



1. Programme Educational Objectives (PEO)
2. Programme Outcomes (PO)
3. Course Learning Outcome (CO)

PROGRAMME SPECIFICATION

1. Programme Name	Bachelor in Civil Engineering			
2. Final Award	Bachelor of Engineering (Civil)			
3. Awarding Institution	UTM			
4. Teaching Institution	UTM			
5. Professional or Statutory Body of Accreditation	Board of Engineers Malaysia (BEM)			
6. Language(s) of Instruction	Bahasa Melayu and English			
7. Mode of Study (Conventional, distance learning, etc)	Distance Learning			
8. Mode of operation (Franchise, self-govern, etc)	Self-governing			
9. Study Scheme (Full Time/Part Time)	Part Time			
10. Study Duration	<u>Minimum</u> : 4 1/2 yrs (9 normal semesters) <u>Maximum</u> : 12 yrs (24 normal semesters)			
Type of Semester	No. of Semesters		No. of Weeks / Semester	
	Full Time	Part Time	Full Time	Part Time
Normal	8	9	14	14
Short	4	5	8	8
11. Entry Requirement	<ol style="list-style-type: none"> 1. Diploma in Civil Engineering with minimum CGPA of 2.70 from recognized institutions. Or 2. For candidates who hold a Diploma in Civil Engineering from recognized institutions, with CGPA lower than 2.70 but with a minimum of 2 years working experience are also eligible to apply 			

12. Programme Objectives (PEO) – (Ciri-ciri yang perlu ada pada seorang graduan selepas 3 tahun bekerja)

PEO1: Graduates are competent, innovative and entrepreneurial in acquiring and applying knowledge towards solving complex civil engineering problems.

PEO2: Graduates possess leadership qualities, able to work, manage in diverse teams and serve the society in multidisciplinary environment.

PEO3: Graduates demonstrate professionalism and uphold ethical values with emphasis on sustainable environment.

PEO4: Graduates are able to communicate effectively, possess strong self-confidence and recognise the need for life-long learning.



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13. Programme Learning Outcomes (PO) (Ciri-ciri yang perlu ada pada seorang graduan sebaik sahaja menamatkan pengajian)

Code	Intended Learning Outcomes	Teaching and Learning Methods	Assessment
(a) Technical Knowledge and Competencies			
PO1 Fundamental Knowledge	Ability to apply knowledge of science, mathematics, civil engineering principles and other relevant field of studies to solve complex engineering problems	Lectures, seminars, works, independent study, active learning. tutorials, laboratory directed reading, active learning.	Examinations, laboratory reports, presentations, assignments, problem-based exercises, project reports.
PO2 Analyse & Tools	Ability to analyse and use appropriate techniques, resources and modern tools to solve complex engineering problems and activities	Lectures, computer sessions, works, surveying camps. tutorials, hands-on laboratory training, industrial training, surveying camps.	Examinations, laboratory reports, presentations, assignments, problem-based exercises, project reports, design tasks, simulation exercises, industrial training reports.

13. Programme Learning Outcomes

Code	Intended Learning Outcomes	Teaching and Learning Methods	Assessment
(a) Technical Knowledge and Competencies			
PO3 Design	Ability to design solutions for complex problems and design components, systems, or processes that comply specific requirement with appropriate consideration of other requirements.	Project supervision, lectures, tutorials, laboratory works, directed reading, simulation exercises, computer-based exercises, independent study, problem-based learning.	Final Year Project reports, project reports, design tasks, examinations, laboratory reports, presentations, assignments.
(b) Generic Skills			
PO4 Problem Solving & Research	Ability to resolve complex problems based on investigation or	Project supervision, lectures, tutorials, laboratory works, group projects, independent study.	Oral presentations, written reports.



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	research using integration of knowledge and the consequent responsibilities relevant to professional practice.		
PO5 Communication Skills	Ability to communicate effectively and with confidence including complex engineering activities.	Projects, independent study, tutorials, surveying camps.	Final Year Project reports, project reports, design tasks, examinations, laboratory reports, presentations, assignments.
PO6 Project Management	Ability to apply engineering, management and finance principles in managing project	Independent study, group project, industrial visit, Seminar (SEMKA), dialogue with invited speaker.	Seminar report, written business proposal.
PO7 Teamwork	Ability to function effectively as an individual or in a team to achieve common goals in diverse teams and in multi-disciplinary settings.	Independent projects, group projects, industrial training, final year project, surveying camps.	Industrial training report and logbook, project report, final year project report and logbook.
PO8 Life-long Learning	Ability to perpetually seek and acquire contemporary technological changes..	Independent study, final year projects.	Final year project reports, assignments.
PO9 Entrepreneurial & Leadership	Ability to demonstrate entrepreneurial skills, lead and manage a team effectively in multidisciplinary environment with self-assurance	Lectures, laboratory works, group assignments, Industrial training, final year project.	Industrial training reports and logbooks, final year project reports and logbooks.
Sustainability and Ethics PO10	Ability to understand the impact of engineering decisions and apply professional ethics for sustainable development.	Final year projects, Laboratory works, Industrial training, surveying camps.	Written assignments, laboratory reports, essays, final year project reports, Industrial training report.



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14. Classification of Subjects

No.	Classification	Credit Hours	Percentage
i.	University a. General b. Language c. Entrepreneurship d. Co-curriculum	10 6 2 2	15%
ii.	Faculty / Programme Core	106	78.5%
iii.	Programme Electives	9	6.7%
	Total	135	100%
For engineering programmes please complete the following classification. (Others please refer to the Statutory Body guidelines)			
A	Engineering Subjects (a) Lecture/Project/ Laboratory (b) Workshop/Field/Design Studio (c) Industrial Training (d) Final Year Project	81 5 5 6	71.9%
	Total credit hours for Part A	97	
B	Related Subjects (a) Applied Science/Maths/Computer (b) Management/Law/Humanities/Ethics (c) Language (d) Co-Curriculum	18 12 6 2	28.1%
	Total credit hours for Part B	38	
	Total Credit Hours for Parts A and B	135	100%

15. Total credit hours to graduate

135 credit hours



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16. Programme structure and features, curriculum and award requirements

The programme is offered on part-time mode and is based on a 2 normal-Semester and 1 short-semester in each Academic Session. Courses are delivered and assessed in each Semester. Assessment is based on final examination and coursework conducted throughout the semester.

Award requirements:

To graduate, students should :

- Attain a total of no less than 135 credit hours with minimum CGPA of 2.0.
- Complete and pass the Industrial Training equivalent to 5 credit hours for students without any working experience. Exemption to industrial training is given to students who have at least one year working experience. To obtain exemption students must submit a technical report on the related experience, attend and pass the interview.
- Complete and pass the undergraduate Final Year Project.
- Complete and pass the Civil Engineering Seminar.

The programme is conducted according to the course menu (Menu Matapelajaran) shown in the following tables.

The first and second tables are the menu for the July and December intakes respectively. The third table shows an example of the course menu for Ipoh Learning Centre, with student intake conducted in December.

18. Our Uniqueness

1. One of the biggest Civil Engineering faculties in the world.
2. One of the biggest and best Civil Engineering lab/facilities in the region.
3. A major contributor of Civil Engineering graduates in the local workforce.
4. High employability rate of graduates.
5. A major contributor of leaders in government and industrial sectors.
6. The first Civil Engineering Faculty to achieve ISO 9001:2000 and ISO 17025 certifications.
7. Diversity of lecturers (qualification background from institutions all over the world).

19. Career Prospects and Career Path

Graduates of the programme can work as a Project Engineer, Construction Engineer, Hydraulic Engineer, Environmental Engineer, Highway and Transport Engineer, Geotechnical Engineer, Site Engineer, Design Engineer and Structural Engineer.

20. Facilities available

Range of facilities;

1. Structural Engineering Laboratory
2. Material Engineering Laboratory
3. Hydraulics and Hydrology Laboratory
4. Environmental Laboratory
5. Geotechnical Laboratory
6. Highway & Transportation Laboratory
7. Computer Laboratory
8. Civil Engineering Testing Unit (CETU)
9. Information Technology Unit of Civil Engineering (ITUCE)
10. Conducive Learning Centres
11. Knowledge Resource Centre at Every Learning Centres
12. Digital library accessible to all students via internet
13. Conventional Lectures (Face-to-face lectures)
14. Similar curriculum and contact credit hours to the full-time mode