candidates, both in the public and private sector, who have significant relevant experience in the field, and relevant qualifications at HND or equivalent level, will also be eligible to apply.

# **Career Opportunities**

Career opportunities for graduates cover a wide range of options which includes programmer, system designer, system developer, information specialist, project supervisors, information technology manager, etc. The programme is also designed to provide a platform for graduates' career development, innovation and/or further study to postgraduate level.

# **Programme Length: 4 Years**

# YEAR 1

- Melayu Islam Beraja
- Effective Communication •
- Information Security Fundamentals
- Fundamentals of Information Systems ٠
- Systems Analysis and Design .
- Introduction to Programming .
- **Computational Mathematics**
- Fundamentals of Data Analytics

# YEAR 2

- Data Structures and Algorithms
- Database Systems Design and Implementation
- Introductory statistics •
- Ethics, Legal and Professional Issues
- Major in Software Development
- IT Project Management
- Human Computer Interaction

# Major in Data Analytics

- Data Mining & Predictive Modeling
- Data Management and Business Intelligence ٠

# YEAR 3

•

- Research Methodology
- Entrepreneurship
- Web Development 1
- Computer Systems and Architecture .

#### Major in Software Development Web Development 2

- Major in Data Analytics
- Artificial Intelligence Elective 1\*\*

Elective 1\*

# YEAR 4

Capstone Project (Industry-based)

# Major in Software Development

- Software Engineering ٠
- Mobile Application • Development

# Major in Data Analytics

- **Big Data Analytics** •
- Advanced Data Mining •

# \*Elective Options for Software Development

- Information Systems Management
- Applications of Cloud Computing
- Computer Vision and Image Processing
- **Evolutionary Algorithms**
- Blockchain Technology ٠
- Internet of Things .
- Machine Learning •

# \*\*Elective Options for Data Analytics

- Social Influence of IT
- Applications of Cloud Computing
- Graph Analytics
- Data-Driven Decision-Making
- **Evolutionary Algorithms**
- **Operations Research** •
- Mobile Application • Development

# Master of Science in Computing and Information Systems (Full Time)

Post graduates with Master of Science in Computing and Information Systems will be able to find a number of career openings including ICT Manager, Application Developer, Data Scientist, System Administrator, Web Developer, Research Officer, Project Manager, AI Specialist, MIS Manager, ICT Consultant, E-Commerce Manager, and so on.

# **Programme Length: 1 Year (Full Time)**

# Full-Time Structure SEMESTER 1

- Computing Research Methodology
- Computer Application Design and Implementation
- People & Security
- Elective 1<sup>\*</sup>

## **SEMESTER 2A**

- Managing Information Systems in Practice
- Intelligent System
- Elective 2 \*

## **SEMESTER 2B**

Master Research Project

## \*Elective Options

# Elective Option 1

- Data Mining
- Electronic Government

## **Elective Option 2**

- Web Services and Cloud
   Computing
- Data Analytics and Visualisation

# **Entry Requirements**

Hold a second-class honours Bachelors degree, or equivalent, in a relevant discipline, recognized by the Senate. Applicants with other qualifications will be considered on a case-by-case basis, taking into account of any relevant work or other experience.

At least a credit or equivalent in English Language GCE O-level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent.

The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language.

Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

For mature applicants, standard university requirements for mature candidates as prescribed by university regulations apply.

# Computer Network And Security Programme Area

Computer Network and Security Programme Area is one of the programme areas in the School of Computing and Informatics. This programme area currently offers two Bachelor's (Hons) degree programme in the area of Computer Network and Information Security with the aim of providing students with the skill and knowledge to enable them to make practical and valuable contributions towards national development in the field of networking and cybersecurity.

In addition to Academic Degree programme, we would also be focusing on research solving issues pertaining to Networking & Security in Wired, Wireless, Mobile, Cloud, Internet of Things. The Degree students in this programme area would thus have an opportunity to work on such research issues in their final year project contributing to networking industry.

The programme is designed in a way so that graduates will be equipped with necessary academic knowledge and also hands-on experience to solve some of the challenging issues of the Networking and Telecommunication Industry.

The academic staff have adequate academic and industrial experience. Upon successful completion of these programmes, graduates would find themselves well equipped with skills, knowledge and hands on experience to be employed in networking industry and towards pursuing higher degrees in networking and cybersecurity.

Undergraduate programmes offered:

Bachelor of Science (Honours) in Information Security Bachelor of Science (Honours) in Computer Networking

# Bachelor of Science (Honours) in Information Security

The aim of the programme is to prepare graduates for the demands of industry in the skills of computer and information security. Graduates will be equipped with specialised knowledge and skills in security that are designed based on current demand from the private and public sectors.

Graduates will develop theoretical understanding and practical skills in areas such as security in wireless networks; virtual network and security; packet analysis and investigation. They will also have strong foundations in cryptography; symmetric and public key encryption; the cyber kill chain and case studies of critical infrastructure and their interdependencies. Forensic science will also be introduced, including steps from collecting data to preserving evidence. Software security is also a part of their knowledge gained that looks at the upper layers of the networking model.

The final year projects will be based on various security research, issues and applications that reflect the challenges faced globally. This will ensure that their knowledge will be relevant for their future careers and will help prepare them for further study to postgraduate level.

## **Career Opportunities**

Career opportunities exist in many Information security areas such as IT security, security architecture, penetration testing, security analysis, security management, cryptography, forensic analysis, cyber security, security consultancy and in general computing. The programme is also designed to provide a platform for graduates' career development, innovation and/or further study to postgraduate level.

## YEAR 1

- Melayu Islam Beraja
- Effective Communication
- Computer Systems and Architecture
- Fundamentals of Information Systems
- Information Security Fundamentals
- Systems Analysis and Design
- Introduction to Programming
- Fundamentals of Data Analytics
- Computational Mathematics
- Ethics, Legal and Professional Issues

#### YEAR 2

- Network Programming
- Database Systems Design and Implementation
- Data communication
- Networking Essentials
- Network Security Principles
- Security Management and Governance
- Mobile Wireless Network
- Research Methodology
- Computer System Security

#### YEAR 3

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- Digital Forensics and Malware Analysis
- Secured Cyber Infrastructure
- Entrepreneurship
  - Elective from Major Options
- Capstone Project (Industry-based)
- ExperiencePLUS

#### \*Elective Options

- Applied Cryptography
- Blockchain Technology
- Machine Learning
- Internet of Things
- People and Security

#### **Programme Length: 3 Years**

# Bachelor of Science (Honours) in Computer Networking

The main aim of the programme is to meet the demands of the local IT industry for highly capable, multi-skilled graduates. The programme seeks to address the skills shortage by providing potential students with the necessary knowledge and abilities that will be attractive to future employers. The programme has been developed with good industry links to ensure that the graduates are equipped with the necessary knowledge and skills to meet the ever-changing and dynamic demands of the IT industry. Mature candidates, both in the public and private sector, who have significant relevant experience in the field, and relevant qualifications at HND or equivalent level, will also be eligible to apply for this programme.

The degree programme consists of relevant IT and more specialised computing modules, together with some management modules. There is also a significant final year project. Emphasis is placed on the practical application of the theories and principles developed in the modules.

Upon completion of this programme, successful graduates will be able to:

- Design, implement, and test a network system using the latest standard and technology.
- Apply skills to manage and monitor network performance, while able to predict and plan the future growth of computer networks.
- Develop skills to design and implement a highly trusted security policy.
- Plan, design and supervise IT projects independently.
- Undertake analysis and design tasks of IT using relevant methodology and standards.

# **Career Opportunities**

Career opportunities exist in many computer network and security areas such as network management, network programming, network administration, network consultancy and security consultancy. The programme is also designed to provide a platform for graduates' career development, innovation and/or further study to postgraduate level.

# **Programme Length: 3 Years**

# YEAR 1

- Melayu Islam Beraja
- Effective Communication
- Computer Systems and Architecture
- Fundamentals of Information Systems
- Information Security Fundamentals
- Systems Analysis and Design
- Introduction to Programming
- Fundamentals of Data Analytics
- Computational Mathematics
- Ethics, Legal and Professional Issues

# YEAR 2

- Network Programming
- Database Systems Design and Implementation
- Data Communication
- Networking Essentials
- Network Security Principles
- Network Management and Governance
- Internetwork Communication I
- Mobile Wireless Network
- Research Methodology

## YEAR 3

- Internetwork Communication II
- Advanced Networking
- Entrepreneurship
- Elective from Major Options<sup>\*</sup>
- Capstone Project (Industry-based)
- ExperiencePLUS

## \*Elective Options

- Optical Network
- Blockchain Technology
- Machine Learning
- Mobile Application Development
- Internet of Things



# Masters of Science in Cyber Security (Full Time & Part Time)

The threat of IT security attacks is increasingly apparent to either individuals or organisations across the world. From hacking to phishing, scamming to grooming, and botnets to cyber-terrorism, the variety and ingenuity of exploits appear to expand constantly.

MSc Cyber Security addresses key security issues faced by global communications and information systems. This course teaches the latest security principles, practises, tools and techniques. The programme covers management and protection of computer operating systems, networks, and data from cyber-attacks. It also provides skills on how to monitor systems and mitigate threats. As well as studying areas such as securing cyber infrastructure, secure application development, risk management, malware analysis and digital forensics. Furthermore, students are also exposed to the importance of understanding and managing the human factors in cybersecurity.

# Programme Length: 1 Year (Full Time) 2 Years (Part Time)

# **Full-Time Structure**

#### **SEMESTER 1**

- Computer Research Methodology
- Cybercrime and Sociotechnical Risks
- Network Security and Cryptography
- Security Architecture

#### **SEMESTER 2A**

- Information Security Policies and Management
- Cyber Physical Protection
- Elective 1\*
- Digital Forensics Lab

#### **SEMESTER 2B**

Master Research Project

# **Part-Time Structure**

#### **SEMESTER 1**

- Cybercrime and Sociotechnical Risks
- Network Security and Cryptography

#### **SEMESTER 2**

- Security Architecture
- Information Security Policies and Management
- Computer Research Methodology

#### **SEMESTER 3**

- Elective 1\*
- Cyber Physical Protection
- Digital Forensics Lab

#### **SEMESTER 4**

Master Research Project

#### \*Elective Options

- Database Security
- Data Analytics for Cybersecurity

# Masters by Research and PhD

# **Research Areas**

Research areas include (but are not limited to) the following and may also include inter-disciplinary fields:

Computing and Information Systems Programming Graphics and Visualization Algorithm Human Computer Interaction Data Mining Data Analytics Artificial Intelligence Multimedia Network and Security Electronic Commerce Electronic Learning Internet of Things Blockchain Cloud Computing

# **Programme Length**

# **MSc by Research (Full Time)**

2 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# **MSc by Research (Part Time)**

4 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# PhD (Full Time)

3 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# PhD (Part Time)

6 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.



# Lim Tze Yee Bachelor of Science (Hons) in Computer Network and Security

"While studying in UTB, I learnt a wide range of knowledge, skills and experiences that prepared me for the future. I had a wonderful time with all of my great colleagues throughout the period of my course, where we went through a roller coaster of experiences together."

# Awang Qamaruzzaman bin Affandy Bachelor of Science (Hons) in Internet Computing

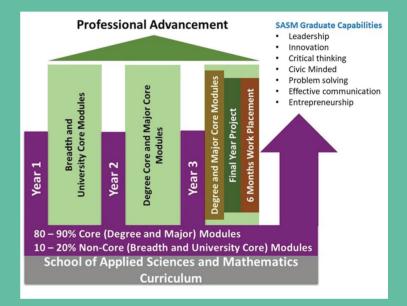
"Having been shaped in part by the rigorous environment at UTB, I found myself able to communicate, innovate and collaborate in ways that allow me to build good rapport with lecturers and classmates. Developing better communication skills helped me to eventually embark on a rewarding career and start up my own company – Cerebral Network Technologies."

# School of Applied Sciences and Mathematics

The School of Applied Sciences and Mathematics provides innovative 3-year degree programmes in the fields of 'Applied Mathematics and Economics', 'Agrotechnology (Minor in Business)', 'Food Science and Technology' and 'Mathematical Finance'. The curriculum of each programme aims to meet the educational and career needs of learners with benefits of technical competency, practical knowledge and applied skills. These are required by fast growing industries and research and development organisations. Our graduates also have a skill set that is important for the strategies and objectives set out in the Brunei Vision 2035 and global skill demands.

The school maintains close links with relevant public and private sectors in Brunei Darussalam for the exchange of ideas and transfer of technology. It has developed collaborations with some leading foreign universities for sharing expertise. The school also provides services to industries and develops innovative science and technological advances through high quality research outputs.

The programmes are structured to have required standard and quality to obtain accreditation from internationally recognised professional institutions. In addition to undergraduate degrees, the school also offers Masters and PhD degrees. The general curriculum structure of the undergraduate programmes of the school is shown below:



# Programmes Offered

# **UTB-SP Bridging Programme**

BriTE (please refer to page 116)

# **Undergraduate Programmes**

Agrotechnology Bachelor of Science (Honours) in Agrotechnology (Minor in Business)

# **Applied Mathematics and Economics**

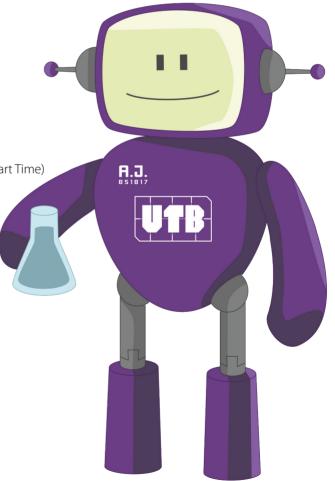
Bachelor of Science (Honours) in Applied Mathematics and Economics Bachelor of Science (Honours) in Mathematical Finance

# Food Science and Technology

Bachelor of Science (Honours) in Food Science and Technology Bachelor of Science (Honours) in Food Science and Human Nutrition

# **Graduate Programmes**

Master of Science (MSc) in Food Science and Technology (Full Time & Part Time) Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)



# Entry Requirements (either one of the following requirements):

# 'A' Level:

CDD or 200'A'Level points in 3'A'Levels including two relevant subjects (Biology, Chemistry, Food Studies, Physics, Further Mathematics, Mathematics, Business and Economics)

#### or

CC or 160 'A'Level points in 2 'A' Levels including one relevant subject (Biology, Chemistry, Food Studies, Physics, Further Mathematics, Mathematics, Business and Economics).

## **International Baccalaureate:**

24 points preferably with minimum of 5 points in two relevant subjects including Biology, Chemistry, Mathematics, Economics, Business and Management at standard level or 4 points at higher level.

# BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of modules including Microbiology and one of (Chemistry, Food Chemistry, Biochemistry, or Business).

## **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

## For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' Level or equivalent is required for admission to this programme.

# Agrotechnology (Minor In Business)

Agricultural production has concerns in food quality and safety and the environmental impact of production methods in the short, medium and long term. Agricultural industry faces challenges and is undergoing an unprecedented period of change. Smart scientific and technological solutions are required to overcome the challenges and adopt the change. They are vital for achieving sustainable and high yield agriculture production to meet the consumer demand of rapidly growing global population.

Our Agrotechnology with Minor in Business programme provides necessary theoretical and practical skill and knowledge in crop and animal production systems as well as in agribusiness and marketing. The underpinning scientific, technical and business principles and their applicability in recent developments are incorporated in the curriculum.

The students gain understanding of the impact of global, regional and local policy on the agricultural industry and economy. They are able to assess agriculture environment interactions and devise environmental management strategies to manage agriculture as a business.

The programme offers a combined curriculum of theoretical and hands-on practical experience through field work, laboratory experiment and research project. It is organised into six semesters, each of which corresponds to half a year (14 weeks) of full-time study. The programme begins with modules that provide fundamental knowledge including key principles and progresses to provide advance knowledge and practical skills in the later years.

# Bachelor of Science (Honours) in Agrotechnology (Minor in Business)

During semester 6, students are placed in relevant industries for 6 month work placement. Each student does a final year project relevant to the industry where the student is attached for the placement.

# **Career Opportunities**

Graduates have the applied and technical knowledge together with communications and business skills to fill various high demand positions in the agricultural industry. Some of the potential local job opportunities are: halal food processing and quality assurance; legal, business scientific and technical consultancy to the agriculture and agrifood sectors; teaching and research in areas related to business, agriculture and agri food; agricultural consultant; estates manager; farm manager; fish farm manager; plant breeder/geneticist; agrosoil scientist; agro economist; farm worker; farm Assistant; farm supervisor.

# **Programme Length: 3 Years**

## YEAR 1

- Effective Communication
- Fundamentals of Biology
- Melayu Islam Beraja (MIB)
- Introductory Chemistry
- Quantitative Methods and Computing
- Biotechnology
- Ecology, Farmland and Soil Management
- Sustainable Crop Seed Bank and Animal Reproduction
  Management
- Principles of Agriculture Technology
- Smart Water and Irrigation Management

# YEAR 2

- Automation in Agriculture
- Smart Greenhouse and Aqua Farming Technologies
- Sustainable Environment, recycling and Climate Crises
- Principles of Economics
- Principles of Marketing
- Research Methodology
- Advances in Pest, Diseases and Weed Control in Farming
- Dairy and Farming Industries
- Halal Life Stock, Welfare and Slaughtering
- Principles of Management

# YEAR 3

- Production and Quality of Seafoods
- Modern Postharvest Management
- Entrepreneurship
- Entrepreneurship
- Elective 1\* (Technology Module)
- 6 Month ExperiencePLUS (Work Placement) with Assigned Final Year Project

## \*Elective Options

- Global Food Marketing Strategies, Sustainable Eco Systems and Society
- Advances in Farming Machineries
- Mechanisation and Farm Buildings
- Agricultural Produce Processing
- Practical Animal Nutrition
- Wildlife and Farming
- Biosecurity Legislation and Regulatory Framework
- IoT, Sensors and Cloud Systems in Agriculture
- Advances in Crop and Animal Science and Technology
- Agricultural Management
- Global Issues in Agriculture
- Enzymology and DNA Technology
- Farm Management and Production Economics
- Agro-processing Management

# Entry Requirements (either one of the following requirements):

# 'A' Level:

DDD or 180'A'Level points in 3'A' level passes with two relevant subjects that include Mathematics, Further Mathematics, Economics, Accounting, Business, Computer Science, Physics, Chemistry, Thinking Skills, Sociology, Information Technology.

or

CC or 160'A'Level points in 2'A' Levels passes with one relevant subject that includes Mathematics, Further Mathematics, Economics, Accounting, Business, Computer Science, Physics, Chemistry, Thinking Skills, Sociology, Information Technology.

# **International Baccalaureate:**

24 points with a minimum of 5 points from relevant subjects at standard level or a minimum of 4 points at higher level with one relevant subject that includes Mathematics, Further Mathematics, Economics, Business and Management, Computer Science, Physics and Chemistry.

# BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of modules including Mathematics.

## **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

# For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' Level or equivalent is required for admission to this programme.

# Applied Mathematics and Economics

Applied Mathematics and Economics programme introduces blend of mathematics and economics to provide the quantitative tools necessary for modern economic analysis and mathematical applications. The combination of both provides variety of important applications such as optimisation, operational research, predicting and forecasting of economic and financial health. The study involves developing problem-solving skills and applying them in financial and economic sectors for developments. Skill and knowledge gained from the study can be used to solve a broad range of issues related to economic development and financial crises. Mathematical modelling of economic relationships and testing hypotheses against real-time data can be a solution to those issues.

# **Career Opportunities**

Graduates from this programme can find employment in wide range of commercial sectors. They can be employed as system analysts, economic analysts or computer programmers. Graduates can be employed in government or private sectors such as treasury, banks, insurance companies or any other departments that require mathematics and economics skills. The degree also provides a platform for entrepreneurship and/or further study at postgraduate level. Applied mathematics skill and knowledge have high social value and can also be used in other applications, e.g. computer science, actuarial science, city planning, climate science, and so on.

# Bachelor of Science (Hons) in Applied Mathematics and Economics

The first two years of the programme focus on building students' knowledge of fundamental mathematical and economic tools. Examples include optimisation, linear algebra, microeconomics, macroeconomics and econometrics. The latter years of the programme take these skills to an advanced level through the application of modern-day problem-solving techniques. Students will graduate with competence in a number of software packages including STATA and MATLAB. This programme will thus aim to prepare students to make a strong contribution to the workforce.

# **Programme Length: 3 Years**

# YEAR 1

- Effective Communication
- Melayu Islam Beraja
- Introduction to Mathematics for Economics
- Introductory Statistics
- Principles of Economics
- Principles of Mathematical Economics
- Linear Algebra
- Principles of Accounting
- Principles of Management

## YEAR 2

- Computational Mathematics I
- Principles of Econometrics
- Differential Equations
- Mathematical Statistics
- Computational Mathematics II
- Advanced Microeconomics
- Applied Econometrics
- Islamic Economics

# YEAR 3

- Operations Research
- Advanced Macroeconomics
- Research Methodology
- Entrepreneurship
- 6 Month ExperiencePLUS (Work Placement) with Assigned Final Year Project

# Entry Requirements (either one of the following requirements):

# 'A' Level:

DDD or 180 'A'Level points in 3 'A' Levels passes with two relevant subjects that include Mathematics, Further Mathematics, Economics, Accounting, Business, Computer Science, Physics, Chemistry, Thinking Skills, Sociology, Information Technology.

or

CC or 160'A'Level points in 2'A' Levels passes with one relevant subject that includes Mathematics, Further Mathematics, Economics, Accounting, Business, Computer Science, Physics, Chemistry, Thinking Skills, Sociology, Information Technology.

# **International Baccalaureate:**

24 points preferably with minimum of 5 points from relevant subjects at standard level or a minimum of 4 points at higher level with one relevant subject that includes Mathematics, Further Mathematics, Economics, Business and Management, Computer Science, Physics and Chemistry.

# BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

in at least 60% of modules including Mathematics.

# **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

# For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' Level or equivalent is required for admission to this programme.

# Mathematical Finance

The importance of the financial sector as a share of national economy has been increasing worldwide. In line with this trend, the complexity and variety of financial markets and products have been rapidly growing. The financial sector has become more skillintensive than the rest of the economy. Jobs in the modern financial industry require technical skills to analyse financial data and build mathematical models. Graduates will possess the subject knowledge and transferable skills that are highly valued by employers in the financial sector as well as other areas where quantitative analysis and data-handling are essential.

# **Career Opportunities**

The graduates will be qualified to start careers as financial analysts, research associates, quantitative traders, actuaries etc. Further, the graduates will possess a competitive set of skill for jobs in other sectors where quantitative analysis and data-handling are vital.

# Bachelor of Science (Honours) in Mathematical Finance

The first year of the programme focus on building students' knowledge of fundamental mathematical and economic tools. Examples include mathematics for economists, statistics and principles of economics. The latter years of the programme take these skills to an advanced level and introduce specialised finance and data analysis modules. In addition to theoretical background, students will have an opportunity to develop practical skills, including the use of software such as Microsoft Excel, EViews and MATLAB.

# **Programme Length: 3 Years**

# YEAR 1

- Effective Communication
- Melayu Islam Beraja
- Introduction to Mathematics for Economics
- Introductory Statistics
- Principles of Economics
- Principles of Mathematical Economics
- Linear Algebra
- Principles of Accounting
- Principles of Management

#### YEAR 2

- Computational Mathematics I
- Principles of Econometrics
- Differential Equations
- Quantitative Foundations of Finance
- Computational Mathematics II
- Applied Econometrics
- Asset Pricing
- Financial Reporting

# YEAR 3

- Research Methodology
- Financial Econometrics
- Corporate Reporting
- Entrepreneurship
- 6 Month ExperiencePLUS (Work Placement) with Assigned Final Year Project

# Entry Requirements (either one of the following requirements):

# 'A' Level:

CDD or 200'A'Level points in 3'A'Levels including two relevant subjects (Biology, Chemistry, Food Studies, Physics, Further Mathematics and Mathematics). or

CC or 160'A'Level points in 2 'A' Levels in two relevant subject (Biology, Chemistry, Food Studies, Physics, Further Mathematics and Mathematics)

# **International Baccalaureate:**

24 points preferably with minimum of 5 points in Biology and Chemistry at standard level or 4 points at higher level.

# BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of modules including Microbiology and one of (Chemistry, Food Chemistry, or Biochemistry).

# **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

## For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' Level or equivalent is required for admission to this programme.

# Food Science and Technology

The aims of the programme are:

- To provide knowledge and skill in food science and technology through theory and applications.
- To apply science and technology principles to deliver safe, nutritious, and convenient food products from raw materials to consumers.
- To produce graduates with skill and attitude who can successfully work as an individual or teams in the context of food product and process development in the modern food industry.
- To develop scientific and personal success skills to enhance individual employability and entrepreneurship in local as well as global food industry.

# **Career Opportunities**

Students can complete an interesting and exciting scientific and technological curriculum that prepare them well for various job opportunities available in the food industry: e.g. product development, quality assurance, food plant and food industry management, food research, food marketing and sales, education and extension. The students are also prepared for graduate studies in human nutrition, biosecurity, medicine, biological sciences, biotechnology, and so on.

# Bachelor of Science (Honours) in Food Science and Technology

In the first year of the programme, students will be introduced to fundamental science relevant to food science and technology. They will use this knowledge to learn the theory in areas of food preservation, sensory science, food safety and quality.

The modules offered in the second year will further enhance their key knowledge and classroom theory in food through practical application in creative development of food, process engineering, concept of Halal food, system thinking in managing sustainable food system and food safety management.

In the third year, students will learn the entrepreneurship aspect and gain an understanding of the complex commercial nature of the food industry. A six-month work placement and individual research project undertaking real-world problem will provide an excellent opportunity for students to reduce the gap between academic theory and real work experience.

# **Programme Length: 3 Years**

# YEAR 1

- Effective Communication
- Fundamentals of Biology
- Melayu Islam Beraja (MIB)
- Quantitative Methods and Computing
- Introductory Chemistry
- Heat and Mass Transfer and Thermodynamics
- Food Preservation
- Food Sensory and Flavour Science
- Food Chemistry
- Food Microbiological Safety and Quality

#### YEAR 2

- Food Product Development and Manufacturing
- Process Engineering Principles
- Principles of Marketing
- Food and Nutrition
- Food Contact Materials and Packaging
- Research Methodology
- Halal Food: Requirements, Quality and Market
- Process Design and Operations
- Quality System Management and Development
- Integrated Sustainable Food System

## YEAR 3

- Industrial Systems, Bioseparation and Purification Processes
- Entrepreneurship
- Elective 1
- Elective 2
- Elective 3
- 6 Month ExperiencePLUS (Work Placement) with Assigned Final Year Project

# \*Elective Modules

- Agricultural Produce Processing
- Advanced Food Formulation Technology and Commercialisation
- Food Supply Chain Management
- Biosecurity Legislation and Regulatory Framework
- Global Food Marketing Strategies, Sustainable Energy
   Systems and Society

# Entry Requirements (either one of the following requirements):

# 'A' Level:

CDD or 200'A'Level points in 3'A' Levels including Biology and two relevant subjects (Chemistry, Food Studies, Physics, Mathematics and Further Mathematics). or

CC or 160'A'Level points in 2 'A' Levels that includes Biology and any relevant subject (Chemistry, Food Studies, Physics, Mathematics and Further Mathematics)

# **International Baccalaureate:**

24 points preferably with minimum of 5 points in Biology and Chemistry at standard level or 4 points at higher level.

# BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Minimum CGPA of 1.6 out of 3, and Merit grade or higher in at least 60% of modules including Microbiology and one of (Chemistry, Food Chemistry, or Biochemistry).

# **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

## For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

In addition to the above entry requirements, a minimum of Credit Six in Mathematics at GCE 'O' Level or equivalent is required for admission to this programme.

# Food Science and Human Nutrition

The aims of the programme are:

- To demonstrate an integrated scientific understanding of food science and nutrition.
- To establish the ability to apply and communicate knowledge to meet the needs of society, industry and the consumer for sustainable and ethical food quality, safety and security of supply.
- To articulate skills on nutritional information according to health status and the interaction between diet, health and disease.
- To develop knowledge and skills in food science and nutrition through theory and applications.

# **Career Opportunities**

Students can pursue careers as nutritionists in food or clinically related health fields. Students who complete the Master of Dietetics degree can also work as registered dietitians. Students can also participate in a variety of job opportunities in the food industry, such as product development, quality assurance, food plant management, food research, food marketing and sales, education and extension.

# Bachelor of Science (Honours) in Food Science and Human Nutrition

In the first year of the programme, students will be introduced to fundamental science relevant to food science and technology. The knowledge is related to the areas of basic food preservation, sensory science, food chemistry and food microbiology

Starting from second year, the students will focus on the relationship between food, nutrition and health as well as examine the environment, socio-economic, cultural and behavioral factors on food choices and nutrion. Students will also learn the physiological and biochemical processes involved in nutrients absorption.

In the final year, students will further explore and apply the knowledge of human health and nutrition, emphasizing on diet planning for better health. Students will undergo a six-month work placement and individual research project related to nutrition and public health for the developemnt of technical, communication and teamwork skills.

# **Programme Length: 3 Years**

# Year 1

- Effective Communication
- Fundamentals of Biology
- Melayu Islam Beraja (MIB)
- Quantitative Methods and Computing
- Introductory Chemistry
- Applied Physics
- Food Preservation
- Food Sensory and Flavour Science
- Food Chemistry
- Food Microbiological Safety and Quality

#### Year 2

- Food Product Development and Manufacturing
- Process Engineering Principles
- Human Anatomy for Pre-Health Professionals
- Food and Nutrition
- Food Contact Materials and Packaging
- Research Methodology
- Nutritional Physiology and Metabolism
- Global Food Culture and Nutrition
- International and Public Health Nutrition
- Food Nutrition Analysis

## Year 3

- Ethical Issues in Healthcare
- Human Health and Wellbeing
- Nutrition in Health and Disease
- Elective modules 1
- Elective modules 2
- 6 Month ExperiencePLUS (Work Placement) with Assigned Final Year Project (related to nutrition and public health)

## \*Elective Modules

- Food and Nutritional Toxicology
- Sports and Exercise Nutrition
- Global Nutritious Food Market
- Practical Application of Diet Therapy

# **Entry Requirements**

At least a second-class honours Bachelors degree, or equivalent, recognised by the Senate of UTB.

At least a credit or equivalent in English Language GCE O-level or an IELTS score of 6.0 or a TOEFL minimum overall score of 550 or its equivalent.

The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

A minimum of a Lower Second-Class Honours Bachelor's degree, or equivalent, in Food Science and Technology or related discipline, recognised by the Senate of UTB.

Mature candidates who do not meet the above minimum requirements but have significant relevant work experience are encouraged to apply.

Admissions criteria for matured candidates are in place and such applications shall be considered on a case by case basis.

# Master Of Science (Msc) in Food Science and Technology

This programme is aimed to provide food science, food technology, and other relevant graduates and practitioners on:

- The advance knowledge and skill of current developments related to sustainable food processing technology in the food industry.
- Applying science and technology principles to ensure sustainability, food quality and food safety.
- Producing graduates with skill and attitude who can successfully work as an individual or teams in the context of food product and process development in the modern food industry.
- Developing scientific and personal success skills to enhance individual employability and entrepreneurship in local as well as global food industry.

# Programme Length: 1 Year (Full Time) 2 Years (Part Time)

# **Career Opportunities**

Students can complete an interesting and exciting scientific and technological curriculum that prepare them well for various job opportunities available in the food industry: e.g. product development, quality assurance, food plant and food industry management, food research, food marketing and sales, education and extension. The students are also prepared for graduate studies in human nutrition, biosecurity, medicine, biological sciences, biotechnology, and so on. The programme provides in-depth knowledge on the food nutrition science, food preservation techniques, food chemistry, food safety and quality which is required for continuous advancement in global food industry. The students will delve in various food processing technologies in different food industry areas. Students are also required to plan and design their research projects with the guidance of a school supervisor, prepare the dissertations and present their scientific findings.

# **Full Time Structure**

- Food Microbiology and Biotechnology
- Food Chemistry and Analysis
- Advanced Food Preservation
- Nutritional Sciences
- Research Methodology
- Advanced HALAL Science
- Global Food Safety Management
- Frontier of Food Processing Engineering
- Elective Modules 1
- Elective Modules 2
- Research Project

## **Part-Time Structure**

#### YEAR 1

- Food Chemistry and Analysis
- Advanced Food Preservation
- Global Food Safety Management
- Frontier of Food Processing Engineering

# YEAR 2

- Food Microbiology and Biotechnology
- Nutritional Sciences
- Research Methodology
- Advanced HALAL Science
- Elective Modules 1
- Elective Modules 2
- Research Project

# \*Elective Options

- Technopreneurship and Innovation
- Food Macrocomponents and Ingredients
- Cereal Science
- Sugar and Confectionery Technology
- Milk and Dairy Technology
- Seafood Quality and Processing
- Rheology and Textural Properties of Food



# Masters by Research and PhD

# **Research Areas**

Research areas include (but are not limited to) the following:

Applied Mathematics and Economics Agrotechnology (Minor in Business) Food Science and Technology Mathematical Finance

# **Programme Length**

# MSc by Research (Full Time)

2 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# MSc by Research (Part Time)

4 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# PhD (Full Time)

3 years of supervised study inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# PhD (Part Time)

6 years of supervised study, inclusive of one year writing-up period. The submission of thesis is before the end of the writing-up period.

# School of Design

UTB School of Design was introduced in 2018 offering two courses BSc (Honours) in Architecture and BSc (Honours) in Product Design, and a new addition of the BSc (Honours) in Fashion Design and Technology in 2021. The school offers engineering based and creative art-based modules through practical and theoretical approach.

Teaching force consists of local and expatriate academics as well as experienced lecturers from industries. The new School of Design complex currently houses over 100 students which also showcases the students work in the Gallery room located in the front section of the building.



# Programmes Offered

# **UTB-SP Bridging Programme**

BriTE (please refer to page 116)

# **Undergraduate Programmes**

**Product Design** Bachelor of Science (Honours) in Product Design

**Fashion Design and Technology** Bachelor of Science (Honours) in Fashion Design and Technology

**Architecture** Bachelor of Science (Honours) in Architecture

# **Graduate Programmes**

Masters in Architecture (Full Time)

Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)

# Product Design

The Product Design program started in 2018 as a 4-year program, and in the coming intake August 2022 we will begin a 3-year program. The difference is that instead of a full one semester ExperiencePlus program in the 3rd year, students will do the ExperiencePlus program in the 3rd year part-time, while finishing the remaining study. Just like the Architecture program, in Product Design program students also learn through lectures, tutorials, studio-based courses and project-based courses.

The studio-based courses are what distinguishes Design from Engineering. You might have heard about Product Design from Engineering schools, but when you're trained as a designer the emphasis is in creativity, conceptual, and considering the relationship between people and products more than the relationship between the components within the product.

# **Career Opportunities**

Product Designer - researcher and developer, Project Manager - managing a development project on behalf of a client, Specialist in the field of Computer Aided Design and Drafting (CADD), Research Officer (with universities, research institutions, NGO's or private firms), Graphic Illustrator, Academic, Product Design writer for journals, Developer, Manufacturer, Entrepreneur, Contractor and others. At the end of the programme, students are expected to be able to:

- Apply relevant engineering and technology competencies in solving product design problems.
- Determine the application of production costing, social legislative and/or environmental sustainability factors in relation to product design activities.
- Interpret business and socio-cultural concepts, principles, standards, and norms as applied to product design processes.
- Solve design problems through research that addresses human needs and project requirements.
- Consolidate design thinking processes and methodologies in creating solutions for product design problems.
- Integrate communication and technological tools/media in product design processes.
- Construct digital and/or physical artefacts for product design solutions with adequate confidence and proficiency.
- Justify the importance of Intellectual Property Rights, Ethics & Professionalism, and Industry Standards in the Industrial Design discipline.
- Demonstrate communication skills, the ability to work independently and collaboratively through self-initiated and/or life-long learning activities in various contexts of organisation, culture and values.

# Bachelor of Science (Honours) in Product Design

# YEAR 1

- Graphic Technique for Product Design
- Mechanics for Design
- Effective Communication
- MIB
- Visual Communication Design
- Engineering Materials
- Creative Design Fundamentals
- User-Centred Design
- Computer Aided Drafting
- Computer for Engineers

# YEAR 2

- Creative Design Studio 1
- Model Making and Rendering
- Research Methods for Product Design
- Electrical Laboratory Skills
- Legal Aspects of Product Design
- Management of Creativity, Design and Innovation
- Professional Ethics
- Creative Design Studio 2
- Ergonomics and Design

# YEAR 3

- Entrepreneurship
- Capstone Project Part A
- Design for Innovation
- Prototyping Technologies
- Capstone Project Part B
- Professional and Portfolio Development
- Sustainable Design
- Design for Manufacture
- ExperiencePLUS

# Entry Requirements (either one of the following requirements):

# 'A' Level:

CDD or 200'A'Level points in 3'A'Levels passes with minimum of grade C including Mathematics, Physics, Design & Technology, Computer Science/ Study, Art or Art & Design.

# or

BC or 180'A'Level points in 2'A'Levels passes with minimum of grade C including Mathematics, Physics, Design & Technology, Computer Science/ Study, Art or Art & Design.

# International Baccalaureate:

A minimum of 24 points preferably in Mathematics, Physics, Design & Technology, Computer Science/ Study or Art & Design at standard level.

# BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

In Architecture, Interior Design, Mechanical Engineering, and Electrical & Electronics Engineering.

# Work Experience:

Relevant work experience and qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

# AND

At least a Credit Six in Mathematics at GCE 'O' Level or its equivalent.

# AND

A portfolio containing at least 10 pieces of original work that demonstrate applicant's creative development and/ or process. The portfolio should include drawings, sketches, idea developments and demonstrate relevant 2D work (e.g. posters, editorial, photography, graphic design artwork, paintings, printmaking, digital imaging, web design, etc) and 3D work (e.g. 3D design, 3D paper structures, packaging design, etc).

# AND

A pass in the interview.

# Fashion Design and Technology

The general aim is to train students to be competent professionals for the fashion industry which includes textiles, apparel, retailing, design and related organisations. The programme enables students to play an active role for the development of fashion and textiles industry locally and internationally. The programme also aim to cultivate essential competencies for today's society such as teamwork, leadership, entrepreneurship and life-long learning. The students will possess critical thinking, creativity and problem solving.

# **Career Opportunities**

Possible careers for graduates completing this programme are such as and not limited to; Fashion designer, Fashion print designer, Knitwear designer, Textile designer (interiors, automotive, fashion etc), Material developer/ R&D, Accessories design, Pattern cutter, Garment technologist, Stylist, etc. At the end of the programme, students are expected to be able to:

- Apply research methods, communication methods and techniques in the development of their discipline and specialisms
- Apply creative and logical thinking processes using design methodologies to create design solutions.
- Understand cultural, historical and socioeconomic contexts as well as awareness of fashion and technology concepts.
- Demonstrate and apply presentation and communication skills including illustration techniques, working drawings and graphic skills and presentation relevant to a Fashion Design portfolio.
- Demonstrate effective professionalism skills, teamwork and self-management and effective use of technology including IT.
- Apply ethical and professional conduct in design practices.
- Demonstrate the awareness of financial, economic, social legislative and environmental factors and their impact towards design.

# Bachelor of Science (Honours) in Fashion Design and Technology

# YEAR 1

- Design Concept
- Textile Design 1
- Fashion Design Studio 1
- Effective Communication
- Melayu Islam Beraja
- Sustainable Fashion
- Fashion Design Studio 2
- Introduction to Fashion History, Culture and Trends
- Fabric and Textile
- Basic Sewing

# YEAR 2

- Dyeing and Printing
- Pattern Making and Construction 1
- Textile Design 2
- Fashion Technology
- Fashion Marketing
- Advanced Fashion Illustration
- Pattern Making and Construction 2
- Textile Design 3
- Fashion Presentations
- Fashion Design Studio 3

# YEAR 3

- Capstone Project Part A
- Fashion Merchandising and Retailing
- Line Development
- Apparel Production and Quality Control
- Entrepreneurship
- Capstone Project Part B
- Fashion Design Studio 4
- Draping and Grading
- Fashion Research
- ExperiencePLUS

Entry Requirements (either one of the following requirements):

# 'A' Level:

CDD or 200 'A'Level points in 3 'A' Levels including Art, Design & Technology, Computer Science/ study or Art & Design.

or

BC or 180'A'Level points in 2'A' Levels including Art, Computer Science or Art & Design.

# International Baccalaureate:

A minimum of 24 points preferably in Design Technology and/or Visual Art at standard level.

# BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent in relevant subjects.

# Work Experience:

Relevant work experience and qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

# AND

At least a Credit Six in Mathematics at GCE 'O' Level or its equivalent.

# AND

A portfolio containing at least 10 pieces of original work that demonstrate applicant's creative development and/ or process. The portfolio should include drawings, sketches, idea developments and demonstrate relevant 2D work (e.g. posters, editorial, photography, graphic design artwork, paintings, printmaking, digital imaging, web design, etc) and 3D work (e.g. 3D design, 3D paper structures, packaging design, etc).

# AND

A pass in the interview.

# Architecture

Architecture is one the most enjoyable and rewarding profession. In designing new spaces and buildings around our everyday lives and needs. Architects are often challenged intellectually, artistically and creatively. Architect can make major contribution to society by shaping our environment and surrounding, leaving lasting impact and legacy. This programme seeks to equip the students with the knowledge and expertise to create architectural designs that balance the human needs and preserving the integrity of the environment, satisfying the aesthetic, technical and cultural demands.

The programme is designed to train students after a successful completion Diploma in Architecture or GCE 'A' Level or Equivalent. Students embark into a program that introduce them to core areas of architecture and inculcate a sense of responsibility and commitment to the natural and built environment. This is done through the understanding of Sustainable approach, where environmental values & green are integrated into the courses. B.Sc. (Hons) in Architecture provides the design and technical skills requirements of the overall architectural education leading to Part I and a basic entry requirement to the Master of Architecture [Part II] for the professional degree programme.

# **Career Opportunities**

Job prospects for the Bachelor of Science in Architecture graduates include: Government or Public Assistant Architect with the Public Works Department and Statutory Bodies, Assistant Architect to Professional Architect as an employee in a beg architectural organisation, Project Manager - managing a development project on behalf of a client, Specialist in the field of Computer Aided Design and Drafting (CADD), Research Officer (with universities, research institutions, NGO's or private firms), Graphic Illustrator, Academic Architectural writer for journals, Developer, Manufacturer, Entrepreneur, Contractor and others. At the end of the programme, students are expected to be able to:

- Describe fundamental concepts and theories for architectural and construction techniques
- Describe the criteria of the histories and theories of architecture and the related arts, technologies and human sciences
- Demonstrate ability to create architectural designs that satisfy both aesthetic and technical requirements
- Apply theories of Urban Design and planning.
- Integrate the needs and aspirations of building users in architectural design with the precepts of sustainable design.
- Appreciate the role of the profession of architecture and its impact on legal, social, ethical and professional issues.
- Demonstrate ability to produce designs that meet
- building users' requirements, cost factors, and building regulations.
- Apply knowledge of the industries, organisations,
- regulations and procedures to translate design concepts into buildings and to integrate plans into overall planning
- Demonstrate ability to produce designs that meet health and safety requirements.
- Develop an informed appreciation of cultural and contextual studies.
- Apply a range of communication methods and media to present design proposals clearly and effectively.

### Bachelor of Science (Honours) in Architecture

#### YEAR 1

- Design Studio 1
- Effective Communication
- History & Theory of Architecture
- Architectural Drawing and Representation
- Melayu Islam Beraja
- Design Studio 2
- Principle of Structures
- 3D Modeling and Visualisation
- Cultural and Contextual Studies

#### YEAR 2

- Design Studio 3
- Environmental Systems
- Construction Technology
- Building Information Modeling (BIM)
- Design Studio 4
- Industrialised and Automated Building Systems
- Urban Design Theory and Practice
- Introduction to Green Building

#### YEAR 3

- Design Studio 5
- Technical Studies and Documentations
- Building Performance and Services
- Entrepreneurship
- Design Studio 6
- Capstone Project
- Professional Practice
- ExperiencePLUS

### Entry Requirements (either one of the following requirements):

#### 'A' Level:

CCC or 240 'A'Level points in 3 'A' Levels ipasses with minimum of grade C including Mathematics, Physics, Design & Technology, Computer Science/ Study, Art or Art & Design.

#### International Baccalaureate:

A mininum of 30 points preferably in Mathematics, Physics, Design & Technology, Computer Science/ Study, Art or Art & Design at standard level.

#### BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

At least 60% or higher of the modules with Merits in Architecture, or its equivalent (including Interior Design, Civil Engineering and Mechanical Engineering.

#### Work Experience:

Relevant work experience and qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

#### AND

At least a Credit Six in Mathematics at GCE 'O' Level or its equivalent.

#### AND

A portfolio containing at least 10 pieces of original work that demonstrate applicant's creative development and/ or process. The portfolio should include drawings, sketches, idea developments and demonstrate relevant 2D work (e.g. posters, editorial, photography, graphic design artwork, paintings, printmaking, digital imaging, web design, etc) and 3D work (e.g. 3D design, 3D paper structures, packaging design, etc).

#### AND

A pass in the interview.

#### **Entry Requirements**

A minimum of Second Class Honours Bachelor's degree, or equivalent, recognised by the Senate of UTB.

At least a credit or equivalent in English Language GCE O-level or a valid IELTS score of 6.0 or a valid TOEFL minimum overall score of 550 or its equivalent. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

#### Masters in Architecture

Upon successful completion of this programme, graduates are expected to be able to:

- Formulate methodology appropriate to integrated pedagogy for studio design projects that demonstrate social value in evidence-based and reflective feedback.
- Justify current and emerging trends in the building industry related to business skills, ethical and professional practice for construction project management.
- Integrate knowledge of environmental building physics, structural principles, construction techniques and resources to enhance wellbeing and promote Zero Energy Building.
- Develop a conceptual and critical climate action approach of sustainable cities and communities that integrates aesthetic aspects and technical requirements.
- Prepare a brief that complies with Brunei legislation and statutory building standards, considering the health and life safety to enhance wellbeing.
- Assess climatological-based and sustainable cities design programming by determining client, community and end user needs, and their fit with the site and urban context.
- Produce environmental design research proposal that demonstrate an understanding of social and spatial issues in urbanism to test new hypotheses or theory of environmental building physics.
- Simulate design using the latest 3D software of CAD and BIM as a representation tool for research data, building energy performance analysis and innovative design solutions.

#### Programme Length: 2 Year (Full Time)

#### **Full-Time Structure**

#### Year 1

- Architecture Design Studio 1
- Contemporary Theory of Design
- Urban Transportation and Network
- Architecture Design Studio 2
- Research Methodology in the Built Environment
- Landscape Design and Site Planning

#### Year 2

- Architectural Design Thesis I
- Ecology and Sustainable Building Systems
- Architectural Design Thesis II
- Architectural Management, Practice and Law

# Masters by Research and PhD

#### **Programme Length**

**MSc by Research (Full Time)** 2 years of supervised study inclusive of writing-up period.

MSc by Research (Part Time) 4 years of supervised study inclusive of writing-up period.

PhD (Full Time)
3 years of supervised study inclusive of writing-up period.

PhD (Part Time)6 years of supervised study inclusive of writing-up period.

#### **Research Areas**

Research areas include (but are not limited to) the following:

#### Architecture

Adaptable Design Industrialized Building System Sustainable Architecture

#### **Product Design**

Design of Agri-food Devices Mechanical Engineering Design Additive Manufacturing

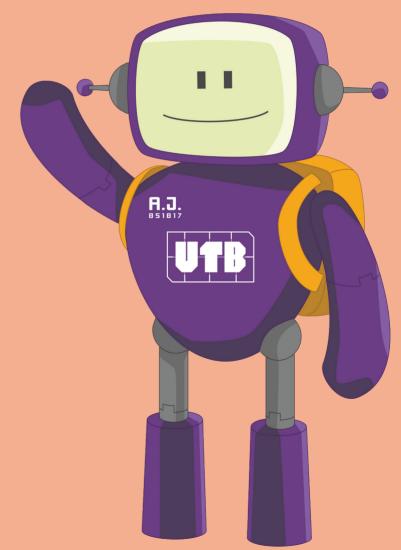


# Centre for Communication, Teaching and Learning

The Centre for Communication, Teaching and Learning (CCTL) is an independent centre in UTB that focuses on development of Communication Skills. In line with UTB's aspiration to be a global university impacting society, CCTL has repositioned itself as a centre offering higher-order programmes in Communication Skills. The Centre consists of three respective areas:

- Communication
- Melayu Islam Beraja
- Teaching and Learning

The Communication area offers communication modules to undergraduates and postgraduates in the university. The BSc and MSc in Communication Programmes aim to develop knowledge and understanding of communication skills according to various communication perspectives. Potential career opportunities are available in various organisations and industries such as editors, journalism, marketing, and human resource. Jobs are not restricted to government organisations but to private sectors as well. Many organisations rely on communication skills to run their daily operations.



### Programmes Offered

#### **Undergraduate Programmes**

Bachelor of Science (Honours) in Communication

#### **Graduate Programmes**

Master of Science (MSc) in Communication (Full Time & Part Time)

Master of Science by Research (Full Time & Part Time) Doctor of Philosophy (PhD) (Full Time & Part Time)

#### **Teaching And Learning**

The Centre for Communication, Teaching and Learning is also offering consultancy and training programmes for UTB staff and students, and interested external stakeholders. Courses can be customised and tailored to suit the needs and demands of industries and organisations.

Some of the training programmes CCTL is currently involved in are as follows:

#### **Student Development Programme (SDP)**

SDP offers a series of skills specific workshops designed to enable students to develop their communication skills. Each workshop focuses on a specific skill area and helps the students to enhance their confidence and competence. Workshops are conducted based on the needs of schools and faculty.

#### **Faculty Development Programmes (FDP)**

CCTL conducts seminars and workshops on innovative pedagogy focusing on assessment, curriculum, reflective teaching and quality assurance. The primary aim of this initiative is to assist academic staff to become more competent as facilitators of learning within the context of higher education and to promote internal quality assurance at UTB. Thus, the general objectives are:

- To increase understanding of teaching and learning processes;
- To improve competence in teaching and assessment methods;
- To foster reflective teaching practice and professionalism; and,
- To encourage the development of a scholarly and research-based approach to teaching and learning.

#### Administrative Staff Development Programme (ASDP)

The ASDP offered workshops to all non-academic staff (administrative and support staff) of the university. The primary aims of this initiative are:

- To foster effective organisational and communication skills;
- To improve and practice effective team work;
- To enhance administrative staff development skills in UTB office environment.



### Entry Requirements (either one of the following requirements):

#### 'A' Level:

CDD or 200 'A'Level points in 3 'A'Levels in relevant English medium subjects<sup>\*</sup>. or BC or 180 'A'Level points in 2 'A'Levels n relevant English

medium subjects\*.

\*Relevant subjects include English Literature, Sociology, Psychology, Public Affairs, History, Art and Design, Accounting, Economics, Management/Business Studies, Mathematics, Computing, Additional Mathematics, Biology, Chemistry, Physics, Geography, Travel and Tourism, and Law.

#### **International Baccalaureate:**

24 points in relevant subjects.

### BDQF Level 5 or BTEC/BDTVEC Higher National Diploma or Advanced Diploma or its equivalent:

Business or ICT fields with acceptable grades as specified by the school.

#### **Work Experience:**

Relevant work experience and/or qualifications deemed to be equivalent to one of the above to be decided on a case by case basis by the School.

In the absence of Credit Six in Mathematics at GCE Ordinary Level, the Centre for Communication, Teaching and Learning recognises subjects which may include but not limited to Commerce, Principles of Accounting, Physics, Chemistry, Computer Science, Economics, Additional Mathematics and any relevant subjects at the discretion of the Centre.

#### For mature applicants:

Standard university requirements for mature candidates as prescribed by university regulations apply.

#### Bachelor of Science (Honours) in Communication

This BSc in Communication programme aims to develop communication skills according to various contexts and promote students' knowledge and understanding of the various communication perspectives. Specifically, the programme will enable students to gain fundamental communication research skills that provide opportunities for the development of communication skills in general, and the application of communication theories, tools and practices for effective communication in contemporary and diverse organisations. Emphasis will be on developing effective communication methods and writing strategies for various mediums, as well as critical analysis and response mechanism on issues from different stakeholders.

#### **Programme Length: 3 Years**

#### YEAR 1

- Melayu Islam Beraja
- Effective Communication
- Communication Theories
- Introduction to Psychology in Communication
- Public Relations: Theories and Practices
- Fundamentals of Communication Strategies and Assessment
- Non-Verbal Communication
- Introduction to Mass Media
- Critical Thinking
- Communication Research Methods

#### YEAR 2

- Intercultural Communication
- Gender and Communication
- Corporate Communication
- Managerial Communication and Leadership Practices
- Current and Future Trends in Media and Communication
- Interpersonal Skills for Professionals (in multi-disciplines)
- Digital Literacies
- Critical Writing
- Elective 1
- Elective 2

#### YEAR 3

- Conflict Resolution and Group Dynamics
- Communication Law and Ethics
- Approaches to Analysing Discourse
- Entrepreneurship
- Final Year Project [Communication Dissertation]
- ExperiencePLUS

#### **Entry Requirements**

A minimum of a Lower Second Class Honours Bachelor's degree, or equivalent, recognised by the Senate of UTB.

At least a credit or equivalent in English Language GCE O-level or a valid IELTS score of 6.0 or a valid TOEFL minimum overall score of 550 or its equivalent. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than 2 years prior to their current application they will need to show that they have continued to study or work in the medium of English.

#### Master of Science (Msc) in Communication (Full Time and Part Time)

This programme aims to provide in-depth communication skills and knowledge across related multidisciplinary areas. Emphasis will be on development of effective and pragmatic professional and technical communication in professional institutions and business organisations. The programme will focus on higher level skills in interpreting and analysing communication and interaction in professional situations to allow progress and development in careers that suit Brunei and global contexts and perspectives. The modules incorporate various analytical methods, creative and critical thinking skills, problem-solving, research skills, communication development techniques, and writing strategies for branding purposes.

Programme Length: 1 Year (Full-Time) 2 Years (Part-Time)

#### **Full-Time Structure**

#### Semester 1

- Research Methodology
- Research Communication
- Psychology In Communication
- Performative Communication
- Strategic Speech

#### Semester 2A

- Strategic Corporate Writing
- Culture And Communication
- Communication Trends And Transitions In Digital Society
- Conflict Resolution And Mediation
- Advanced Public Relations: Perspectives And Applications

#### Semester 2B

• Research Project: Master's Dissertation

#### **Part-Time Structure**

#### Semester 1 - August (Year 1)

- Research Methodology
- Psychology In Communication
- Performative Communication
- Strategic Speech

#### Semester 2 - January (Year 1)

- Conflict Resolution And Mediation
- Strategic Corporate Writing
- Communication Trends And Transitions In Digital Society

#### Semester 3 - August (Year 2)

- Research Communication
- Advanced Public Relations: Perspectives And Applications
- Culture And Communication

#### Semester 4 - January (Year 2)

• Research Project: Master's Dissertation



# Masters by Research and PhD

#### **Programme Length**

#### **MSc by Research (Full Time)**

2 years of supervised study inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### MSc by Research (Part Time)

4 years of supervised study, inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### PhD (Full Time)

3 years of supervised study inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### PhD (Part Time)

6 years of supervised study, inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### **Research Areas**

Research areas include (but are not limited to) the following:

#### Communication

Communicative Competence Cross-cultural Studies Corporate Communication Public Relation Strategic Communication Sociolinguistic Genre Analysis Corpus Analysis

#### **Teaching and Learning**

Instructional communication Outcome based education Competency based education Innovative curriculum development and design Professional Development in Higher education STEM Education Literacy Transformative Learning Narrative-based research Feedback in Higher Education Teaching Pedagogies in Higher Education Assessment in Higher Education

#### Malay Islamic Monarchy / Melayu Islam Beraja (MIB)

Islamic Leadership Cultural Studies Brunei National Philosophy MIB Values

## UTB-Satellite Partners Bridging Programme







UTB-SP bridging programme is a 14-week programme open to applicants who meet the university's minimum general entry requirement but fall short of points for admission to specific undergraduate programmes. The programme also offers lifelong learners who have been out of study for a period of time, the opportunity to upgrade their fundamental knowledge and skills required to further their study in specified programme.

UTB-SP bridging programmes are offered for undergraduate programme applications under the following Faculty/School:

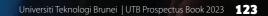
BriTE for Faculty of Engineering, School of Applied Sciences and Mathematics, and School of Design programmes.
BriCOMP for School of Computing and Informatics programmes.
BriBUS for UTB School of Business programmes.

#### **General Entry Requirements**

At least a Credit Six in the Malay language at GCE Ordinary Level (applicable only for Bruneians applying for a Government Scholarship).

At least a Credit Six in Mathematics at GCE Ordinary Level or its equivalent.

At least a Credit Six in English Language at GCE Ordinary Level or an IELTS score of 6.0 or TOEFL minimum overall score 550 or its equivalent



### BriTE

Students who have successfully completed the BriTE programme will be eligible for admission into one of the following first year undergraduate programmes at UTB:

- BEng (Hons) in Chemical Engineering
- BEng (Hons) in Civil Engineering
- BEng (Hons) in Electrical and Electronic Engineering
- BEng (Hons) in Mechanical Engineering
- BEng (Hons) in Mechatronics Engineering
- BEng (Hons) in Energy Engineering
- BSc (Hons) in Product Design
- BSc (Hons) in Food Science and Technology
- BSc (Hons) in Food Science and Human Nutrition
- BSc (Hons) in Agrotechnology (Minor in Business)

#### **Satellite Partner**

Kemuda Institute

#### Eligibility for Admission Into Faculty Of Engineering Undergraduate Programmes

Students who obtain at least 60% marks per enrolled core module will be eligible for admission into the first year of the Faculty of Engineering undergraduate programmes of their choice. Three core modules are offered: Mathematics, Physics and Chemistry. Students with sufficient 'A' Level grade as required for admission to the undergraduate degree may be exempted from taking the relevant module. Students on BriTE will therefore take a minimum of one core module and a maximum of 3 core modules. In addition to the core modules, students are required to take one compulsory module which is Introduction to Programming.

#### How to Apply?

Application for BriTE Programme is made through the respective Satellite Partner and HECAS portal. Where this option is not easily accessible for the applicant, computers are available at the UTB Staff and Students Centre (SSC). Email for enquiry: admission@utb.edu.bn

#### Structure of Programme

SEM	CODE	MODULE TITLE	
FE01	FE01	Mathematics	
March to July	FE02	Physics	
14 weeks	FE03	Chemistry	
	FE04	Introduction to Programming	

#### Entry Requirements for BEng (Hons) programmes in Chemical, Civil, Mechanical, Mechatronics, or Energy Engineering

#### 'A' Level:

CDD or 200'A' Level points for 3'A' Level passes including: Mathematics, Physics and any other relevant subject specified in the published entry requirements for the applicable BEng programme.

#### **International Baccalaureate:**

24 points at higher level subjects including Mathematics, Physics and other relevant Science subjects (Computer Science, Chemistry, Design Technology).

### Entry Requirements for BEng (Hons) programme in Electrical and Electronic Engineering:

#### 'A' Level:

DDD or 180'A' Level points for 3'A' Level passes including: minimum D grades in both Mathematics and Physics, and any other relevant Science subject (Chemistry, Further Mathematics, Biology).

or

CC or 160'A' Level points for 2'A' Level passes, with minimum C grades in both Mathematics or Further Mathematics and Physics.

#### International Baccalaureate:

24 points at higher level subjects including Mathematics, Physics and other relevant Science subjects (Chemistry, Computer Science, Design Technology).

### Entry Requirements for BSc (Hons) in Food Science and Technology, Food Science and Human Nutrition:

#### 'A' Level:

DDD or 180 'A' Level points for 3 'A' Level passes including two relevant subjects (Biology, Chemistry, Food Studies, Physics, and Mathematics)

or

CD or 140 'A' Level points for 2 'A' Level passes in two relevant subjects (Biology, Chemistry, Food Studies, Physics, and Mathematics)

#### Entry Requirements for BSc (Hons) in Product Design:

#### 'A' Level:

DDD or 180 'A' Level points for 3 'A' Level passes in subjects including Mathematics, Physics, Design & Technology, Computer Science or Art & Design).

or

CC or 160'A' Level points for 2'A' Level passes in subjects including Mathematics, Physics, Design & Technology, Computer Science or Art & Design.

AND

A portfolio containing at least 10 pieces of original work that demonstrate applicant's creative development and/or process. The portfolio should include drawings, sketches, idea developments and demonstrate relevant 2D work (e.g. posters, editorial, photography, graphic design artwork, paintings, printmaking, digital imaging, web design, etc) and 3D work (e.g. 3D design, 3D paper structures, packaging design, etc).

AND

A pass in interview.

#### Entry Requirements for BSc (Hons) in Agrotechnology (Minor in Business)

#### 'A' Level:

DDD or 180 'A' Level points for 3 'A' Level passes including two relevant subjects (Biology, Chemistry, Food Studies, Physics, Further Mathematics, Mathematics, Business and Economics)

#### or

CD or 140'A' Level points for 2 'A' Level passes in two relevant subjects (Biology, Chemistry, Food Studies, Physics, Further Mathematics, Mathematics Business and Economics)

### BriCOMP

Students who have successfully completed the BriCOMP programme will be eligible for admission into one of the following first year School of Computing and Informatics undergraduate programmes at UTB:

- BSc (Hons) in Digital Media (Major in Digital Content Design or Major in Game Development)
- BSc (Hons) in Computing (Major in Data Analytics or Major in Software Development)
- BSc (Hons) in Computer and Information Security
- BSc (Hons) in Computer Networking

#### **Satellite Partner**

Micronet International College

#### Structure of Programme

SEM	CODE	MODULE TITLE
	FC01	Computional Mathematics
	FC02	Fundamental of Programming
March to July 14 weeks	FC03	Introduction to Multimedia
T T Weeks	FC04	Computer System and Architecture
	FC05	Basic of Database System

#### Eligibility For Admission Into School of Computing and Informatics Undergraduate Programmes

Students who obtain at least 50% marks per enrolled module will be eligible for admission into the first year of the School of Computing and Informatics undergraduate programmes of their choice.

#### How To Apply?

Application for UTB-SCI BriCOMP Programme is made through the respective Satellite Partner and HECAS portal. Where this option is not easily accessible for the applicant, computers are available at the UTB Staff and Students Centre (SSC). Email for enquiry: admission@utb.edu.bn

#### **Entry Requirements**

#### 'A' Level:

DDE or 160'A' Level points for 3 A-level passes including:

- One subject from Group A, and two from Group B
- Two subjects from Group A, and one from Group B
- Three subjects from Group A
- or

CD or 140 'A' Level points for 2 A-level passes including:

- At least one subject from Group A, and one from Group B
- Two subjects from Group A

#### International Baccalaureate:

20 points at higher level subjects including Mathematics and Physics and other relevant science subjects (Computer Science, Chemistry, Design Technology)

#### **Group A**

Computer Studies / Science Further Mathematics Mathematics Physics

#### Group B

Applied ICT/IT Accounting Biology Business Studies Chemistry Design & Technology Economics English Literature Geography History Media Studies Psychology Sociology Thinking Skills Travel & Tourism

### BriBUS

Students who have successfully completed the BriBUS programme will be eligible for admission into one of the following first year School of Business undergraduate programmes at UTB:

- BBus (Hons) (Major in Accounting Information Systems)
- BBus (Hons) (Major in Finance and Risk Management)
- BBus (Hons) (Major in Applied Economics and Finance)
- BBus (Hons) (Major in Marketing Information Systems)
- BBus (Hons) (Major in Business Information Management)
- BBus (Hons) (Major in Business Technology Management)

#### **Satellite Partner**

• International Graduate Studies College (KIGS)

#### Eligibility for admission into UTB School of Business Undergraduate Programmes

Students who obtain at least 50% marks per enrolled module will be eligible for admission into the first year of the UTB School of Business undergraduate programmes of their choice.

#### How To Apply?

Application for BriBUS Programme is made through the respective Satellite Partner and HECAS portal. Where this option is not easily accessible for the applicant, computers are available at the UTB Staff and Students Centre (SSC). Email for enquiry: admission@utb.edu.bn

#### Structure of Programme

SEM	CODE	MODULE TITLE	
	FB01	Mathematics for Business	
	FB02	Introduction to Accounting	
March to July	FB03	Introduction to Finance	
14 weeks	FB04	Introduction to Management and Marketing	
	FB05	Business Economics	

#### **Entry Requirements**

#### 'A' Level:

DEE or 140'A' Level points for 3 A-level passes in relevant English medium subjects

#### or

CE or 120'A' Level points for 2 A-level passes in relevant English medium subjects

#### International Baccalaureate:

18 points in International Baccalaureate.

#### **Relevant Subjects**

Accounting Economics Management of Business Business Studies Mathematics Computer Studies Additional Mathematics Biology Chemistry Physics English Literature Geography Public Affairs History Sociology

# UTB ExperiencePLUS

The ExperiencePLUS programme in UTB is intended to provide a platform to extend students' experience beyond the walls of academia. It is structured into the University's undergraduate programmes and provides opportunities for all undergraduate students to partake in work attachment in local or overseas institutions to enhance their experiential learning and facilitate the attainment of life skills. The programme adds value to students' academic qualifications and contributes towards the preparation of students for the world of business and industry. Students in UTB can also vie for overseas internship opportunities which are more competitive. Students must demonstrate a high standard of academic performance and be in the top 10% of the cohort in order to qualify for fully-funded overseas placements. Selffunded arrangements are also possible. The Deputy Dean of the School/Faculty can be contacted for further details.





### International Students

Being a student in a foreign country can be challenging and demanding at times. This is especially true when one is in a foreign place with different physical, cultural, social and religious settings than the ones of their own. However, it is an academic sacrifice worth making.

UTB's vision is to become a global university impacting society, therefore UTB is more than ready to provide both local and international students with a learning experience that is diverse in its learning culture and a stimulating environment that will help students realise their full potential.

UTB is committed to providing its international students with the best care and assistance. UTB's Students Welfare Office provides various kinds of assistance and support to facilitate a smooth and easy transition and immersion to a new environment for new international students. Some of the assistance provided includes formality assistance to handle their visa and student pass application. The EXCO International Affairs under the Student Representative Council are also ready to aid them with any matters pertaining to students' affairs and they automatically become a member of the UTB International Students' Club where they can meet other international students. UTB also holds regular Students' Affairs & International Students Dialogue sessions for updates and to address any arising matters. During semester breaks, outings and trips around Brunei Darussalam are organised to provide international students with a better understanding of the country's history, background, culture and people. International students are also given the opportunity to undergo industrial attachment under the UTB ExperiencePLUS.

#### Kurbanov Umid Rajabboevich (Uzbekistan) BBus (Hons) in Marketing and Information Systems

"The opportunity was given to me by my previous university, University of World Economy and Diplomacy, where I took my first degree. It has always been my dream to study abroad, so I decided to apply for a scholarship to UTB. I can say that I am truly grateful to be accepted to UTB."

#### Rawiyah Mulung (Mauritius) BEng(Hons) in Electrical and Electronic Engineering

"To be honest, I have never heard about UTB until I came across a scholarship offered by the Brunei Government for undergraduate students. I was intrigued, so I did my research on which universities I could go to. Being an engineering student, my obvious choice was UTB, which is the leading technology university in Brunei."

#### Lenita Helina Faumuina (Samoa) BSc (Hons) in Creative Multimedia

"When I found the Creative multimedia degree program on the UTB website, I knew that I had to apply. In my earlier years it has always been something that I'd been interested in, but was not available to me. Receiving an offer from UTB was one of the greatest events in my life, and I wasn't going to let the opportunity go to waste. It has been a great journey for me, moving to a country I had never been to before and leaving my country for the first time was both thrilling but at the same time nerve wrecking. Fast forward 3 year later, I am in my 3rd year and interning at the UTB, International and Public Relations Office. I've learnt so much in my 3 years at UTB, not only in terms of education but it has also pushed me to be a better version of myself, in discipline and maturity.

#### Muhammad Ahsan Akram (Pakistan) BEng (Hons) in Mechanical Engineering

"I was given the opportunity to discover and experience Brunei through an academic grant provided by the Brunei Government. I have a passion towards Mechanical Engineering and since UTB is the only university that offers the course, it was obvious that my choice would be UTB."

#### Muhammad Shaban (Egypt) MSc by Research in Electrical and Electronic Engineering

"I chose UTB when I applied for Brunei Government Scholarship because I was attracted with the courses offered."

## Why I Chose UTB?

#### Nidup Dorji (Bhutan) BBus (Hons) In Accounting & Information Systems

"I chose UTB because the International students at UTB came from all over the world, I feel that the teaching and learning at UTB is at par with other well-known international standards and of course the courses offered at UTB are very attractive."

#### Suaibou Adamu (Republic of Cameroon) BEng (Hons) in Civil Engineering

"I chose to study at UTB without a second thought for the great reputation, diverse student body and it has a strong Engineering Faculty, besides Brunei is a safe and peaceful country. UTB is also known for its emphasis on the spirit of communication and cooperation. When I received the study offer I was greatly impressed and excited! UTB is no doubt the heart of the nation, studying as an international student has, overall, been a positive and overwhelming experience. My one-year at UTB is one of greatest years of my study; having taught by world class and experienced lecturers, I have acquired a lot in just a very short period of time. UTB has an excellent faculty, flexible course structure, and most importantly a friendly atmosphere for foreign students; hence, it is the perfect destination for pursuing higher education. I must say I am proud to be a student here and graduating with its certificate. "

# Application Process

Applicants who fulfil the minimum entry requirements into an undergraduate programme of their choice, offered at Universiti Teknologi Brunei are eligible to apply to the University.

For applicants based in Brunei Darussalam, the following process should be followed:

1

All applications (except for in-service applicants) must be made **online** by visiting the HECAS portal at **www.hecas.edu.bn** 

2

Following the above online application, applicants are required to submit a print-out of their application form (HECAS) together with a copy of identity card, certified true copies of academic certificates and relevant documents to the University and make an online application at **Apply@UTB**.

3

The complete set of application form together with all copies of certificates and related documents required is to be **submitted directly to the University not later than one (1) week after the closing date set by HECAS.** 

For applicants who are in-service and currently employed in Brunei Darussalam, the following process should be followed:

All applicants who are currently employed by the Government either in a permanent, temporary, month-tomonth, open vote or daily paid position, or in the private sector are required to apply through the university's online application system at **Apply@UTB**.

2

A print-out of the application form is to be **submitted to the University before the deadline not later than one (1) week after the closing date set by HECAS.** 

3

**In addition**, their application will only be considered if the hard copy application form is submitted through their Head of Department together with a confidential report and record of service. The applicants are responsible for submitting their applications to their Head of Department in good time to make sure it reaches UTB before the deadline.

All copies of certificates and documents attached to the application forms are to be **certified by the Head of Department/Employer.** 

The complete set of application form together with all copies of certificates and related documents required is to be **submitted directly to the University not later than one (1) week after the closing date set by HECAS.** 

# Fee Regulations

On receiving the offer to study at the University, the student, upon accepting the offer of admission, must pay all fees at the counter located at the UTB Finance Office. The fees will include registration, programme deposit, administrative charges and other general fees where applicable, and tuition fee. An official receipt will be produced and this receipt must be shown during the registration day.

#### **Fees Schedule**

#### **Acceptance Fees**

Payable by non-government scholarship students on accepting the offer of admission (non-refundable):

All Programmes	B\$1(

**Programme Deposit** (Refundable upon completion of study except for 'self-withdrawal' students)

Undergraduate Degree (Part Time)B\$200.00Postgraduate Degree (Part/Full Time)B\$300.00

#### Field Trip/Site Visit Fee

Students will be advised of any such fees by the programme area on registration.

#### **Examination Fees**

Payable at the beginning of the final semester.

Undergraduate Degree (Part-time)	B\$300.00
Postgraduate Master (Part/Full Time)	B\$500.00
Postgraduate PhD (Part/Full Time)	B\$750.00

#### **Administrative Charges**

Payable by all students

Student's Welcome Pack	B\$80.00
Student Association Fee per academic year	B\$60.00

#### Insurance

00.00

All local and international students are required to obtain their personal insurance for the duration of their studies and other related insurance as deemed necessary by the programme. The details need to be worked out with the insurance company concerned during the orientation week.



#### **Undergraduate Degree Programmes**

Full Time B\$16,000.00 per programme\*

Part Time B\$18,000.00 per programme\*

<sup>\*</sup>International Rates Apply, please refer to http://www.utb.edu.bn/academics/undergraduate-tuition-fees/ \*Subject to change.

#### **Graduate Degree Programmes**

#### **Research Programmes**

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Programme (Part Time)	
	Brunei Citizen & PR International		Brunei Citizen & PR	International
PhD	B\$12,000	B\$15,000	B\$12,000	B\$15,000
MSc	B\$4,000	B\$6,000	B\$4,000	B\$6,000

#### **UTB Scholarship for Graduate Students**

UTB scholarships are provided to attract high calibre candidates to conduct full-time graduate studies by research (Masters or PhD) and to contribute to research outcomes as well as to support life-long learning through financial support to highly motivated candidates who cannot qualify for Brunei Ministry of Education (MOE) scholarships. The aim of the funding is also to attract highly qualified international candidates and contribute to diversity among UTB community. UTB scholarship award is subject to terms and conditions.

#### Faculty of Engineering

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Programme (Part Time)	
	Brunei Citizen & PR	International	Brunei Citizen & PR	International
MSc in Civil Engineering	B\$3,500	B\$5,250	B\$3,500	B\$5,250
MSc in Mechanical Engineering	B\$3,500	B\$5,250	Not available	Not available
MSc in Electrical & Electronic Engineering	B\$3,500	B\$5,250	B\$3,500	B\$5,250
MSc in Water Resources & Environmental Engineering	B\$3,500	B\$5,250	Not available	Not available

#### School of Computing and Informatics

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Semester (Part Time)	
	Brunei Citizen & PR	International	Brunei Citizen & PR	International
MSc in Computing and Information Systems	B\$3,500	B\$5,250	Not available	Not available
MSc in Cyber Security	B\$3,500	B\$5,250	B\$2,250	B\$3,375

#### **UTB School of Business**

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Semester (Part Time)	
	Brunei Citizen & PR International		Brunei Citizen & PR	International
MSc in Management & Technology	B\$3,500	B\$5,250	B\$2,250	B\$3,375

#### School of Applied Sciences and Mathematics

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Semester (Part Time)	
	Brunei Citizen & PR International		Brunei Citizen & PR	International
MSc in Food Science and Technology	B\$3,500	B\$5,250	B\$2,250	B\$3,375

#### **School of Design**

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Semester (Part Time)	
	Brunei Citizen & PR International		Brunei Citizen & PR	International
Masters in Architecture	B\$5,250	B\$7,875	Not available	Not available

#### Centre for Communication, Teaching and Learning

Course	Tuition Fee per Programme (Full Time)		Tuition Fee per Semester (Part Time)	
	Brunei Citizen & PR	International	Brunei Citizen & PR	International
MSc in Communication	B\$3,500	B\$5,250	B\$2,250	B\$3,375

### Graduate Studies and Research at UTB

Since its official upgrade to a university status in 2008, UTB is now in the exciting process of transforming from an institute nationally renowned for its strong academic programmes to a leading university of Engineering and Technology of high academic and research calibre at both national and international levels.

UTB has established itself as a reputable institution at both national and international levels. Coupled with the everincreasing staff with high academic and research capabilities, it is now catering for the production of professionals at both undergraduate and graduate levels.

Suitable applicants are now invited for enrolment into our Graduate Research Programmes leading to Masters and PhD, as well as our Masters by Coursework.

# Programme Entry Requirements

For admission into the graduate research degrees, candidates must satisfy the following minimum admission requirements:

### Master's by Research degree and Master's by Coursework

A minimum of a lower second-class honours Bachelor's degree, or equivalent, recognised by the Senate of UTB

#### AND

At least a credit or equivalent in English Language GCE O-level or a valid IELTS score of 6.0 or a valid TOEFL minimum overall score of 550 or its equivalent. The English Language requirements maybe waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than two years prior to their current application, they will need to show that they have continued to study or work in the medium of English

Applications from mature candidates are encouraged. Admission criteria for mature candidates are in place and such applications shall be considered on a case to case basis.

#### Doctor of Philosophy (PhD) degree

A Masters degree, or equivalent, recognised by the Senate of UTB.

OR

An upper second-class honours Bachelor's degree, or equivalent, recognized by the Senate of UTB.

#### AND

At least a credit or equivalent in English Language GCE O-level or a valid IELTS score of 6.0 or a valid TOEFL minimum overall score of 550 or its equivalent. The English Language requirements may be waived where qualifying studies in Higher Education were in the medium of English Language. Where candidates completed their higher education more than two years prior to their current application, they will need to show that they have continued to study or work in the medium of English.

Applications from mature candidates are encouraged. Admission criteria for mature candidates are in place and such applications shall be considered on a case to case basis.

Note that:

- 1. Additional admission requirements set out by the programme area, which would normally include having the required qualification in a relevant area, the submission of a satisfactory research proposal and passing an interview.
- 2. A candidate will only be offered a place if the faculty is able to provide adequate supervision and facilities in the candidate's proposed area of research.

#### **Masters By Coursework**

Currently the following Masters by Coursework are available:

MSc in Civil Engineering (Full Time & Part Time) MSc in Electrical and Electronic Engineering (Full Time & Part Time) MSc in Mechanical Engineering (Full Time)

MSc in Water Resources and Environmental Engineering (Full Time)

MSc in Management & Technology MSc in Management & Technology (Part Time)

MSc in Computing and Information Systems (Full Time) MSc in Cyber Security (Full Time & Part Time)

MSc in Food Science and Technology (Full Time & Part Time)

Masters in Architecture (Full Time)

MSc in Communication (Full Time & Part Time) Full-time study – One year

\* For detailed information on programmes offered, please refer to the respective faculty or schools.

#### **Programme Length**

#### MSc by Research (Full Time)

2 years of supervised study inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### MSc by Research (Part Time)

4 years of supervised study, inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

#### PhD (Full Time)

3 years of supervised study inclusive of one year writing-up period. TThe submission of the thesis is before the end of the writing-up period.

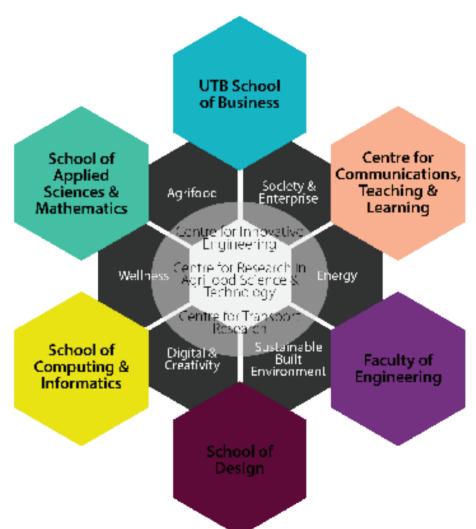
#### PhD (Part Time)

6 years of supervised study, inclusive of one year writing-up period. The submission of the thesis is before the end of the writing-up period.

# Research Thrusts

Research Thrusts facilitates cross-disciplinary research and development as well as innovation across the research areas of UTB by acting as a platform for research teams that transcends across traditional disciplines. In this way, Research Thrusts bring to bear expertise and perspectives of engineers, economists, mathematicians, business and ICT specialists on challenges facing Brunei and the world.

Furthermore, it is envisioned that graduate students immersed in such multi-disciplinary environment will develop a collaborative approach and systems-thinking to their research and problem solving skills.



# Prospective Research Areas by Research Thrusts

UTB's multidisciplinary research are conducted through six Research Thrusts. Each of the research thrusts draws members. from UTB's academic units in Applied Sciences, Business, Design, Engineering and Computing and Informatics. The Research Thrusts provide opportunities for cross-disciplinary Research, Development & Innovation across the University. UTB's six Research Thrusts are in Agri-Food; Digital & Creativity; Wellness; Energy; Sustainable Built Environment and Society & Enterprise. In addition, three Research Centres in UTB serves as a focal point where major engineering and scientific challenges of national importance are addressed. These research centres are the Centre for Transport Research, the Centre for Innovative Engineering, and the Centre for Research in Agri-Food Science & Technology. Research excellence in our University is underpinned by research grants from the Brunei Research Council, industry and international agencies in addition to the internally funded research grants.

The major part of the research management in our university is carried out by the Graduate Studies and Research Office. This office nurtures and develops research excellence, scholarship and creative activities. Local and international researchers are welcome to join and collaborate with UTB researchers in on-going projects and in the proposals for future projects.

# **Agri-Food**

Any areas in the broad context of agriculture, food, nutrition, enabling technology for the aforementioned. Examples include food packaging, irrigation systems for agriculture, and agricultural economics.

# **Digital & Creativity**

Any areas in the broad context of digital, information systems, computing, algorithms, networks, programming languages, hardware and software.

Examples include animation, smart sensors, fashion, internet of things, multimedia technologies, architecture, photonics, semiconductor device design and fabrication.

# Energy

Any areas in broad context of energy including hydrocarbons, renewables, new energy sources, technologies for increased efficiency, enabling technologies such as materials and low-power devices.

# Society & Enterprise

Any areas in the broad context of enterprise, industry and sociology including business, entrepreneurship, communications, studies on impact of technology on social cohesion, security studies, economics.

# Wellness

Any areas in the broad context of well being. Examples include cosmetics, point of care diagnostics, apps for health monitoring, technologies for rehabilitation, geriatrics, occupational wellness, big data analytics for health, etc.

# Sustainable Built Environment

Any areas in the broad areas of built environment such as the use of technologies for smart sustainable living, lowering carbon footprint, water research, novel technologies for construction, and green technology.

# Research Centres

# Centre for Transport Research (CfTR)

The Centre for Transport Research (CfTR) was the first research centre established at Universiti Teknologi Brunei (UTB), with an emphasis on multidisciplinary and collaborative research in the field of transport. CfTR remains the only research centre in the country focusing its research in the field of transport. The centre is committed to improve the transport system by:

- conducting interdisciplinary research to develop, support and complement the relevant national transport plans and strategic directions
- collaborating with fellow national and international researchers for knowledge sharing and advancement
- acting as a transport and road safety resource and training centre

The main research themes of CfTR are road safety engineering, highway and geotechnical Engineering, and traffic engineering. Recent research projects include the application of Geographical Information System for road accident hotspot analysis, database development, laboratory and numerical analysis of road pavement, road safety improvement, intelligent transport system, transport modelling and slope stability analysis. Several academic staff have been seconded to the centre from across the disciplines of Civil Engineering, Electrical and Electronic Engineering, Petroleum and Chemical Engineering and Computer Information System. Moreover, research associates have also been appointed from the government sector and partner university to provide valuable advice and additional expertise to the centre. The centre also regularly hosts research assistants, research interns, research students and final year project students to work on various contemporary research problems related to transport.

Since its establishment, CfTR has maintained an active role in the Brunei Darussalam National Road Safety Council chaired by the Honourable Minister of Transport and Infocommunications. Several research projects have been successfully completed and their outcomes disseminated in Scopus-indexed publications and meetings with relevant stakeholders. Moreover, new research projects and initiatives, which are expected to have a strong impact to improve national road safety and transport system, has been started to strengthen and support the growth of research activities at the university.

# Centre for Innovative Engineering (CIE)

The centre will be a point of reference for innovative research in UTB. CIE will facilitate national innovation leadership and will accelerate the rate of technology adoption. Thus, it will attract national and international partnerships and contribute to intellectual growth in Brunei.

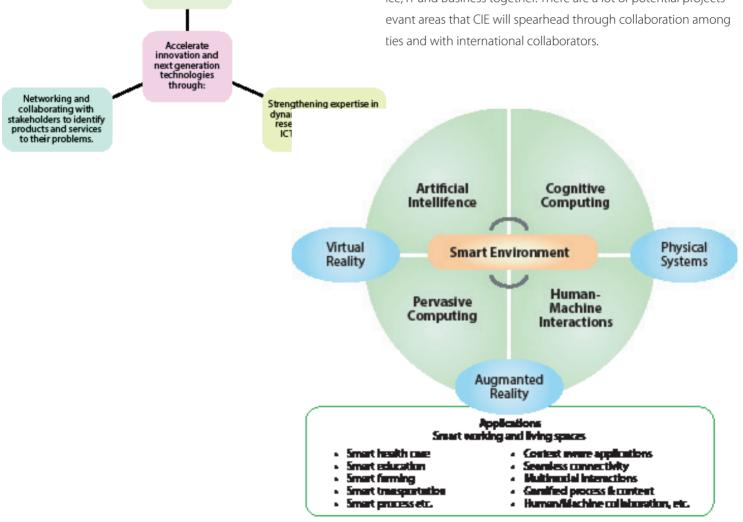
Technology

transfer through partnerships and joint research

collaborations

CIE will focus on strengthening research capability in the key and niche research areas through partnership and technology transfer through the current flagship research titled 'Smart Environment'.

With this multidisciplinary flagship initiative, the research activities of the 'Smart Environment' will include physical hardware, communication 'orks and software application development. A project in this area oring researchers from multidisciplinary areas such as Engineering, ice, IT and Business together. There are a lot of potential projects evant areas that CIE will spearhead through collaboration among ties and with international collaborators.

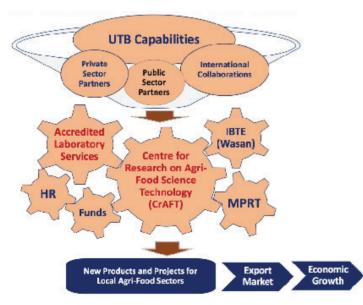


# Centre for Research in Agrifood Science & Technology (CrAFT)

CrAFT was established in 2018 as a university-wide research centre to serve as a platform for networking of researchers and pooling resources from various organization, academic institutions and governmental bodies at local and international levels.

The vision of the centre is to create new knowledge and sustainable solutions for agri-food problems, while preparing students to become the next generation of researchers and leaders and able to serve the needs of Bruneian society.

### CrAFT Network Operation Structure



### **Operational Plan**



GOAL 5

Create Escalent Agrifood Sciesce Research Core Facility -Increase multidisplinary collaboration within UTB - Accessability of recent technologies for UTB researches.

#### Focus on Traditional Network for Commercialization - Identify potential research areas matching with UTB experies - Develop local products for marketing - MoU pathenthip and capacity building

#### Improve Research organization and Strengthen Collaboration - Create efficient teamwork organization - Support UTB stategic initiatives - Promote synargy bate-sen UTB and stakeholders

#### Further develop CrAFT Research Groups

- -Sainforce expertise and foster research work culture -Expand internal and external collaborations - More emphasis on research athics, seearch career development and guidence - Support research groups to identify priorities based on available resources, expertise and scientific reveards
- Active involvement with our partners in discussion and decision making

#### Strengthen International Collaborations

Increase participation in international networks, such an ASSAN-NO.
 Support teamwork applications for international measorh funding
 Stimulate international research mobility with centres of escalence
 Stimulate regular workshop on different agtificationerse
 Invite international speakers for keynote lectures



# Funding And Scholarships

There are a number of scholarship opportunities for graduate studies (both local and International graduate students).

#### Scholarship through Ministry of Foreign Affairs (MFA):

This scholarship is for foreign applicants only. Detail of this scholarship and application procedure can be obtained from MFA website: http://www.mfa.gov.bn/Pages/ BDScholarship.aspx

#### Ministry of Education (MoE) Scholarship:

This scholarship is for Bruneians (Yellow IC) applicants only who are not more than 30 years old. It is offered to the applicants who are accepted for admission (PhD, Master's by Research and Master's by Coursework). The University usually does the processing to forward the scholarship request to the Ministry of Education once the applicant accepts the admission offer as well as submitting the scholarship application form. The scholarship includes a tuition fee waiver and a monthly allowance of about BND 400.

#### **UTB Scholarship for Graduate Students**

UTB scholarships are provided to:

- Attract high calibre candidates to conduct full-time graduate studies by research (Masters or PhD) and to contribute to research outcomes.
- Support life-long learning through financial support to highly motivated candidates who cannot qualify for MOE scholarships (such as due to age).
- Attract highly qualified international candidates and contribute to diversity among UTB community.

### Terms of Scholarship:

- This is a waiver of programme fees only. Other fees apply.
- A stipend of BND 750 per month is provided for up to 24 months for Masters by research and 36 months for PhD programmes.
- UTB scholarship is provided for full-time study by graduate research students only.
- A one-off return airfare to country of origin is provided for international scholarship recipients.
- The scholarship cannot be held with other financial support unless written approval is given by UTB.
- Recipients are to assist in supervised teaching and learning activities in appropriate modules as required by UTB.
- UTB reserves the right to amend terms of the scholarship at any time.

#### Candidates must be:

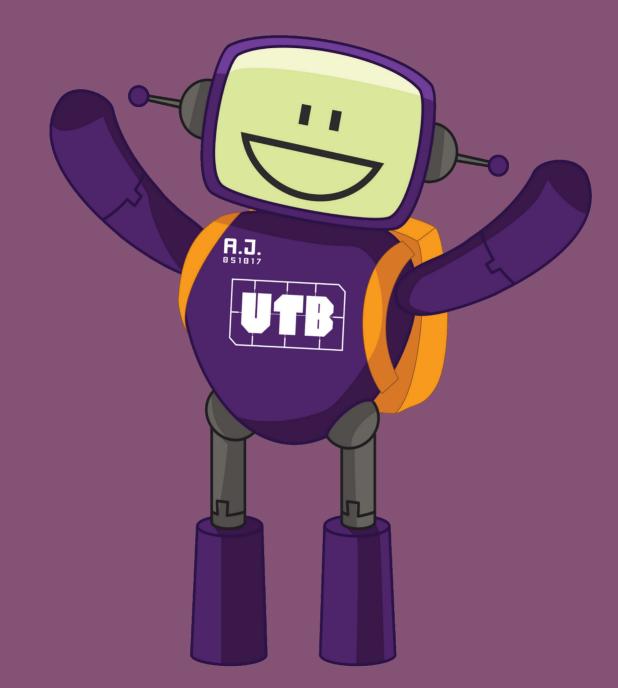
 Brunei citizens or permanent residents of Brunei or international students. The scholarship is conferred based on academic excellence. If the candidate have an equal academic excellence, the scholarship will be conferred to Brunei citizens, Brunei permanent residents and international students, in that order of preference.

- Holders of First Class honours undergraduate degree, or if applying using Master's degree, holders of Master degree with distinction/merit from a university acknowledged by UTB Senate (For applicants in the PhD programme).
- Holders of at least a Second Upper class honours undergraduate degree from a university acknowledged by UTB Senate (For applicants in the MSc by Research programme).
- While candidates with the above degrees from reputable universities are eligible, those from prestigious, rigorous and highly ranked universities will, everything else being equal, have an advantage.
- Recipients must be under the age of 35 years at the time the window for graduate admissions closes.

### Other scholarships:

There are research assistantship opportunities depending on the available research funds.

# Student Matters



# Student Services

# Office of Student Affairs

#### **Staff and Students Centre**

The Staff and Students Centre is a one-stop centre for Staff and Students services. The Centre is part of the Registrar's and Secretary's Office and it is available to assist staff and students and other visitors with general enquiries at the Staff and Students Service Counter.

The Centre is located on the ground floor of Administration Building.

The Centre was officially opened by His Royal Highness Prince Haji Al-Muhtadee Billah ibni His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah, Pro-Chancellor of Universiti Teknologi Brunei during the official opening of the first UTB Convocation Festival on Tuesday, 30th September 2014.

### **Counter opening hours:**

7.45 am – 12.00 pm 2.00 pm – 4.30 pm The Office of Student Affairs is responsible for planning, coordinating and implementing a variety of services designed to assist and support students in achieving academic excellence and personal success. In order to achieve this, the focus is placed on the following six tenets:

- Spiritual and religious support
- Academic support
- Community service
- Sports and recreation
- Life skills development
- Campus Life

### Main objectives

- To provide guidance in Islamic religious practice for ethical and spiritual development of students in accordance with Brunei Darussalam's national philosophy of Melayu Islam Beraja (MIB).
- To prepare students to be well-rounded individuals with 21st century skills.
- To motivate students to excel in academic activities.
- To instill a spirit of participation, advocacy and willingness to volunteer.
- To engage students in community and environmental activities.
- To engage students in co-curricular activities.

# UTB Students' Representative Council

MPPUTB is a Student Association Organisation representing the students of UTB. It acts as the voice of the students and as a bridge between the students and UTB Management through Student Affairs Unit. It was formally known as the 'Badan Kebajikan Pelajar'. Later in 2010, it was renamed as 'Majlis Perwakilan Mahasiswa/Mahasiswi' (MPMM). Then, in 2011, it has been officially standardised with other local institutions, as 'Majlis Perwakilan Pelajar' (MPP).

#### Roles

- To practice the national concept of 'Melayu Islam Beraja' (MIB).
- To establish good relation between other student association organisation amongst higher institutions, both locally and internationally.

### Responsibilities

- To improve knowledge, understanding and image among all the students.
- To have a better understanding on the importance of teamwork between students and education officers.
- To organise religious, economic, cultural, sports and voluntary activities.
- To have interaction among students with positive mindsets.
- To work together with UTB Management in carrying out activities that are organised / proposed by the Vice Chancellor or Dean of Student Affairs and Extra-Curricular Activities.

#### Structure

MPPUTB consists of 15 positions with total of 11 Executive Committees (ExCo) and administered by 5 Supreme Councils (Majlis Tertinggi). Every member has their own specific scope of work, in addition to their general duties or roles.

### Supreme Council (Majlis Tertinggi) MPPUTB

- President (Yang Di-Pertua)
- Vice President (Naib Yang Di-Pertua)
- General Secretary (Setiausaha Agung)
- Deputy General Secretary (Timbalan Setiausaha Agung)
- Treasurer (Bendahari)
- Deputy Treasurer (Timbalan Bendahari)

### **Executive Committees (ExCo) MPPUTB**

- Religious and Spiritual
- Leadership, Development and Mentor
- Sports
- Culture
- Health, Safety, Security and Environment
- Community Service and Project
- Logistics
- Publicity and Info-Communication Technology
- Economy and Entrepreneurship
- Student Representative
- International Affairs

### Campus LEAD (Leadership, Entrepreneurship, Active and Dynamic)

- CL for Electrical and Electronic Engineering, FENG
- CL for Mechanical Engineering, FENG
- CL for Petroleum and Chemical Engineering, FENG
- CL for Civil Engineering, FENG
- CL for Computer Network and Security, SCI
- CL for Creative Computing, SCI
- CL for Economics and Management, UTBSB
- CL for Accounting, UTBSB
- CL for School of Design
- CL for Centre for Communication, Teaching and Learning

# Student Clubs 2023

### **ExCo Sports**

- Basketball Club
- Badminton Club
- Dodgeball Club
- Frisbee Club
- Futsal Club
- Karate Club
- Men Touch Rugby
- Ladies Touch rugby
- Netball Club
- Spinning Club
- Squash Club
- Swimming Club
- Table Tennis Club
- Volleyball Club
- Tae Kwan Do Club
- Kendo Club

### **ExCo Culture**

- Dance Club
- Gulingtangan Club
- Korean Culture Club
- Art & Craft Club
- Dream (Combination of Drama, Reading, Music & English Clubs)
- Choir Clubs

### **ExCo Entrepreneurship and Economy**

- Cooking Club
- Entrepreneurship (MPP Café)

### **ExCo Religious and Spiritual**

- Dikir Nasyid & Tausyeh
- Kelab Hadrah
- Kelab AlQuran (Q Beats)
- Archery Club

## **ExCo Publicity and ICT**

- Photography Club
- Gamers Alliance
- Robotic Club

### **ExCo Community Service and Project**

Community Service & Voluntary Club

### ExCo Leadership, Development and Mentor

- IET (Institution of Engineering and Technology) UTB Student
   Chapter
- Leaders of Tomorrow Club (LOT)
- Army Cadet (PKTUTB)
- PUJA (Pertubuhan Ukur, Jurutera & Arkitek) UTB Student Chapter
- SPE (Society of Petroleum Engineers) UTB Student Chapter
- IChemE (Institution of Chemical Engineers) UTB Student Chapter
- IMechE (Institution of Mechanical Engineers) UTB Student
   Chapter
- TEDx

### HSSE

Clean Environment Club

### **ExCo International Affairs**

International Club

# Co-Curricular Unit

#### **Responsibilities:**

- To manage the Student Achievement Passport (SAP).
- To organise CCA activities, including cultural, sports and community service.
- To manage overseas study visits/friendly sports activities.
- To manage/administer student clubs.
- To assist students in organising tournaments.
- To provide guidance to the UTB Student Representative Council (MPP).
- To provide support to students representing UTB in national and international events.

#### **ECA Officer:**

Mohamad Shah @ Muhammad Lutfi Hadi Bin Hj Asmat Office : GF.69 T: +673 2461020 Ext 5123 F: 2461035/6 E: hadi.asmat@utb.edu.bn

# Counselling Unit

Our counsellors can assist both staff and students to gain a clearer understanding of the problems you face and how to identify appropriate strategies so you can make the best possible decision for yourself.

#### **Responsibilities:**

- Individual counselling: To conduct confidential counselling and therapeutic sessions on academic, social and personal matters for staff and enrolled UTB students.
- Assessment and treatment by our psychologist based on the biopsychosocial/cultural needs of the client.
- Crisis support if you need help immediately.
- Provision of consultation and liaison with internal staff and external agencies on counselling dynamics in a teaching environment.
- Group sessions designed to help improve your wellbeing run throughout the year.
- To make operational arrangements for Leadership and Entrepreneurial Student Programmes abroad.

#### **Counselors:**

Pg Raden Tutimuliawati binti Pg Hj Mahmud Office: 2F.18 T: +673 2461020 Ext 5360 E: raden.mahmud@utb.edu.bn

Nur Asyiqin Afiqah binti Hj Ahmad Office: 2F.19 T: +673 2461020 Ext 5361 E: raden.mahmud@utb.edu.bn

# Student Welfare Unit Career Guidance Unit

#### **Responsibilities:**

- To manage students' welfare, discipline, health and safety.
- To manage the placement and allocation of accommodation for students.
- To work with student affairs on orientation programme for ٠ international students.
- To liaise, monitor and manage the international students' welfare.
- To liaise with the academic faculties on Student ExperiencePLUS programme.

#### Student Welfare Officer:

Siti Nuratika Sri Mu'minnah binti Mohammad Hadi Muslim Office: GF.70 Ext: 5115 Email: nuratika.hadi@utb.edu.bn

# **Religious Unit**

### **Responsibilities:**

- To organise religious activities and services
- To assist students in religious tournaments and functions
- To advise students on religious matters

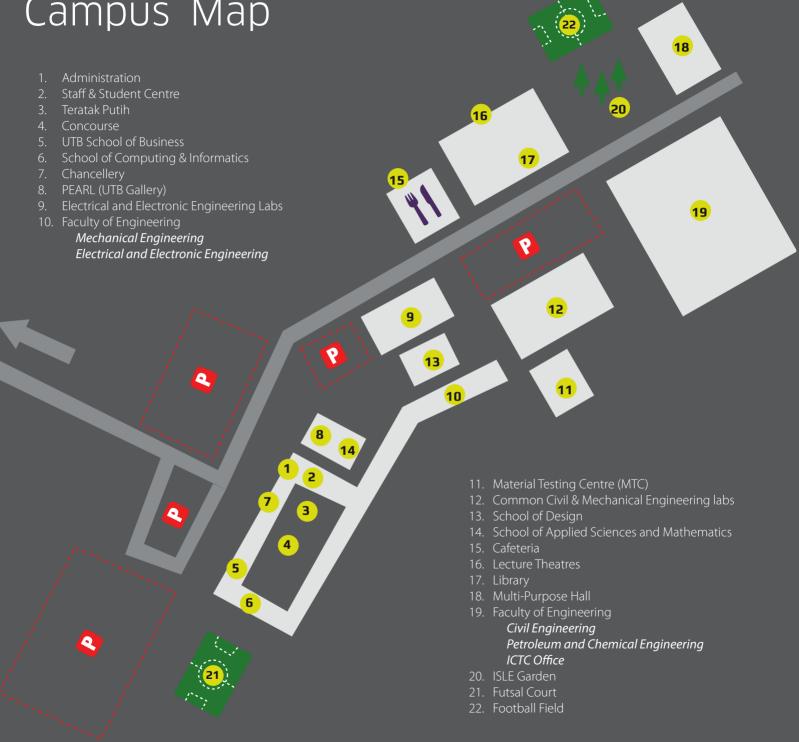
Ustaz Mohd Fazalley bin Haji Hidup Office: 2F.59 Ext: 5306 Email: fazalley.hidup@utb.edu.bn

Ustazah Norimah binti Hj Abd. Karim Office: 2F.60 Ext: 5307 Email: norimah.karim@utb.edu.bn

#### **Responsibilities:**

- To track the graduates employment path.
- To provide seminars, workshops and courses to students to enhance career prospects.
- To assist in the organisation of career dialogues with a view to • exploring employment opportunities.
- To provide career counselling for students to choose the right career paths and for right job search strategies.
- To compile tracer study of recent graduates of the University.
- To assist graduates who are just entering the workforce.
- To match graduates with jobs that will give them the ultimate balance of financial payoff and job satisfaction.
- To gather employer feedback on students' and graduates' performance.
- To act as a focal point for MOE in identifying career pathways.

# Campus Map



# Getting To UTB

Metered Fare	
The first 1 km or 1 minute	\$3.50
Subsequent 250m or 15 seconds (whichever comes fitst)	\$0.20
Area Surcharge	
To/From Brunei International Airport	\$3.00
From one district to another, including to Muara in the	
Brunei-Muara District (after the Kampong Sabun roundabout)	\$8.00 per new district
Other charges	
More than four passengers	\$2.00 per passenger
Waiting charge	\$0.50 every 60 seconds
Extra Baggage	\$2.00 per item
Toll charges	Borne by passenger
Public Bus	\$1.00 per ride

### **Car Rental**

Visitors wishing to explore Brunei beyond its capital, Bandar Seri Begawan can rent a car prior to reaching the country, through online booking at a number of services. Prices range between BND60 to BND100 per day, depending on the size of the vehicle.

### Dart

Dart is a local transport app; think of it as Brunei's Uber or Grab (both of which are currently unavailable in Brunei). It can be competitively priced against Brunei's taxis, with the additional convenience of booking a ride through the app. Click here to download it on the Apple App Store, and here on the Google Play Store.

### Taxi contact information

Bandar Seri Begawan: +673 222 2214, +673 222 6853 Kuala Belait: +673 333 4581 Seria: +673 322 2020, +673 322 2155 Airport Taxi Service: +673 234 3671

> Source: Brunei Tourism



#### **Contact information**

For general enquiries, please contact:

The Registrar's and Secretary's Office Universiti Teknologi Brunei Tungku Highway Gadong BE1410, Brunei Darussalam

#### www.utb.edu.bn

*(*+673-246 1020

- +673-246 1035 / 246 1036
- Undergraduate Admissions: admission.ug@utb.edu.bn

Postgraduate Admissions: admission.pg@utb.edu.bn

General Enquiry: enquiry@utb.edu.bn