



# BACHELOR OF ENGINEERING IN NEW ENERGY SCIENCE AND ENGINEERING(HONOURS)

KPT/JPS [R/522/6/0055] 08/27 [MQA/FA5668]

## DURATION

4 years

## INTAKE

February / April / September

## MEDIUM OF INSTRUCTION

English

## ABOUT THE PROGRAMME

NESE is an interdisciplinary engineering programme related to the efficient, safe, environmentally friendly and economical extraction, conversion, transportation, storage and use of energy, with an aim to increase efficiency whilst minimising negative effects on humans, nature and the environment.

The NESE programme at Xiamen University is supported by College of Energy, one of China's top-rated new energy technology research institutions for education, R&D, and technology transfer. We are supported by a strong faculty, consisting of high-calibre researchers and engineering experts in the fields of clean chemical energy, nuclear energy, solar and wind energy, bio energy, energy economics, and energy efficiency engineering, all dedicated to high quality R&D in energy science and technologies.

We are working closely with many leading universities such as Australian National University, University of Cincinnati and National University of Singapore, and major industry players including EDRA ENERGY, +Plus Solar, Infineon, Petronas, China Southern Power Grid and Zhejiang Electric Power Construction Co. Ltd.

Our programme at Xiamen University Malaysia aims to develop highly flexible professionals with solid specialty knowledge, who are ready for employment in energy related industries or for pursuing scholastic endeavours in the same or related fields. At the end of the programme, students will be equipped with core theoretical knowledge and practical skills for the analysis, modeling, evaluation, design, development, and implementation of energy technology.

## PROGRAMME HIGHLIGHTS

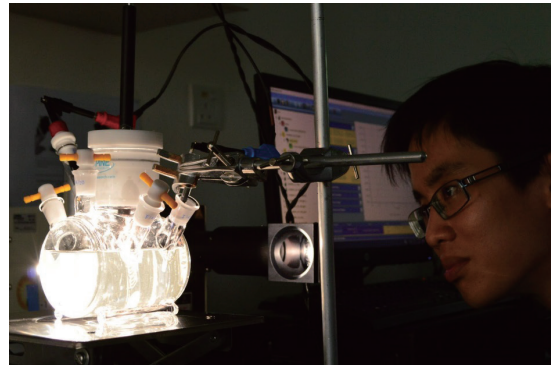
- A world-leading programme which produces well-trained professionals who are able to devise strategies to counter the global energy crisis by promoting the use of efficient, clean, renewable and sustainable energy technologies
- A customised programme which benefits from the vast Chinese experience in energy technology research and development
- A close cooperation with leading overseas universities and major industry players which ensures up-to-date appreciation of energy technology developments and research directions

## CAREER OPPORTUNITIES

Technical or research work in power plants, energy technologist, material engineer, solar engineer etc.



# BACHELOR OF ENGINEERING IN NEW ENERGY SCIENCE AND ENGINEERING (HONOURS)



## ENTRY REQUIREMENTS

<b>STPM</b>	A pass in STPM with at least a Grade C (GP2.0) in Mathematics AND Physics/Chemistry.
<b>A-LEVEL</b>	A pass in A-Level with at least a Grade C in Mathematics AND Physics/Chemistry.
<b>UEC</b>	A pass in UEC with at least a Grade B in 5 subjects including Mathematics AND Physics/Chemistry.
<b>Foundation/Matriculation</b>	A pass in Foundation/Matriculation with at least CGPA 2.0 out of 4.0 AND passes in Mathematics AND Physics/Chemistry.
<b>Diploma</b>	A pass in Diploma in Engineering/Engineering Technology or the equivalent with at least CGPA 2.5 out of 4.0 AND passes in Mathematics AND Physics/Chemistry.
<b>AND</b>	English Language - a pass in SPM or a Grade C in UEC or its equivalent. MUET - at least Band 2 or its equivalent.

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

## MAIN COURSES

### MAJOR CORE COURSES

General Physics I  
General Physics II  
General Physics Laboratory  
Energy Economics and Policy  
Corrosion and Protection of Materials  
Circuit Foundation  
Principles of Chemical Engineering I  
Physical Chemistry  
Engineering Drawing  
Foundation of Materials Science  
Principles of Chemical Engineering II  
Introduction to Electric Power Systems  
Engineering Thermodynamics  
Petrochemical Engineering  
Engineering Fluid Mechanics  
Practices of Energy Technology

### Energy Innovation Laboratory

Thesis I

Thesis II

Industrial Training

### MAJOR ELECTIVE COURSES

Solar Energy Engineering  
Technology of Electrochemical Power Sources  
Natural Gas Chemical Engineering  
Semiconductor Physics  
Introduction to Combustion  
Coal Chemical Engineering  
Microbial Energy  
Electrical & Electronic Technology  
Chemical Engineering of Energy  
Biomass Energy Engineering  
Fundamentals of Nuclear Science and Engineering  
Modeling and Simulation in Energy Engineering

## 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



The information in this brochure is correct at the time of publication. Xiamen University Malaysia (XMUM) reserves the right to change the information in line with updates from time to time. Please check the website (www.xmu.edu.my) for latest information.

April 2021