EMPOWERING THE FUTURE

INSTITUT SEL FUEL, UNIVERSITI KEBANGSAAN MALAYSIA

Awarded as a Higher Education Centre of Excellence (HICoE) for FUEL CELL AND APPLICATIONS by MOHE in 2024

Fuel Cell Institute

The Fuel Cell Institute has built a strong and sustained track record in fuel cell technology and hydrogen energy since its establishment in 2006. Equipped with comprehensive facilities, the Institute provides learners with immersive, hands-on training that spans the entire value chain from component and system design to prototype-scale operation.

Our course modules are ready for deployment and are adapted from Malaysia's first hydrogen-focused postgraduate program, the Master of Science in Low Carbon and Hydrogen Technology (MQA-accredited, introduced in 2022). These modules ensure industry-relevant learning grounded in real-world practice.

Get ready to lead the Global Green Transition.

These professional certificate and micro-credential programs equip students, engineers, researchers, and technical professionals with advanced skills in fuel cell technology and hydrogen energy.

MICRO-CREDENTIALS

Micro-credentials provide focused skills for mastering critical industry knowledge in sustainable energy.

PROFESSIONAL CERTIFICATE

The institute offers professional certifications to build expertise in fuel cell technologies and hydrogen energy.

FUEL CELL SYSTEMS & APPLICATIONS

Low-temperature fuel cells
Ideal for mobility, transportation, & portable power systems.

High-temperature fuel cells
Suited for efficient stationary & distributed power applications.

System Engineering
Covers stack design, balance-of-plant (BoP), & full system integration for real-world deployment.

Fuel Cell Operation & Maintenance
Ensures reliable, efficient, & safe performance of fuel cell systems through routine monitoring, preventive maintenance, & timely troubleshooting.

HYDROGEN VALUE CHAIN

Hydrogen Production Methods
Exploration of various hydrogen production techniques including electrolysis (PEMWE, AEMWE, PEC etc.) & reforming processes.

Hydrogen Storage & Transport Solutions
Overview of hydrogen storage technologies & transport logistics ensuring safety & efficiency.

Hydrogen safety & Maintenance
Focuses on ensuring safe handling, storage, & operation of hydrogen systems through strict safety protocols, leak detection, ventilation management, & proper equipment maintenance.

ADVANCED SIMULATION TECHNIQUES

Comprehensive Simulation Skills
Develop expertise in both Computational Fluid Dynamics (CFD) & quantum-mechanical modeling, Density Functional Theory (DFT), to fully analyse & optimise hydrogen & fuel cell technologies.

Hands-On Training with Industry-Relevant Tools
Gain practical experience running CFD & DFT simulations, from modelling stack performance to predicting catalytic activity & material stability.

Scan now!

Scan this code to register your early interest in the Micro-credential & Professional Certificate programs offered by SELFUEL UKM.

Or reach out to us today for more information:
Assoc. Prof. Ir. Dr. Nurul Akidah Baharuddin
Micro-credential & Professional Certificate Coordinator
akidah@ukm.edu.my
https://www.ukm.my/selfuel/

ILMU, MUTU DAN BUDI