



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Innovating Solutions



POSTGRADUATE STUDY
**FACULTY OF CHEMICAL AND
ENERGY ENGINEERING**



Study at
Universiti Teknologi
Malaysia

fkt.utm.my



TAUGHT COURSE	RESEARCH
<ul style="list-style-type: none"> Master in Chemical Engineering Master of Gas Engineering and Management Master in Petroleum Engineering Master of Science (Energy Management) Master in Herbal Technology Master In Process Plant Management Master of Science (Safety, Health and Environment) Master of Science (Polymer Technology) Master in Bioprocess Engineering Master of Science in Food Processing Innovation 	<ul style="list-style-type: none"> Master of Philosophy Doctor of Philosophy <ul style="list-style-type: none"> • Gas Engineering • Environmental Engineering • Petroleum Engineering • Bioprocess Engineering • Chemical Engineering • Polymer Engineering
OPEN & DISTANCE LEARNING (ODL)	
<ul style="list-style-type: none"> • Master of Science (Energy Management) 	

AREAS OF RESEARCH

Chemical Engineering

- Membrane Manufacturing for Water
- Gas Purification
- Energy Application
- Advanced Material for Water
- Gas Transmission and Distribution System
- Development of Adsorbent for Water and Gas Application
- Computational fluid Dynamics (CFD) Development and Application
- Waste Combustion
- Storage System
- Industrial Process Tomography
- Explosion Protection and Mitigation
- Corrosion of Metals
- Nondestructive Testing (NDT) and Radiation
- Biomass to Biofuels
- Safety and Risk Assessment
- Nuclear Engineering

Bioprocess Engineering

- Bioprocessing
- Bioreactor Design
- Fermentation Technology
- Enzyme
- Genetic Engineering
- Cell Culture
- Food Technology, Food Packaging & Plant Extraction
- Herbal Technology
- Bioseparation
- Biofuel
- Environmental Biotechnology
- Cosmeceutical
- Proteomic
- Nutraceutical
- Bioconversion
- Bioproduct Development
- Metabolomics

Polymer Engineering

- Polymers Blend
- Polymers Composites and Nanocomposites
- Natural Fiber Reinforced Polymers
- Composites
- Nano Filler Polymers Composites
- Thermoplastic Elastomer
- Bio-degradable Polymers and Degradable Polymers
- Liquid Rubber and Rubber Technology
- Polyurethane and Polyacrylic Coatings, Polyurethane Foam
- Shape Memory Polymers
- PVC Blends
- Biodegradable Packaging
- Polymer Recycling
- Functional / Smart Polymer (Hydrogel)
- Advanced Membrane Functionalization
- Crystallization and Thermal Degradation Studies / Kinetics of Polymer Melts, Polymer Blends and Composites
- Rheology of Polymer Melts, Polymer Blends and Composites
- Polymer Processing, Instabilities and Processing Aids

Petroleum Engineering

- Production of Local Lignin from Coconut Fiber as Lignin Based Surfactant in EOR
- Vibro-seismic Application in EOR
- Cementation of Porous Media Using Calcite
- Surfactant Foam Flooding in EOR
- CO₂ Sequestration/Storage
- Alkaline Surfactant Flooding in EOR
- Deep Water Drilling
- Non-Convective Resources
- Production Optimization
- Rejuvenate Old Field
- Small & Marginal Field Development

- Nano Material and Technology Application in Drilling & Production
- Cement Material and Cementing Technology
- Polymer Flooding in EOR
- Carbonated Water Flooding in EOR
- Nano fluids Application in EOR

Gas Engineering

- Membrane Manufacturing for Water and Gas Purification and Energy Application
- Advanced Material for Water and Gas Purification and Energy Application
- Gas Transmission and Distribution System
- Development of Adsorbent for Water and Gas Application
- Computational Fluid Dynamics (CFD) Development and Application
- Waste Combustion
- Storage System
- Industrial Process Tomography
- Explosion Protection and Mitigation
- Corrosion of Metals
- Non-destructive Testing (NDT) and Radiation
- Biomass to Biofuels
- Safety and Risk Assessment
- Nuclear Engineering

Environmental Engineering

- Water Pollution Control and Treatment
- Environmental Management and Sustainability
- Sustainable Consumption and Production
- Solid and Hazardous Waste Management
- Life Cycle Assessment (LCA)
- Industrial and Municipal Wastewater Treatment
- Water Quality Assessment and Management
- Environmental Quality Analysis
- Modelling

Notes:

1. A comprehensive list of research areas can be found at the respective faculty websites.
2. Areas and disciplines for Masters by Research and PhD study other than listed above will be offered as Generic Programmes at faculties and schools.