Postgraduate Programmes »

Doctor of Philosophy
Entry requirements :

- A Master's Degree from Universiti Teknologi Malaysia or any other institutions of higher learning recognised by the Senate ; or

- Other qualifications equivalent to a Master's degree and experience in the relevant field recognised by the Senate ; or

- Candidates who are currently registered in a Master's Degree programme at Universiti Teknologi Malaysia, and approved by the Graduate Studies Committee of the respective faculty and the Senate.

Master's Degree
Entry requirements :

- A Bachelor's Degree with good honours from Universiti Teknologi Malaysia or any other institutions of higher learning recognised by the Senate ; or

- A qualification equivalent to a Bachelor's Degree and experience in the relevant field recognised by the Senate.

Research fields

- Study of Algebra, Functional Analysis, Group Theory, Graph Theory, Formal Language Theory and Splicing Systems.
- Mathematical Modelling of Fluids Flow, Non-linear Waves and Soliton, Conceptual and Mathematical Model of Behavioural Changes, Mathematical and Fuzzy Modelling.
- Numerical Analysis, Numerical Computational Method (Algorithms), Numerical Simulation and Visualization.
- Development, Analysis and Implementation of Operational Research, Optimization Models and Algorithms, Decision Making Tools.
- Statistical Modelling and Analysis (theory and practice), Time Series and Forecasting, Geo-Statistical Modelling, Functional Data Analysis, Financial Mathematics, Survival and Failure Time Modelling, Robust Statistics.

Facilities

Students at the Department of Mathematical Sciences have access to three computer laboratories equipped with high performance computational desktops and mobile audio system. Software is also available for teaching and learning activities as well as for research such as LINGO, Matlab, MATHEMATICA, WinEdt, R, Python, SPSS, COMSOL Multiphysics, and Simul8.

Career Prospects »

Graduates of the programmes have the opportunities to develop their careers as :

- Quality assurance manager, production control engineer, and planning officer in industries such as manufacturing, telecommunications, and oil & gas.

- Statisticians, data analysts, operations research analysts, sales and marketing executives in service industries.

- Financial executives in financial institutions.

- Administrative officers in public and private sectors.

- Academicians and researchers in academic and research institutions.

For Further Information, please visit the following websites :
UG entry requirement (Malaysian) :
https://admission.utm.my/entry-requirements-ug-malaysian/
UG entry requirement (International) :
https://admission.utm.my/entry-requirements-ug-international/
PG entry requirement (Malaysian):
https://admission.utm.my/postgraduate-entry-requirements/
PG entry requirement (International):
https://admission.utm.my/int-pg-entry-requirements/

https://science.utm.my/ | https://admission.utm.my/
Universiti Teknologi Malaysia
81310 Johor Bahru, Johor, Malaysia.
@ pengarah.jsm@utm.my

DEPARTMENT OF MATHEMATICAL SCIENCES
FACULTY OF SCIENCE

... where great minds are nurtured

UTM | Faculty of Science
UNIVERSITI TEKNOLOGI MALAYSIA

Overview

Algebra and Analysis, Applied Mathematics, Numerical Analysis and Computational Mathematics, Operational Research and Statistics are the mathematical disiplines in which core and elective courses in academic programmes are classified. Students can improve their technical and generic skills through activities integrated in the program curriculum and co-curricular activities. Teaching and learning activities are student-centered and incorporate IR4.0 and 21st Century elements to ensure students gain the required skills to be relevant and highly employable.

Programmes Offered

Undergraduate Programmes

● **Bachelor of Science (Mathematics) with Honours**

Graduates of this 4-year programme will be mathematically competent professionals capable of applying their knowledge and skills in relevant agencies and institutions such as teaching, research and development of new knowledge, and will be proficient in both writing and oral communication in order to effectively disseminate mathematical knowledge. Graduates will have the skills and motivation to continue their life-long education in the acquisition of new mathematics knowledge and skills in depth and breadth.

● **Bachelor of Science (Industrial Mathematics) with Honours**

Graduates of this 4-year programme will be mathematically competent profesionals capable of dealing with qualitative and quantitative problems in related industries. They will be able to assume productive roles and positions in planning, decision making, analysis, and supervision of work in the industrial and public sectors. Graduates will also be able to exhibit team working and leadership skills with effective communication and desirable interpersonal skills, as well as to pursue life-long learning, enabling them to identify, adapt, and seize prospective business opportunities.

Postgraduate Programmes

- Master of Science in Mathematics
- Master of Science in Engineering Mathematics

These two programmes are offered full-time in mixed-mode. The programmes can be completed within three semesters (1 and 1/2 years).

- **Master of Philosophy Field of Research : Mathematics**

This program is offered full-time. Students will conduct research in a chosen area for a maximum of 8 semesters. However, students need to complete their studies within 3 semesters to get the "graduate-on-time" status.

- **Doctor of Philosophy Field of Research : Mathematics**

This program is offered full-time. Students will conduct research in a chosen area for a maximum of 16 semesters. However, students need to complete their studies within 7 semesters to get the "graduate-on-time" status.

Undergraduate Programmes

Entry Requirements :
Minimum Entry Requirements for STPM/Matriculation/Foundation/Diploma & Equivalent Holders

University General Entry Requirements :

● Passed the Malaysian Certificate of Examination (SPM) or equivalent with a credit in Bahasa Melayu/Bahasa Malaysia or a credit in Bahasa Melayu/Bahasa Malaysia, July paper and passed History subject effective from year 2013 ; and

● Passed the Malaysian Higher School Certificate (STPM) and obtained a CGPA of at least 2.00 with Grade C in THREE (3) subjects including General Studies ; or

● Passed the Ministry of Education Malaysia (MOEM) Matriculation/ UM Science Foundation, UKM Foundation/UiTM Foundation with a CGPA of at least 2.00 ; or

● Obtained an UA/ILKA/US or other equivalent Diploma approved by the Government of Malaysia and the University Senate (special programme entry requirements according to the types of programmes offered) ; and

● Obtained at least Band 1 in Malaysia University English Test (MUET). The validity period for MUET is FIVE (5) years from the date of the MUET result.

Programme Entry Requirements :
STPM/Matriculation/Foundation Holders

● Obtained at least CGPA 2.80 at STPM, Matriculation or Foundation level ; and

● Obtained at least Grade B (CGPA 3.00) in Pure Mathematics at the STPM, Matriculation or Foundation level ; and

● Obtained at least Grade B- (CGPA 2.67) in any ONE (1) of the following subjects : Physics, Chemistry and Biology ; and

● Passed with a credit in Mathematics (Grade C) at the Malaysian Certificate of Examination (SPM) level or equivalent ; and

● Obtained at least a Band 2 in the Malaysian University English Test (MUET).

Diploma Holders :

● Obtained a Diploma from UTM or any other institutions approved by the Government of Malaysia and related to the applied course with CGPA of at least 3.00 ; or

● Other equivalent holders approved by the Government of Malaysia and the University Senate and related to the applied course with a CGPA of less than 3.00 ; or

● Candidates who obtained a CGPA less than 3.00 but have at least TWO (2) years working experience in related field are eligible to apply ; and

● Passed with a credit in Mathematics (Grade C) at the Malaysian Certificate of Examination (SPM) level ; or

● Obtained at least Grade C in any of Mathematics subjects at Diploma level ; and

● Obtained at least a Band 2 in the Malaysian University English Test (MUET).