BACHELOR OF CHEMICAL ENGINEERING WITH HONOURS

XIAMEN UNIVERSITY MALAYSIA
厦門大學馬來西亞分校

KPT/JPS [N/524/6/0063] 05/21 [MQA/PA5713]

DURATION	INTAKE	MEDIUM OF INSTRUCTION
4 years	February / April / September	English

ABOUT THE PROGRAMME

Chemical Engineering (CE) is the branch of engineering that deals with chemical production and the manufacture of products through chemical processes. This includes the development, design and operation of chemical processes and plants for the extraction, conversion and recovery of materials with the minimum environmental impact.

The CE programme at Xiamen University (XMU) is supported by the College of Chemistry and Chemical Engineering, a renowned college with 95 years' history. The affiliated Department of Chemical and Biochemical Engineering, the National Engineering Laboratory for Green Chemical Productions of Alcohols-Ethers-Esters, the State-Province Joint Engineering Laboratory of Power Source Technology for New Energy Vehicle, and the Engineering Research Center of Electrochemical Technology remain at the forefront of Chemical Engineering, in the fields of Process Control, Chemical Engineering Technology, Applied Catalysis, Biochemical Engineering, Membrane Technology, Petroleum Processing, Clean Energy, electrochemical power sources, electro-deposition surface treatment, corrosion science, biochips and advanced electrochemical instruments, etc. The college is supported by a strong faculty, among which there are 9 academicians of the Chinese Academy of Sciences and 5 experts involved in "Thousand Talents Plan", China's Recruitment Programme of Global Experts.

The CE Programme at Xiamen University Malaysia (XMUM) equips the graduates to solve broadly-defined chemical engineering problems systematically, to reach substantiated conclusions using modern engineering tools, resources and techniques, to keep track of the cutting-edge development and the latest trend in this field, to apply analytical and critical thinking skills to plan and conduct experimental investigations, and to gain an understanding of the impact of engineering practices, taking into account the need for sustainable development.

PROGRAMME HIGHLIGHTS

- A programme approved by the Engineering Accreditation Council (EAC) Malaysia
- A multi-disciplinary programme provided by one of the top institutions for chemical research and education
- An ideal integration of practical training with theoretical learning
- A stimulating environment with excellent teaching and research facilities
- A wide range of research activities to help transform our students into highly skilled, well-rounded professionals
- Extensive support and collaboration from industry players

CAREER OPPORTUNITIES

- Chemical engineer and researcher in
  - Oil and gas industry
  - Biochemical companies
  - Environmental engineering companies, etc.
- Professional consultant in government agencies, financial institutions and business enterprises

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ENTRY REQUIREMENTS

STPM	A pass in STPM with at least a Grade C (GP 2.0) in Mathematics AND Chemistry/Physics
A-LEVEL	A pass in A-Level with at least a Grade C in Mathematics AND Chemistry/Physics
UEC	A pass in UEC with at least a Grade B in 5 subjects including Mathematics, Chemistry AND Physics
Foundation/ Matriculation/ (Science/in a relevant field)	A pass in Foundation/Matriculation with at least CGPA 2.0 out of 4.0 AND passes in Mathematics AND Physics
Diploma (in a relevant field)	A pass in Diploma with at least CGPA 2.5 out of 4.0 AND passes in Mathematics, AND Chemistry/Physics

**For other equivalent qualifications, please consult our programme counsellor.*

MAIN COURSES

MAJOR CORE COURSES

- Physical and Organic Chemistry
- Chemical Engineering Drawing
- Fundamentals of Computer Programming
- Chemical Engineering Thermodynamics
- Heat and Mass Transfer
- Unit Operations of Chemical Engineering
- Fluid Mechanics for Chemical Engineering
- Chemical Process Safety
- Reaction Engineering
- Modeling and Simulation of Chemical Processes
- Chemical Process Technology and Design
- Biochemistry
- Process Control and Instrumentation
- Catalysis Technology
- Biorefinery and Bioprocessing
- Particle Technology
- Environmental Management
- Project Management and Economics
- Pollution Sampling and Analysis
- Engineering Mathematics
- Probability and Statistics
- Numerical Methods in Engineering
- Information Skills
- Research Methodology
- Engineering Ethics

MAJOR ELECTIVE COURSES

- Advanced Drying Technology
- System Optimisation
- Computational Fluid Dynamics
- Multi-Scale Modelling and Simulation
- Membrane Technology
- Nanomaterials

XIAMEN UNIVERSITY MALAYSIA DULN009(B)

TEL : +603 7610 2079
FAX : +603 7610 2068
E-MAIL : enquiry@xmu.edu.my
WEBSITE : www.xmu.edu.my
CAMPUS ADDRESS : Jalan Sunsuria, Bandar Sunsuria, 43900 Sepang, Selangor Darul Ehsan, Malaysia

October 2018