

Postgraduate Programmes

Entry Requirements

DOCTOR OF PHILOSOPHY

- 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 with experience in the relevant field recognised by the Senate ; or
- Candidates who are currently enrolled 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

- A Bachelor's Degree with good honours from Universiti Teknologi Malaysia or any other institution of Higher Learning recognised by the Senate ; or
- A qualification equivalent to a Bachelor's Degree with experience in the relevant field recognised by the Senate.

Research Fields

- Natural Products & Organic Synthesis
- Polymer Chemistry
- Biotechnology & Biochemistry

- Photocatalysis and Heterogeneous Catalysis
- Nanostructures, Nanomaterials & Energy Materials
- Organometallic Chemistry

- Separation Science and Environmental Chemistry
- Spectrometric Analysis and Electroanalytical Chemistry
- Computational Chemistry & Chemometrics
- Forensic Sciences and Food Chemistry

- Electrochemistry
- Optical Chemical Sensor
- Surface and Colloid Chemistry

Facilities

The Department is equipped with a number of teaching and research laboratories, well equipped with state-of-the-art scientific instruments such as NMR (400 MHz), GCMS, GCMS-MS, LCMS (TOF), TGA DSC, TOC, GPC, EDXRF, CHN Analyser, UHPLC, HPLC, GC-FID, GC-ECD, ATR FTIR, FTIR, UV-Vis, Fluorescence Spectrophotometer, AAS, ICP-MS, ICP-OES, Voltammetry Systems, Capillary Electrophoresis, Nano Particle Size and Zeta Potential Analyser, Surface Area Analyser and other supporting instruments. The Department also boasts a Glass-Blowing Workshop and an accredited testing laboratory MS ISO/OEC 17025:2017 (Pusat Perkhidmatan Analisis - PPA).

Career Prospects

Graduates of the programme can explore different Chemistry-related career paths including as :

- Chemists or scientists in government research institutions,
- Chemists or process engineers in private sectors,
- Academics or researchers in higher learning institutions,
- Quality control or quality assurance, manufacturing and marketing officers in agencies or industries
- Forensic chemist/consultant
- Environmental or Occupational Safety Specialist

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
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DEPARTMENT OF CHEMISTRY

FACULTY OF SCIENCE

... where great minds are nurtured



Overview

Our programmes place emphasis on humanising students to be capable problem-solvers through research and development activities in the field of Chemistry. We are determined to holistically nurture our students to be efficient and innovative with distinctive leadership qualities, all in compliance with a high standard of ethical conducts.

At the Department of Chemistry, we take pride in our role to equip students so they are ever-ready to engage and contribute towards our common aspirations : environmental well-being and sustainable communities. We are also engaged in New Academia Learning Innovation (NALI), a testament to our commitment in bringing innovative teaching methods to the classroom, including active learning and flipped classrooms.

Undergraduate Programmes

› Bachelor of Science (Industrial Chemistry) with Honours

› Bachelor of Science (Chemistry) with Honours

- The objectives of these programmes are to provide knowledge and skills in chemistry that are vital in nurturing life-ready graduates so they are ready to have a successful professional career or pursue advanced graduate studies.
- The first 2 years of the curriculum are designed with the aim of building a solid foundation in the principles of chemistry. Based on their interest and specialisation, students can further select the area of applied and industrial chemistry, which are regularly curated, ensuring the incorporation of the latest advancement in chemical science knowledge and skills.
- In addition to the practical courses, final year students will perform independent research projects. These projects are tailored to inculcate and hone their advanced scientific research techniques, all through the utilisation of state-of-the-art scientific instrumentations.
- Students will also be exposed to experiential learning practice via a regulated internship at relevant industries or institutions.

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 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 a CGPA of at least 2.80 at STPM/Matriculation/Foundation level ; and
- Obtained at least Grade B (CGPA 3.00) in Chemistry at the STPM/Matriculation/Foundation level ; and
- Obtained at least Grade B- (CGPA 2.67) in any ONE (1) of the following subjects : Biology, Mathematics and Physics ; 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) ; and
- Candidates have no physical disabilities (e.g. blind/color blindness/ paralysed which may cause difficulties in lab work).

Diploma Holders

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

Postgraduate Programmes

› Master of Philosophy Field of Research : Chemistry

› Doctor of Philosophy Field of Research : Chemistry

- These programmes are tailored for those who are interested in research and in-depth knowledge in chemistry through individual and specialised research projects. Students will work with outstanding facilities together with experienced academic supervisors.
- Maximum duration of 8 semesters (MSc) and 16 semesters (PhD).

Master of Science (Chemistry) by Mixed Mode

- This programme provides advanced knowledge and skills in chemistry and research. It is designed to prepare students with the skills to critically assess and solve problems via the competent application of chemistry principles.

Master of Forensic Science by Taught Course

- This programme concentrates on the practices, procedures and analytical techniques of forensic science, and how they are applied in support of the investigation of crime and the criminal justice system as a whole.

The Master of Science programmes are offered full time and can be completed within three semesters (1.5 years).