

# PROGRAMME OVERVIEW

# Master of Science (Engineering Education)

aims is to provide graduates with a degree in Engineering, Technology, Computer, Science and Mathematics in exploring the education and training for engineering, science and technical areas. The program integrates the science of engineering education which includes educational philosophy, teaching and learning methods, and assessment and evaluation into the curriculum. Graduates will be able to contribute in producing more dynamic, credible and holistic engineers who can help the nation to be more Through research in the field of competitive. engineering education, graduates will be able to improve the quality of the nation's education system, as well as identify problems related to teaching and learning in the field of engineering education.

# **ENTRY REQUIREMENTS**

A Bachelor's Degree in Engineering, or Science, or Computer Science, or Mathematics 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 as per above area and experience in the relevant field recognised by the Senate.

Additional requirement for International Applicant An English Certificate of IELTS with the minimum band of 6.0 OR TOEFL with the minimum score of 550



COURSEWORK (46 CR)



Intake: February and September



Package 1: Weekdays Class

1.5 years (3 semesters) - 4 years (8 semesters)

Package 2: Weekend Class

2 years (4 semesters) - 4 years (8 semesters)

## **CORE COURSES**

- Curriculum Development
- Philosophy in Engineering Education
- Data Analysis in Engineering Education
- Instructional Design in Engineering Education
- Teaching and Learning in Engineering Education
- Assessment and Evaluation in Engineering Education
- Research Methodology
- 1 University General Course

# **ELECTIVE COURSES**

#### PROFESSIONAL DEVELOPMENT

- Practical Teaching Experience
- Trends in Engineering Education
- Practical Engineering Experience
- Instrument Development Theory and Applications
- Professional Development in Engineering Education

#### MANAGEMENT

- Technovation Management
- Leading Talent in Organizations
- Quality Management and Techniques
- Operation Strategy and Management

### PHILOSOPHY AND EDUCATIONAL PSYCHOLOGY

- Cognitive Psychology
- Theories of Motivation
- Advanced Educational Psychology
- Islamic Philosophy of Science and Technology
- Development and Epistemology of Engineering Thinking

### MASTER PROJECT

- Master Project 1
- Master Project 2

# CAREER OPPORTUNITIES

- Lecturer
- Researcher
- Engineering education consultant
- Policy maker in engineering education
- Professionals in engineering education
- Trainer in entrepreneurship and professional practice



"New teaching techniques..!"

Coming from the technical background and focussing on teaching competency programs, I have learnt many new teaching techniques through this program and successfully applied them. This program allowed me to acquire interdisciplinary engineering knowledge to solve complex problems for a balanced environment. 99

#### W MOHD SHUKRAN BIN W MAT RANI

Mechatronic Instructor and Engineer Johor Skills Development Centre (JSDC



"Critical and meaningful."

**66** Education is my Passion. Engineering is my Profession. To meet the needs of the 21st century, Engineering Education at UTM has made critical and meaningful additions to our academic culture. For those who want to build future engineering education, this is the best program for you. 99

#### **SUHAIDA JAMALUDIN**

Field Engineer Logging and Perforation Halliburton Malaysia