

UNIVERSITY REQUIRED COURSES

Students must complete all university required courses. The total university required courses are (20 CH) and consist of Philosophy, Values and History Courses (4 CH), Soft Skills Courses (10 CH), Malaysia Studies Courses (4 CH) and Community Engagement (2 CH). (Table 2)

TABLE 2: UNIVERSITY REQUIRED COURSES (20 CH)

Course Code	Course Title	Credit Hours
UNICORE 1 (UN1)		
MPU 3122K	Tamadun Islam dan Tamadun Asia (TITAS)	2
MPU 3112K	Hubungan Etnik <ul style="list-style-type: none"> • for malaysian students 	2
UNGS 2060K	Malay Virtues, Heritage and Malaysian Society	2
LM 1030K	Bahasa Melayu I untuk Pelajar Antarabangsa	1
LM 1031K	Bahasa Melayu II untuk Pelajar Antarabangsa	1
LM 1040K	Bahasa Melayu I untuk Pelajar Antarabangsa	1
LM 1041K	Bahasa Melayu II untuk Pelajar Antarabangsa (<i>Nusantara</i>) <ul style="list-style-type: none"> • for non malaysian students 	1
UNICORE 2 (UN2)		
UNGS 2011K	Creative Thinking and Problem Solving	2
CCHB/HS 1011K	Usrah 1 (BUDI)	0.5
CCHB/HS 1012K	Usrah 2 (BUDI)	0.5
CCLM 2051K	Leadership and Management	0.5
CCFM 2052K	Family Management and Parenting	0.5
SKILL	Skills Package 1	0.5
	Skills Package 2	0.5
LE 4000K	English Academic Writing	3
TQ 1001K	Tilawah Al-Quran I	0.5
TQ 2001K	Tilawah Al-Quran II	0.5
LQ 1008K	Quranic Language I	0.5
LQ 2008K	Quranic Language II	0.5
UNICORE 3 (UN3)		
UNGS 2080K (UNGS 2050 + UNGS 2070)	Ethics and <i>Fiqh</i> of Contemporary Issues	2
UNGS 2090K (UNGS 2030 + UNGS 2040)	Islamic Worldview, Knowledge & Civilization	2
UNICORE 4 (UN4)		
CCCD 1621K	Usrah 3 (BUDI)	1
CCCD 1622K	Usrah 4 (BUDI)	1
TOTAL		20

KULLIYAH REQUIRED COURSES

The Kulliyyah requires students in the programme to complete 3 CH of Computers in Science and 3 CH of Principles & Practice of Management. (Table 3)

TABLE 3: KULLIYAH REQUIRED COURSES (6 CH)

Course Code	Course Title	Credit Hours
KOS 1110	Computers in Science	3
MGT 2010K	Principles & Practice of Management	3
	TOTAL	6

DEPARTMENTAL CORE COURSES

Students are required to complete 82 CH of core courses. (Table 4)

Table 4: Departmental Core Courses (CH)

Course Code	Course Title	Credit Hours	Pre-requisite
SCH 1013	Concepts in Physics	3	-
SCH 1023	Physical Chemistry I	3	SCH 1013
SCH 1313	Mathematics for Chemists I	3	SCH 1013
SCH 1413	Organic Chemistry I	3	-
SCH 1213	Inorganic Chemistry I	3	
SCH 1323	Mathematics for Chemists II	3	-
SCH 1014	Analytical Chemistry	4	SCH 1013
SCH 2213	Inorganic Chemistry II	3	SCH 1213
SCH 2013	Physical Chemistry II	3	SCH 1023
SCH 2413	Organic Chemistry II	3	SCH 1413
SCH 2053	Polymer Chemistry	3	SCH 1023, SCH 1413
SCH 2423	Physical Organic Chemistry & Reaction Mechanism	3	SCH 1413, SCH 1023
SCH 2443	Natural Product Chemistry	3	SCH 2413
SCH 2083	Environmental Chemistry	3	SCH 1023
SCH 2243	Organometallic & Bioinorganic Chemistry	3	SCH 1213
SCH 2623	Analytical Spectroscopy	3	SCH 1014, SCH 1023, SCH 1413
SCH 3013	Principles of Biochemistry	3	-
SCH 3434	Organic Synthesis	4	SCH 2413
SCH 3053	Industrial Catalysis	3	SCH 1013, SCH 1223
SCH 3072	Good Laboratory Practice	2	-
SCH 3041	Project Seminar	1	-
SCH 3046	Industrial Training/Internship	6	-
SCH 4612	Research Methodology	2	-

SCH 4974	Final Year Project I	4	-
SCH 4988	Final Year Project II	8	-
TOTAL		82	

APPLIED CHEMISTRY CONCENTRATION COURSES

Each student is also required to complete 21 CH of concentration courses from any one of the three specialization areas shown in Table 5

TABLE 4: CONCENTRATION COURSES

1. Halal Haram Chemistry

Package I (12 CH): Compulsory		
Course Code	Title	Credit Hours
SCH 4431	Food Chemistry & Biotechnology	3(2+1)
SCH 4432	Chemistry of Fats and Oils	3(2+1)
SCH 4433	Emulsifiers and Surfactants	3(2+ 1)
SCH 4434	Halāl and Harām in Food Ingredients and Processing	3(3+0)

Package II (9 CH): Students must choose 3 of the 4 following courses		
Course Code	Title	Credit Hours
SCH 4435	Flaovours and Fragrance	3(3+0)
SCH 4436	Fermentation Technology	3(3+0)
SCH 4437	Halal Foods and Related Products	3(2+1)
SCH 4438	Advance Analytical Methods for Halal Haram Products	3(2+1)

2. Occupational Safety and Health Management

Package I (12 CH): Compulsory		
Course Code	Title	Credit Hours
SCH 4531	Occupational Safety	3(3+0)
SCH 4532	Occupational Health	3(2+1)
SCH 4533	Health Risk Assessment	3(3+0)
SCH 4534	Waste management	3(3+0)

Package II (9 CH): Students must choose 3 of the 4 following courses		
Course Code	Title	Credit Hours
SCH 4535	Industrial Hygiene	3(3+0)
SCH 4536	Industrial Toxicology	3(2+1)
SCH 4537	Occupational, Safety and Health Legislation and Management	3(3+0)
SCH 4538	Ergonomics	3(3+0)

3. Medicinal Chemistry

Package I (12 CH): Compulsory		
Course Code	Title	Credit Hours
SCH 4631	Medicinal Chemistry I	3(3+0)
SCH 4632	Medicinal Plants	3(2+1)
SCH 4633	Toxicology and Drug Interactions	3 (3 + 0)
SCH 4634	Drug Dosage Form	3(3+0)

Package II (9 CH): Students must choose 3 of the 4 following courses		
Course Code	Title	Credit Hours
SCH 4635	Medicinal Chemistry II	3(3+0)
SCH 4636	Drug Delivery & Application	3(3+0)
SCH 4637	Separation Techniques for Medicinal Chemistry	3(2+1)
SCH 4638	Proteomic Chemistry	3(3+0)

INTERNSHIP

The compulsory Internship carries 6 CH. Each student must choose his/her place of internship, which could be in the areas of management, industry, research, education or specialized laboratory work. Students may also have their training in medical science laboratories in hospitals or other medical institutions.