

## **10** UNDERGRADUATE PROGRAMME





**BECOMING A GLOBAL ENGINEERING TECHNOLOGY ACADEMIC CENTER** OF EXCELLENCE WITH UNIVERSAL SUSTAINABILITY

DRIVING THE DEVELOPMENT AND DEVELOPMENT OF ENGINEERING TECHNOLOGY BY PRODUCING INNOVATIVE AND HOLISTIC HIGH PERFORMANCE GRADUATES

**FTKKI** INTRODUCTION **WHY** 

• UMT is the top 2.3% university in Asia • UMT is leading in aquatic resources study • Opportunity for a short course in Japan, Thailand, Indonesia and the Philippines

• Learn local and international culture • Very low tuition fees

TECHNOLOGY **FTKKI** FACULTY OF OCEAN ENGINEERING TO LEAD FTKKI TECHNOLOGY AND INFORMATICS





# **BACHELOR OF APPLIED** SCIENCE MARITIME TECHNOLOGY

Maritime Technology is an area focusing on the application of technology, operations, and systems used in the maritime, coastal and offshore engineering sectors. The programme is designed to produce graduates who will develop knowledge, contribute expertise to serve and lead shipping, shipbuilding, oil and gas companies, and government agencies related to the maritime industry locally and abroad.

### **UNIQUENESS & SPECIALTY**

INTRODUCTION

### **CAREER OPPORTUNITIES**

### SPECIFIC REOUIREMENT

- 1. STPM:
- Obtain C (2.00) in one of the following subjects: Mathematics (T)/Mathematics (M) /Further Mathematics (T)/Physics. 2. MATRICULATION/FOUNDATION:
  - Obtain C (2.00) in one of the following subjects: Mathematics/ Physics/Physics Engineering/Basic Engineering.
- 3. DIPLOMA:
- Obtain a minimum CGPA of 3.00 in a related recognized field. 4. A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET)

# **BACHELOR OF MECHANICAL** ENGINEERING TECHNOLOGY NAVAL ARCHITECTURE

Mechanical Engineering Technology (Naval Architecture) is a programme that combines the science, naval architecture and engineering of ship machining systems. The core of the programme includes studies related to naval architecture, hydrostatic and static/dynamic stability of ships or floating structures, ship machining and instrumentation, ship power plants, ship management and operating systems, and safety based on standards by the marine safety agency and the International Maritime Organization (IMO). Elements implemented

include naval architecture and ship construction, mechanical engineering, electrical, electronics, software and security used in the engineering design, classification, maintenance, and operation processes for vessels and floating structures. The programme provides professional knowledge and skills for jobs in the shipping, marine and oil and gas industries.

### **UNIOUENESS & SPECIALTY**

YEARS

**8 SEMESTERS** 

### CAREER OPPORTUNITIES

- SPECIFIC REOUIREMENT
- 1. STPM:

### Obtain C (2.00) in one of the following subjects: Additional Mathematics/Modern Mathematics/Further Mathematics 4. A minimum of level 2 (Band 2) in the Malausian University (T)/Physics.

- 2. MATRICULATION/FOUNDATION:
- Obtain C (2.00) in one of the following subjects: Mathematics/ Physics/Physics Engineering/Basic Engineering.
- 3 DIPLOMA
  - Obtain a minimum CGPA of 3.00 in a related recognized field.
- English Test (MUET)



## BACHELOR OF TECHNOLOGY **ENVIRONMENT** WITH HONOURS

This programme is an interdisciplinary field of study that combines aspects of science, technology and environmental engineering. Students will be exposed to technical knowledge and skills that focus on solving environmental issues in terms of monitoring, prevention as well as treatment technologies of water, air and soil pollutions. The programme also emphasizes the mastery of basic principles, industry-oriented practical skills and community service as a way to prepare students with a range of value-adding skills for a broader and dynamic career energy, separation technology and

### INTRODUCTION

opportunities. The curriculum of the programme covers courses within the scope of the environmental field such as environmental laws and regulations, environmental management, hydrology and water resources management, water and wastewater treatment technology, air quality and pollution, solid waste and hazardous waste management, safetu and occupational health management, environmental impact assessment, environmental design as well as advanced elective courses with the latest topics such as sustainability, renewable

### **UNIOUENESS & SPECIALTY**

### **CAREER OPPORTUNITIES**

### SPECIFIC REQUIREMENT

### 1. STPM:

- a. Obtained at least C grade (NGMP 2.00) in any one of the following subjects: Mathematics (T)/Physics/ Chemistry/Biology at STPM level; OR
- b. Obtained at least C grade (NGMP 2.00) in any one (1) of the following subjects: Mathematics (M)/ Economics/Business Studu/Visual Arts/Sports Science/Information Technology and Communication/ Accounting/Geography at STPM level:

### AND

Obtained at least C grade in any following subjects: Physics/ Chemistry/Biology/Science/ Additional Mathematics at SPM level: OR. Obtained at least C grade in any two (2) of the following subjects: Science/ Additional Science/Mathematics/ Engineering Drawing/Mechanical Enaineerina Studies/Civil Engineering Studies/Electrical and Electronic Engineering Studies/Invention/Basics of Sustainability/Computer Science/ Domestic Construction/Technical Communication Graphics/Domestic Wirina/Domestic Electrical Appliances Servicing/Computer Graphics/Entrepreneurial Studies/Commerce/Principles of Accounting/ Economics/ Geography/Visual Arts Education at SPM level.

### 2. STAM:

- a. Passed at the STAM examination with at least Jayyid; AND
- b. Obtained at least C grade in any of the following subjects: Physics/Chemistry/Biology/ Science/Additional Mathematics at SPM level; OR, Obtained at least C grade in any of the two (2) following subjects: Science/ Additional Science/Mathematics/ Engineering Drawing/ Mechanical Enaineerina Studies/Civil Engineering Studies/Electrical and Electronic Engineering Studies/Invention/Basics of Sustainability/Computer Science/ Domestic Construction/Technical Communication Graphics/Domestic Wiring/Domestic Electrical Appliances Servicing/Computer Graphics/Entrepreneurial Studies/Commerce/Principles of Accounting/Economics/ Geography/Visual Arts Education

at SPM level.

- 3. MATRICULATION/FOUNDATION: Obtained at least C grade (2.00) in any following subjects; Mathematics/ Physics/Physics (Engineering)/Basic Engineering at Matriculation or Foundation level.
- 4. DIPLOMA/EQUIVALENT: Obtained at least CGPA 2.00 recognized by the Government of Malausia and approved by the Senate of the University.
- 5. Passed the APEL assessment conducted by MQA in related fields to be eligible for admission to Bachelor's level programs (Level 6, Malaysian Qualifications Framework)
  - \* candidate must furnish the APEL Certificate from MQA before the admission process.
- 6. A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET)

Duration of Study YEARS **8 SEMESTERS**  1 11 1h 649 64 . .

## BACHELOR OF COMPUTER SCIENCE SOFTWARE , ENGINEERING INTRODUCTION

This programme encourages students to understand the theory and application of software systems. This programme also focuses on skills in problem solving, software system design, software testing and system maintenance. In line with the advent of the industrial revolution 4.0, computer science and information technology were social technologies that enabled the creation of an informed society. Both of these areas are very important for industrial competition. Therefore, in line with the government's call, labour skilled in software engineering is important.

### **UNIOUENESS & SPECIALTY**

### CAREER OPPORTUNITIES

### SPECIFIC REQUIREMENT

- 1. STPM :
  - (i) Obtain Grade C (NGMP 2.00) in any two (2) subjects; AND obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics: OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering
  - OR
  - (ii) Passed STPM in Science stream or equivalent, with a minimum of Grade C (NGMP 2.00) in the
- 2. MATRICULATION/FOUNDATION : Obtain at least Grade C (NGMP 2.00) in any two (2) subjects at Matriculation/ Foundation level AND Obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering.
- 3. DIPLOMA/ EQUIVALENTS :
  - (i) Passed Diploma in Computer Science/Software Engineering/ Information Technology/ Information Systems or equivalent with a minimum CGPA of 2.50 OR
  - (ii) Passed a Diploma in Science and Technology with a minimum CGPA of 2.50.

- 4. Passed the APEL assessment conducted by MQA in related fields to be eligible for admission to Bachelor's level programs (Level 6, Malaysian Qualifications Framework)
  - \* candidate must furnish the APEL Certificate from MQA before the admission process.
- 5. A minimum of level 2 (Band 2) in the Malausian Universitu English Test (MUET).

Duration of Study **3.5** YEARS **7 SEMESTERS** 

- following subjects: Mathematics (T); AND one (1) Science/ICT subject.



UNIQUENESS & SPECIALTY				CAREER OPPORTUNITIES			
	Broader job opportunities in computer science, maritime industry, ports and shipping. Experienced educators in computer science		Adequate laboratory equipment that supports the program curriculum. Balanced theory and practical teaching		Information Technology Officer Network Administrator Software Engineer Maritime Intelligence Analyst Network Engineer Maritime Business Development Specialist System Analyst		Maritime Business Support System and Business Executives Database Administrator System administrator Software System Developer Software Tester IT Consultant
	and maritimo field						Doctoroduoto Studu

### SPECIFIC REOUIREMENT

- 1. STPM :
  - (i) Obtain Grade C (NGMP 2.00) in any two (2) subjects; AND Obtained credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering
  - OR
  - Passed STPM in Science stream or equivalent, with minimum Grade C (NGMP 2.00) in the following subjects: Mathematics (T); AND one (1) Science/ICT subject.
- MATRICULATION/FOUNDATION: Obtain at least Grade C (NGMP 2.00) in any two (2) subjects at Matriculation/ Foundation level AND obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering
- 3. DIPLOMA/ EQUIVALENTS:
  - (i) Passed Diploma in Computer Science/Software Engineering/ Information Technology/ Information Systems or equivalent with a minimum CGPA of 2.50
  - OR
  - (ii) Passed a Diploma in Science and Technology with a minimum CGPA of 2.50

- Passed the APEL assessment conducted by MQA in related fields to be eligible for admission to Bachelor's level programs (Level 6, Malaysian Qualifications Framework)
  - \* candidate must furnish the APEL Certificate from MQA before the admission process
- A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET)

## INTRODUCTION

The programme prepares students with the knowledge and skills needed to develop mobile and web applications. In addition to produce graduates, who can meet current and future workforce needs, the programme enhances the prospects and career paths of graduates through new job functions resulting from changes in the ICT landscape following the transition to mobile technology and IR4.0.

BACHELOR OF COMPUTER SCIENCE

MOBILE COMPUTING



**UNIOUENESS & SPECIALTY CAREER OPPORTUNITIES** Broader iob

### SPECIFIC REOUIREMENT

1. STPM:

- (i) Obtain Grade C (NGMP 2.00) in any two (2) subjects; AND Obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering
- OR
- (ii) Passed STPM in Science stream or equivalent, with a minimum Grade 4. C (NGMP 2.00) in the following subjects: Mathematics (T); AND one (1) Science/ICT subject.
- 2. STAM:

Obtain at least the rank of Jayyid; with a minimum Grade C (NGMP 2.00) in any two (2) subjects; AND Obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering.

- 3. MATRICULATION/FOUNDATION: Obtain at least Grade C (NGMP 2.00) in any two (2) subjects at Matriculation/ Foundation level AND Obtained at least credit (Grade C) at SPM level in the following subjects: Additional Mathematics; OR Mathematics AND one (1) of the subjects of Science, Technology or Engineering.
- DIPLOMA/ EQUIVALENTS: (i) Passed Diploma in Computer Science/Software Engineering/ Technology Information/Information System or equivalent to a minimum CGPA of 2.50
- OR
- (ii) Passed Diploma in Science and Technology with a minimum CGPA of 2.50

- 5. Passed the APEL assessment conducted by MQA in related fields to be eligible for admission to Bachelor's level programs (Level 6, Malaysian Qualifications Framework)
  - \* candidate must furnish the APEL Certificate from MQA before the admission process.
- 6. A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET).

Duration of Study

3.5 YEARS **7 SEMESTERS** 

### BACHELOR OF APPLIED SCIENCE ELECTRONIC & INSTRUMENTATION WITH HONOURS

The advanced electronics field is playing a growing role in business, communication and education. Workers with expertise in electronics and instrumentation are in demand in almost any industry that utilizes electronics equipment and automation. As such, the programme provides specific exposure to the field. Graduates of the programme will have a good understanding of physics and electronics. These elements are combined into instrumentation which allows the graduates to use the concept to create, modify or refine the components used in industrial automation systems and robotics in line with current requirements in the industrial revolution 4.0 era.

### **UNIQUENESS & SPECIALTY**

- Combine theory & hands-on with relevant expertise in electronics & instrumentation that mee the industry requirements
   Adequate laboratory equipment that supports
- Opportunities to participate in various university & national innovation competitions.
   Job opportunities will continue to grow as technology changes.

### CAREER OPPORTUNITIES

- Automation EngineerIoT EngineerElectronic SystemMaterials EngineerEngineerSales EngineerInstrumentationTechnical Manage
  - Science Officer
  - Research Office

### SPECIFIC REQUIREMENT

 STPM: Obtained C (CGPA 2.00) in one of the subjects, Additional Mathematics / Modern Mathematics/Physics/ Chemistry/Biology.

#### OR

Obtained C (CGPA 2.00) in one of the subjects, Mathematics (M)/Accounting/ Economics/Business Studies/Visual Arts/Sports Science /Information and Communication Technology/Geography. AND

Obtained at least Grade C+ at SPM level for Mathematics and Grade C in one of the subjects, Physics/Chemistry/ Biology/Science/Additional Science/ Additional Mathematics /Electrical and Electronics Engineering Studies/ Civil Engineering Studies/Mechanical Engineering Studies/Design/Computer Science. 4.

- STAM: Passed the Sijil Tinggi Agama Malaysia (STAM) examination with a minimum result of Jayyid
   AND
- Obtained at least Grade C+ at SPM level for Mathematics and Grade C in one of the subjects, Physics/Chemistry/ Biology/Science/Additional Science/ Additional Mathematics /Electrical 6. and Electronics Engineering Studies/ Civil Engineering Studies/Mechanical Engineering Studies/Design/Computer Science
- . MATRICULATION/FOUNDATION: Obtain at least Grade C (2.00) in one of the subjects, Mathematics/Physics /Physics (Eng.)/Fundamental of Engineering
- 4. DIPLOMA: Obtain at least CGPA 2.00

- Passed the APEL assessment conducted by MQA in related fields to be eligible for admission to Bachelor's level programs (Level 6, Malaysian Qualifications Framework)
  - \* candidate must furnish the APEL Certificate from MQA before the admission process.
- A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET)

Duration of Study **3.5** YEARS
7 SEMESTERS

INTRODUCTION

3.5 YEARS **7 SEMESTERS** 



INTRODUCTION

This program is developed to produce graduates trained in the field of Mathematical Science who are able to apply their knowledge and expertise to meet the needs of the national workforce. The program curriculum has been fully integrated to meet the eleven domains of program learning outcomes recommended by the MOHE. This program is basically to apply mathematical and statistical knowledge, as well as related concepts in various areas of focus such as modeling, computing, optimization, geometry, physical science and so on. Students will also be exposed to knowledge and skills in various up-todate mathematical methods as well as computer programming.

Along with the development of current technology and to meet the needs of the Industrial Revolution 4.0, several courses in this program have been integrated with SAS modules that enable graduates to obtain SAS professional certificate that recognize them as data scientists internationally. In addition, the program also trains students to think logically, structured and accurately, and in turn assists them in finding effective solutions in related fields. At the end of the study, students will undergo Industrial Training for 24 weeks in the industry in both public and private, locally or internationally. While in the industry, students will be supervised by supervisors from the industry and have the opportunity to practice the theories learned in the lecture room as well as go through real-world work experience in preparation for the next phase.

WITH HONOURS

BACHELOR OF SCIENCE

APPLIED MATHEMATICS

### **UNIOUENESS & SPECIALTY**

CAREER OPPORTUNITIES

### SPECIFIC REOUIREMENT

1. STPM:

Obtained at least C (CGPA 2.00) at STPM level in mathematics subject.

- 2. MATRICULATION/FOUNDATION: Obtained at least C (2.00) at Matriculation/Foundation level in mathematics subject.
- 3. DIPLOMA:
  - Obtained at least C (2.00) in any one of the mathematics subjects.
- 4. A minimum of level 2 (Band 2) in the Malaysian University Enalish Test (MUET).

This program is a program developed to provide knowledge on the application of mathematical methods such as probability theory, statistics, optimization, stochastic analysis and economic theory in financial problems which include investment, insurance, Islamic finance, risk analysis and so on. The curriculum of this program has been fully integrated to meet the eleven domains of learning outcomes of the program recommended by KPT. In addition, in line with the development of the Industrial Revolution 4.0, several core programs of the program have been implemented with SAS modules that provide SAS certification to graduates at the end of

**BACHELOR OF SCIENCE** 

FINANCIAL MATHEMATICS

the program. This certification is an added value to graduates as it is recognized worldwide and has wide industry demand.

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To ensure that students get real work experience, a 24-week Industrial Training course will be taken in the last semester in finance or other related industries. Knowledge that has been learned while on campus can be applied during this training in addition to gaining new knowledge in the relevant sector.

### **UNIOUENESS & SPECIALTY**

SPECIFIC REQUIREMENT

NTRODUCTION

**CAREER OPPORTUNITIES** 

STPM: Obtained at least C (CGPA 2.00) at STPM level in mathematics subiect.

- 2. MATRICULATION/FOUNDATION: Obtained at least C (2.00) at Matriculation/Foundation level in mathematics subject.
- 3. DIPLOMA:
  - Obtained at least C (2.00) in any one of the mathematics subjects.
- 4. A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET).

Duration of Study **3.5** YEARS
7 SEMESTERS

## INTRODUCTION

This program is designed to prepare trained graduates to meet the needs of the nation's highly skilled workforce based on the latest technology and the needs of the industrial revolution (IR) 4.0. Along with the development of the ICT sector and the requirements of IR4.0, the program curriculum has been blended by combining the domains of knowledge in the fields of data science, statistics, machine learning and mathematics. In addition, study program that involve industry in the aspects of curriculum development, implementation of teaching and learning (T&L) and assessment. The program is also designed by applying the 2u2i element through the implementation of 2.5 years of study in university (university component) and 1 year of study in industry (industrial component). The implementation of the 2u2i element with the industry will directly expose students to the actual learning and practice of industry practitioners

related to IR4.0. To meet the requirements of the globally recognized SAS professional certification known as the globally recognized "SAS Academic Specialization in Data Analytics", several courses in the program have been allocated with SAS modules. The program curriculum has been fully integrated to meet the growing needs of a highly skilled labor market that can analyze a growing amount of data across multiple disciplines and turn it into information that can be used for decision making.

**BACHELOR OF SCIENCE** 

DATA ANALYTICS

The demand for highly skilled workers in the labor market in the IR4.0 -based sector will enhance the prospects and career paths of graduates through new jobs created as a result of changes in the ICT and IR4.0 landscape that are central to future national and global economic growth.

### **UNIOUENESS & SPECIALTY**

- I. Broader employment opportunitie in IR4.0 based fields
- standards
- 3. 2021 mode or study (2 1/2 years in university and 1 year in industry)
- 4. SAS certification program

- CAREER OPPORTUNITIES
- opportunities · Data Scientist · Data Analyst industry · Data Engineer · Data Manager
- Systems Analy
  - rormation Security

### SPECIFIC REQUIREMENT

- STPM: Obtained at least C (CGPA 2.00) at STPM level in mathematics subject.
- MATRICULATION/FOUNDATION: Obtained at least C (2.00) at Matriculation/Foundation level in mathematics subject.
- 3. DIPLOMA:
- Obtained at least C (2.00) in any one of the mathematics subjects.
- 4. A minimum of level 2 (Band 2) in the Malaysian University English Test (MUET).

### STPM GRADUATES

- Possess Sijil Pelajaran Malaysia (SPM) with honors in Bahasa Malaysia/ Bahasa Melayu and pass History from 2013. Honors in Bahasa Malaysia/ Bahasa Melayu July paper is taken into account.
- Passed the Sijil Tinggi Persekolahan Malaysia (STPM) Examination with at least a CGPA of 2.00 including;
  - Grade C (NGMP 2.00) General Stu subjects; DAN
  - Grade C (NGMP 2.00) in two (2) oth subjects.
  - Obtained at least Level 1 (Band 1) in the Malaysian University English Test (MUET).

### MATRICULATION RELEASE KPM /ASASI

- Possess Sijil Pelajaran Malaysia (SPM) with honors in Bahasa Malaysia/ Bahasa Melayu and pass History from 2013. Honors in Bahasa Malaysia/ Bahasa Melayu July paper is taken into account
- Passed KPM Matriculation / UM Science Foundation / UiTM Foundation with at least CGPA 2 00:
- 3) Obtained at least Level 1 (Band 1) in the Malausian University English Test (MUET

### DIPLOMA / EQUIVALENT GRADUATES

GENERAL REQUIREMENTS OF ADMISSION

> TO THE UNIVERSITY

### Possess Sijil Pelajaran Malaysia (SPM) with honors in Bahasa Malaysia/ Bahasa Melayu and pass History from 2013. Honors in Bahasa Malaysia/ Bahasa Melayu July

SOURCES OF

FINANCING

 paper is taken into account;
 Possess a Diploma or other qualificatio recognized as equivalent by th Government of Malaysia and approve

#### OR

- Passed the Sijil Tinggi Persekolahan Malaysia (STPM) Examination in 2018 or earlier with a minimum CGPA of 2.00 including.
  - Grade C (NGMP 2.00) in General Studies;

AND

- Grade C (NGMP 2.00) in two (2) other subjects;
- OF
- Pass the Matriculation/ Foundation examination in 2018 or earlier with at least CGPA 2.00;

### ŌŔ

 Passed the Sijil Tinggi Agama Malaysia (STAM) examination in 2017 or earlier with at least Jayyid Level

#### AND

Obtained at least Level 1 (Band 1) in the Malaysian University English Test (MUET).

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