



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

UTM Razak School of
Engineering and
Advanced Technology



Master of Science (Sustainable Infrastructure)

Master of Science (Sustainable Infrastructure) or in short, MSSI, is a programme that offers substantial knowledge for graduate and professional in engineering, science and technology background as well as opportunities for further updating and enhancing current knowledge in sustainable infrastructure. This programme is an application and industrial-driven, where participants can directly add value to their employers and industry in general via the lectures delivered by experienced industrial speakers in the area of sustainable infrastructure throughout the modules. A total of 46 credits is required for graduation, comprising 12 taught modules of 3 credits each and a master project worth 10 credits. The duration of study is 1½ years for full-time and 2 years for part-time study. This programme aims to prepare professionals in the engineering, science and technology-based organisations working for transition into senior executive positions or senior engineering (or other professional) management roles towards the preparation of life-long learning.

Program Objectives

This programme aims at providing rooms for knowledge advancement to graduate and professional of Bachelor of Engineering, Technology or Science backgrounds, be it those with vast working experience or those who recently graduated. This programme is specifically designed to ensure that the graduate is kept up-to-date with the current development of sustainable infrastructure in enhancing knowledge and skills in their career. The objectives of this programme include producing graduates who are able to:

- (i) Manage the development of project organisation related to sustainable infrastructure by applying the advance knowledge and skill in facilitating the local and international sectors.
- (ii) Lead and simultaneously work as a team and communicate effectively in verbal and oral in the field of sustainable infrastructure.

- (iii) Carry out responsibilities competently, effectively, innovatively, professionally and ethically while demonstrating the creativity, sensitivity and academic ability in confronting issues related to sustainable infrastructure.
- (iv) Apply the current knowledge on the impact of sustainable infrastructure from time to time extensively, globally and innovatively throughout the life-long learning

Program Outcomes

- (1) Integrate and build in-depth knowledge of the concepts and techniques of sustainable infrastructure and its impact on the future nation development
- (2) Critically analyse the problem of relationship between

sustainable solutions and effective infrastructure technology by choosing the appropriate techniques and skills

- (3) Assess the situation and act with responsibility, either as leader or member of the group, and to communicate effectively orally and in writing to the professionals, industry and the public
- (4) Adapting the best practices and comply with the law, the code of professional ethics, and key stakeholders needs on the importance of the environment and society
- (5) Manage and adapt knowledge and information effectively through lifelong learning to support organisational, career and personal development
- (6) Identify and strategise entrepreneur opportunities in sustainable infrastructure development through new knowledge

Entry Requirements

• General University Requirements:

Basic conditions of entry is referring to the Evaluation Guidelines Admission 1998 Pind.1/2013.

• Faculty's Requirement:

Admission requirements are as specified by the School of Graduate Studies. Additional conditions

are Bachelor's Degree (Honours) in the engineering and technology field recognised by the Senate of UTM with minimum CGPA 3.00.

OR

a) Bachelor's Degree (Honours) in applied and pure science with minimum CGPA ≥ 3.00 , an applicant must pass an interview.

OR

b) An applicant who has lower academic achievement, but with work experience in related field will be considered.

- English Language Requirement (for international student):

All international students applying to UTM must have a valid two-year old TOEFL or IELTS certificate. Students with a TOEFL score of 550 (or 79 IBT) or an IELTS Band 6 will be enrolled in a faculty programme without undergoing UTM English Courses.

Courses

1. CORE COURSES (8 credits – Compulsory)

● Sustainable Building Technology	3
● Sustainable Infrastructure in Practice	3
● Sustainable Infrastructure Policy and Legislation	3
● Services and Maintenance of Infrastructure Assets	3
● Sustainable Water and Energy Saving	3
● Sustainable Transportation, Road and Bridge	3

2. ELECTIVE COURSES (12 credit – Choose 4)

● Engineering Stakeholder Management	3
● Waste Management and Recycling	3
● Soil and Slope Sustainability	3
● Coastal Infrastructure Maintenance	3
● Service Life Planning and Asset Management	3
● Conservation and Urban Regeneration	3
● Contextual Leadership	3
● Human Asset Management	3
● Urban Studies	3
● Sustainable Design and Construction	3
● Sustainable Development and Environmental Engineering	3

UNIVERSITY COURSE (6 Credit – Choose 2 including Research Methodology)

● Research Methodology	3
● Seminar on Global Development, Economic and Social Issues	3
● Malaysian Society and Culture	3
● Environmental Ethics	3
● Information and Communication Technology Ethics and Society	3
● Philosophy of Science and Civilization	3
● Dynamics of Leadership	3
● Malay Language for Postgraduates	3

● Organizational Behavior and Development	3
● IT Project Management	3
● Japanese Language	3

MASTER PROJECT (10 credit)

● Master Project 1	4
● Master Project 2	6

TOTAL CREDIT 46

Fee

Full Time/ Part-time

	Local	International
● Processing fee (Non-refundable)	RM 20.00	RM 114.00
● Registration fee (Non-refundable)	RM 300.00	RM 4,000.00
● Programme fee* (Subject to change)	RM 19,800.00	RM 32,000.00

● Meals provided

Scholarship and Financial Aids

Student can obtain financial assistance from:

- (1) My Brain 15: (<https://biasiswa.moe.gov.my/MyBrain15>)
- (2) PTPN: (<http://www.ptpn.gov.my/web/guest/pinjaman>)
- (3) MARA (<http://www.mara.gov.my/web/guest/biasiswa/-/pinjaman-pelajaran>).

Student can also withdraw EPF savings. UTM will issue a support letter once the offer letter to the student has been issued



razakschool.utm.my

For online application, please log on to www.sps.utm.my

Program Coordinator:
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MASTER OF SCIENCE

(SUSTAINABLE INFRASTRUCTURE)

NEW PROGRAMME START SEPTEMBER 2016

