

PROGRAMME STRUCTURE

BACHELOR OF CIVIL ENGINEERING

Courses	Content	Credit Hours
University Courses	GIG1012: Philosophy and Current Issues* / GLT1049: <i>Bahasa Melayu Komunikasi</i> **	2
	GIG1013: Appreciation of Ethics and Civilization	2
	GIG1003: Basic Entrepreneurship Enculturation	2
	GLTXXXX: English Communication Programme †	4
	University Elective Courses (Student Holistic Empowerment)	8
	Co-Curriculum	2
Sub-total Credit Hours		20
Faculty Courses	Faculty Core Courses	12
Sub-total Credit Hours		12
Department Courses	Department Core Courses	96
	Department Elective Courses	15
Sub-total Credit Hours		111
TOTAL CREDIT HOURS		143

* Compulsory for local students.

** Compulsory for international students.

† Students are required to complete the courses based on their English Proficiency qualification (MUET/IELTS/TOEFL), as stipulated in the respective PATH on page 33.

ACADEMIC PLANNER

INTAKE SESSION 2024/2025

YEAR 1						
CODE	COURSE	S1	S2	SS	TOTAL CREDIT	PRE-REQUISITE
UNIVERSITY COURSES						
GIG1012 / GLT1049	Philosophy And Current Issues* / Bahasa Melayu Komunikasi **	2				
GIG1003	Basic Entrepreneurship Enculturation	2				
GLTXXXX	English Communication I	2				
GIG1013	Appreciation of Ethics and Civilisations		2			
GLTXXXX	English Communication II		2			
Sub-total Credit Hours		6	4		10	
UNIVERSITY ELECTIVE COURSES (STUDENT HOLISTIC EMPOWERMENT)						
Cluster 1	Thinking Matters: Mind and Intellect		2			
Sub-total Credit Hours			2		2	
FACULTY COURSES						
KIX1001	Engineering Mathematics 1	3				
KIX1002	Engineering Mathematics 2		3			
Sub-total Credit Hours		3	3		6	
DEPARTMENT CORE COURSES						
KIA1002	Engineering Mechanics	3				
KIA1003	Civil Engineering Materials	3				
KIA1006	Civil Engineering Drawing And CAD	3				
KIA1004	Mechanics Of Materials		3			
KIA1005	Engineering Survey		3			
KIA1007	Programming And Information System		3			
Sub-total Credit Hours		9	9		18	
TOTAL CREDIT HOURS		18	18	0	36	

* Compulsory for local students.

** Compulsory for international students.

YEAR 2						
CODE	COURSE	S1	S2	SS	TOTAL CREDIT	PRE-REQUISITE
UNIVERSITY ELECTIVE COURSES (STUDENT HOLISTIC EMPOWERMENT)						
Cluster 2	Emotional, Physical and Spiritual Intelligence: Heart, Body & Soul	2				
Cluster 3	Technology/Artificial Intelligence and Data Analytics: I-Techie	2				
Cluster 4	Global Issues and Community Sustainability: Making The World A Better Place		2			
Sub-total Credit Hours		4	2		6	
FACULTY COURSES						
KIX2005	Law, Ethics and Sustainability For Engineers		3			
Sub-total Credit Hours			3		3	
DEPARTMENT CORE COURSES						
KIA2001	Theory Of Structures	3				KIA1002 and KIA1004
KIA2003	Fluid Mechanics	3				
KIA2010	Soil Mechanics I	3				
KIA2011	Pavement Engineering	2				
KIA2013	Principles Of Environmental Engineering	3				
KIA2005	Water Resources		3			
KIA2012	Reinforced Concrete Design I		3			
KIA2014	Soil Mechanics II		2			
KIA2015	Surveying Fieldwork		2			KIA1005
KIA2016	Highway Engineering		3			
Sub-total Credit Hours		14	13		27	
TOTAL CREDIT HOURS		18	18		36	

YEAR 3						
CODE	COURSE	S1	S2	SS	TOTAL CREDIT	PRE-REQUISITE
UNIVERSITY COURSES						
	Co-Curriculum		2			
Sub-total Credit Hours			2		2	
FACULTY COURSES						
KIX2006	Engineering Economics and Project Management	3				
Sub-total Credit Hours		3			3	
DEPARTMENT CORE COURSES						
KIA3001	Statistics and Numerical Techniques	3				
KIA3002	Structural Steel Design	3				KIA1002 and KIA1004
KIA3010	Geotechnical Engineering	3				KIA2010
KIA3011	Open Channel Hydraulics	3				KIA2003
KIA3016	Structural Analysis	3				KIA2001
KIA3003	Traffic Engineering		3			
KIA3006	Foundation Engineering		3			
KIA3012	Reinforced Concrete Design II		3			KIA2012
KIA3013	Water Supply And Sewerage		2			KIA2003
KIA3014	Fundamentals Of Sustainability In Civil Engineering		2			
KIA3015	Construction Management And Technology		3			
KIA3008	Industrial Training			5		
Sub-total Credit Hours		15	16	5	36	
TOTAL CREDIT HOURS		18	18	5	41	

YEAR 4						
CODE	COURSE	S1	S2	SS	TOTAL CREDIT	PRE-REQUISITE
DEPARTMENT CORE COURSES						
KIA4001	Final Year Project (P)	3P	3+3			
KIA4018	Integrated Design Project I	2				
KIA4020	Engineers and Society	2				
KIA4035	Prestressed Concrete Design	2				
KIA4019	Integrated Design Project II		3			KIA4018
Sub-total Credit Hours		6	9		15	
DEPARTMENT ELECTIVE COURSES						
KIAXXXX	ELECTIVE COURSE I	3				
KIAXXXX	ELECTIVE COURSE II	3				
KIAXXXX	ELECTIVE COURSE III	3				
KIAXXXX	ELECTIVE COURSE IV		3			
KIAXXXX	ELECTIVE COURSE V		3			
Sub-total Credit Hours		9	6		15	
TOTAL CREDIT HOURS		15	15		30	

DEPARTMENT ELECTIVE COURSES

CODE	COURSE	CREDIT HOURS	PRE-REQUISITE
KIA4005	Rekabentuk Struktur Keluli Lanjutan <i>Advanced Structural Steel Design</i>	3	
KIA4006	Rekabentuk Kayu <i>Timber Design</i>	3	
KIA4007	Kejuruteraan Angin dan Gempabumi <i>Wind and Earthquake Engineering</i>	3	
KIA4008	Kejuruteraan Jambatan <i>Bridge Engineering</i>	3	
KIA4036	Teknologi dan Kejuruteraan Konkrit <i>Concrete Engineering and Technology</i>	3	
KIA4012	Kejuruteraan Batuan <i>Rock Engineering</i>	3	
KIA4013	Pembaikan Tanah <i>Ground Improvements</i>	3	
KIA4017	Teknik-teknik Kuantitatif dalam Pengurusan Pembinaan <i>Quantitative Techniques in Construction Management</i>	3	
KIA4021	Konkrit Pra Tuang dan IBS <i>Precast Concrete and IBS</i>	3	
KIA4022	Bangunan Hijau <i>Green Building</i>	3	
KIA4023	Pembaikan dan Pemulihan <i>Repair and Rehabilitation</i>	3	
KIA4024	Pengurusan dan Perawatan Sisa <i>Waste Management and Treatment</i>	3	
KIA4025	Kawalan Hakisan dan Endapan <i>Erosion and Sediment Control</i>	3	
KIA4026	Proses dan Pengurusan Pantai dan Pesisir <i>Coastal Processes and Management</i>	3	
KIA4027	Penilaian Impak Alam Sekitar dan Sistem Pengurusan Persekitaran <i>Environmental Impact Assessment and Management Systems</i>	3	
KIA4028	Hidrologi Lanjutan <i>Advanced Hydrology</i>	3	
KIA4029	Hidraulik Lanjutan <i>Advanced Hydraulics</i>	3	
KIA4030	Kecerdasan Buatan dalam Kejuruteraan Awam <i>Artificial Intelligence in Civil Engineering</i>	3	
KIA4031	Sistem Transit Bandar Massa <i>Urban Mass Transit System</i>	3	
KIA4032	Perancangan dan Audit Keselamatan Jalan Raya <i>Highway Planning and Road Safety Audit</i>	3	
KIA4033	Sistem Pengangkutan Lanjutan <i>Advanced Transportation System</i>	3	
KIA4034	Kejuruteraan Kualiti Air Permukaan <i>Surface Water Quality Engineering</i>	3	

UNIVERSITY COURSES

The list of university courses offered for each semester could be found through the following link:

<https://citra.um.edu.my/list-of-university-courses>

A. Student Holistic Empowerment (SHE)

The Student Holistic Empowerment (SHE) courses are categorized into four (4) clusters:

Cluster 1

Thinking Matters: Mind and Intellect

Cluster 2

Emotional, Physical and Spiritual Intelligence: Heart, Body & Soul

Cluster 3

Technology/Artificial Intelligence and Data Analytics: i-Techie

Cluster 4

Global Issues and Community Sustainability: Making the World a Better Place

All students are required to register one (1) course from each cluster.

B. Co-curricular Courses

The list of co-curricular courses available is as follows:

CODE	COURSE
GKA1001	Attach@Industry
GKI1001	Independent Research
GKK1001	Community Services
GKP1001	Talent Development
GKS1001	Volunteerism
GKU1001	Entrepreneurship

PATH FOR ENGLISH COMMUNICATION PROGRAMME

ENGLISH COMMUNICATION PROGRAMME (UNIVERSITY COURSE) LIST OF COURSES TO BE COMPLETED BY ALL STUDENTS			
PATH 1	PATH 2	PATH 3	PATH 4
<ul style="list-style-type: none"> • MUET BAND 2 • IELTS Band 4.0 • TOEFL Paper – Based Test (437 – 473) • TOEFL Computer – Based Test (123 – 150) • TOEFL Internet – Based Test (41 – 52) • PTE (Academic) – (10 – 28) 	<ul style="list-style-type: none"> • MUET BAND 3 • IELTS Band 4.5 – 5.0 • TOEFL Paper – Based Test (477 – 510) • TOEFL Computer – Based Test (153 – 180) • TOEFL Internet – Based Test (53 – 64) • PTE (Academic) – (29 - 41) 	<ul style="list-style-type: none"> • MUET BAND 4 • IELTS Band 5.5 – 6.0 • TOEFL Paper – Based Test (513 – 547) • TOEFL Computer – Based Test (183 – 210) • TOEFL Internet – Based Test (65-78) • PTE (Academic) – (42 – 57) • FCE (B & C) • GCE A Level (English) (Minimum C) • IGCSE/GCSE (English) (A, B & C) 	<ul style="list-style-type: none"> • MUET BAND 5 & BAND 6 • IELTS Band 6.5 – 9.0 • TOEFL Paper – Based Test (550 – 677) • TOEFL Computer – Based Test (213 – 300) • TOEFL Internet – Based Test (79 – 120) • PTE (Academic) (58 – 90) • FCE (A) • GCE A Level (English) (B & A)
Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH
<u>COMPULSORY</u>	<u>COMPULSORY</u>	<u>COMPULSORY</u>	<u>CHOOSE TWO:</u>
GLT1018 – Proficiency in English I	GLT1021 – Proficiency in English II	GLT1024 – Proficiency in English III	<ul style="list-style-type: none"> • GLT1027 – Advanced Oral Communication* • GLT1028 – Advanced Business Writing* • Alternative courses - Foreign Language
** <u>CHOOSE ONE:</u> <ul style="list-style-type: none"> • GLT1019 – Let’s Speak • GLT1020 – Fundamental Writing 	** <u>CHOOSE ONE:</u> <ul style="list-style-type: none"> • GLT1022 – Speak Up • GLT1023 – Effective Workplace Writing 	** <u>CHOOSE ONE:</u> <ul style="list-style-type: none"> • GLT1025 – Effective Oral Communication • GLT1026 – Writing at the Workplace 	<ul style="list-style-type: none"> • GLT1027 – Advanced Oral Communication* • GLT1028 – Advanced Business Writing* • Alternative courses - Foreign Language <p>*Students can only register for one course per semester</p>

** These courses have prerequisites and students can only register for them after obtaining a PASS in the compulsory course as stipulated in the respective PATH.

LIST OF FOREIGN LANGUAGE COURSES

Alternative Courses for Path 4

No.	Course Code	Course Name	Credit Hours
1	GLT1029	Bahasa Arab Asas 1 / <i>Basic Arabic Language 1</i>	2
2	GLT1030	Bahasa Arab Asas 2 / <i>Basic Arabic Language 2</i>	2
3	GLT1031	Bahasa Jepun Asas 1 / <i>Basic Japanese Language 1</i>	2
4	GLT1032	Bahasa Jepun Asas 2 / <i>Basic Japanese Language 2</i>	2
5	GLT1033	Bahasa Korea Asas 1 / <i>Basic Korean Language 1</i>	2
6	GLT1034	Bahasa Korea Asas 2 / <i>Basic Korean Language 2</i>	2
7	GLT1035	Bahasa Parsi Asas / <i>Basic Persian Language</i>	2
8	GLT1036	Bahasa Portugis Asas 1 / <i>Basic Portuguese Language 1</i>	2
9	GLT1037	Bahasa Portugis Asas 2 / <i>Basic Portuguese Language 2</i>	2
10	GLT1038	Bahasa Rusia Asas 1 / <i>Basic Russian Language 1</i>	2
11	GLT1039	Bahasa Rusia Asas 2 / <i>Basic Russian Language 2</i>	2
12	GLT1040	Bahasa Sepanyol Asas 1 / <i>Basic Spanish Language 1</i>	2
13	GLT1041	Bahasa Sepanyol Asas 2 / <i>Basic Spanish Language 2</i>	2
14	GLT1042	Bahasa Thai Asas 1 / <i>Basic Thai Language 1</i>	2
15	GLT1043	Bahasa Thai Asas 2 / <i>Basic Thai Language 2</i>	2
16	GLT1044	Bahasa Turki Asas / <i>Basic Turkish Language</i>	2