

Note: \* - cornerstone course; \*\* - capstone course; @ - with tutorial  
# - must pass (at least with grade D+) for prerequisite course

English prerequisite is shown below:

ENGLISH LANGUAGE TESTS	UHLB 1112	UHLB 2122	UHLB 3132
a) MUET : $\geq$ Band 4 b) IELTS : $\geq$ Band 5.5 c) TOEFL: $\geq$ 525 d) TOEFL iBT : $\geq$ 60 e) CEFR : $\geq$ B2	Exemption*	Compulsory	Compulsory

\*Eligible students are required to apply for UHLB 1112 course credit exemption. The credit exemption form (UTM.E/3.8) is provided in the academic office.

### Elective Courses

#### 1. Energy

- SETG 4113 Carbon Capture and Sequestration
- SETG 4143 Energy Management and Economics
- SETG 4153 Energy Conversion Technology
- SETG 4163 Green Energy Technology
- SETG 4243 Non-Conventional Oil and Gas Exploitation

#### 2. Gas

- SETG 4173 Membrane Based Gas Separation Technology
- SETG 4253 Gas Production Engineering
- SETG 4263 Fire and Explosion Safety
- SETG 4273 Gas Operation and Maintenance
- SETG 4283 Corrosion Engineering

### GRADUATION CHECKLIST

To graduate, students must pass all the stated courses in this checklist. It is the responsibility of the students to ensure that all courses are taken and passed. Students who do not complete any of the courses are not allowed to graduate.

NO.	CODE	COURSE	CREDIT EARNED (JKD)	CREDIT COUNTED (JKK)	TICK (✓) IF PASSED
<b>CHEMICAL-GAS ENGINEERING COURSES</b>					
1	SETG 1233	Introduction to Chemical and Gas Engineering	3	3	
2	SETG 1313	Mechanics of Engineering	3	3	
3	SETG 1323	Engineering Drawing	3	3	

4	SETG 1333	Thermodynamics	3	3	
5	SETG 1413	Mass Balance	3	3	
6	SETG 2133	Combustion Engineering and Gas Utilisation	3	3	
7	SETG 2343	Fluid Mechanics	3	3	
8	SETG 2363	Material Engineering	3	3	
9	SETG 2423	Energy Balance	3	3	
10	SETG 2433	Chemical Engineering Thermodynamics	3	3	
11	SETG 2443	Transport Processes	3	3	
12	SETG 2741	Fluid Mechanics Laboratory	1	1	
13	SETG 3123	Gas Processing and Liquefaction	3	3	
14	SETG 3213	Gas Transmission and Distribution	3	3	
15	SETG 3373	Environmental Engineering and Sustainability	3	3	
16	SETG 3383	Safety and Health in Petrochemical Industry	3	3	
17	SETG 3453	Chemical Engineering Computation	3	3	
18	SETG 3463	Chemical Reaction Engineering	3	3	
19	SETG 3473	Separation Process	3	3	
20	SETG 3483	Process Control and Instrumentation	3	3	
21	SETG 3721	Combustion Engineering and Gas Utilisation Laboratory	1	1	
22	SETG 3731	Separation Process Laboratory	1	1	
23	SETG 3751	Thermodynamics and Material Engineering Laboratory	1	1	
24	SETG 3812	Undergraduate Project I	2	2	
25	SETG 3915	Industrial Training	5	HL	
26	SETG 4223	Gas Storage and Reticulation System	3	3	
27	SETG 4393	Engineering Economics and Project Management	3	3	
28	SETG 4493	Plant Design	3	3	
29	SETG 4611	Gas Engineering Seminar	HL	HL	
30	SETG 4711	Gas Flow System Laboratory	1	1	
31	SETG 4761	Pollution Control and Reaction Laboratory	1	1	
32	SETG 4771	Process Control Laboratory	1	1	
33	SETG 4824	Undergraduate Project II	4	4	
34	SETG 4834	Plant Design Project	4	4	

35	SET* ***3	Elective I	3	3	
36	SET* ***3	Elective II	3	3	
37	SET* ***3	Elective III	3	3	
		<b>TOTAL CREDIT OF CHEMICAL-GAS ENGINEERING COURSES (a)</b>	<b>97</b>	<b>92</b>	
<b>MATHEMATICS/ SCIENCE/ TECHNOLOGY COURSES (Faculty of Science/ Faculty of Engineering)</b>					
1	SECP 1013	Programming Technique I	3	3	
2	SEEU 2003	Electrical Technology	3	3	
3	SETG 2353	Introduction to Organic and Analytical Chemistry for Engineers	3	3	
4	SSCE 1693	Engineering Mathematics I	3	3	
5	SSCE 1793	Differential Equations	3	3	
6	SSCE 1993	Engineering Mathematics II	3	3	
		<b>TOTAL CREDIT OF MATHEMATICS/ SCIENCE/ TECHNOLOGY COURSES (b)</b>	<b>18</b>	<b>18</b>	
<b>UNIVERSITY GENERAL COURSES</b>					
<b>Kluster 1: Penghayatan Falsafah, Nilai &amp; Sejarah (Faculty of Social Sciences and Humanities)</b>					
1	UHMS 1182	Appreciation of Ethics and Civilizations (for Local Students)	2	2	
	UHMS 1022	Philosophy and Current Issues (for International Students)			
	OR UHMS 1182	Appreciation of Ethics and Civilizations (for International Students)			
2	UHis 1022	Philosophy and Current Issues (for Local Students)	2	2	
	UHLM 1012	Malay Language Communication 2 (for International Students)			
<b>Kluster 2: Kemahiran Insaniah (Soft Skills)</b>					
1	UHMT 1012	Graduate Success Attribute	2	2	
<b>Kluster 3: Perluasan Ilmu</b>					
1	UHIT 2302	The Thought of Science and Technology	2	2	
2	UETS 2142	Energy Sustainability	2	2	

		(University General Elective)			
<b>Kluster 4: Kurikulum Pembelajaran Servis</b>					
1	UKQF 2**2	Co-Curriculum	2	2	
2	UKQT 3001	Extracurricular Experiential Learning (ExCEL)	1	1	
<b>Kluster 5: Kemahiran Bahasa (Language Skill) (Language Academy, Faculty of Social Sciences and Humanities)</b>					
1	UHLB 1112	English Communication Skills	2	2	
2	UHLB 2122	Academic Communication Skills	2	2	
3	UHLB 3132	Professional Communication Skills	2	2	
4	UHL* 1112	Foreign Language Elective	2	2	
<b>Kluster 6: Keusahawanan</b>					
1	UBSS 1032	Introduction to Entrepreneurship	2	2	
		<b>TOTAL CREDIT of UNIVERSITY GENERAL COURSES (c)</b>	<b>23</b>	<b>23</b>	
		<b>TOTAL CREDIT TO GRADUATE (a + b + c)</b>	<b>138</b>	<b>133</b>	
<b>OTHER COMPULSORY COURSES</b>					
<b>Professional Skills Certificate (PSC) (UTMSPACE/ School)</b>					
1	GLL 1001	How to Get Your Self Employed (HTGYE)			
2	GLL 1029	ISO 9001:2008 Quality Management System Requirement (ISO)			
3	GLL 1040	Occupational Safety and Health Awareness (OSHA)			
4	GLL 1041	How to Manage Your Personal Finance (HTMYPF)			
<b>Test of English Communication Skill (TECS) (Language Academy, Faculty of Social Sciences and Humanities)</b>					
1	TECS 1001	Oral Interaction			
2	TECS 1002	Writing			