

TABLE 1: 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 • 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	(Nusantara) Bahasa Melayu II untuk Pelajar Antarabangsa (Nusantara) • 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

TABLE 2: KULLIYAH REQUIRED COURSES (6 CH)

Course Code	Course Title	Credit Hours
	Computers in Science	3
	Principles & Practice of Management	3
TOTAL		6

TABLE 3: GENERAL CORE COURSES (68 CH)

Course code	Title	Credit Hours	Pre-requisite
SBT 1113	Organic Chemistry I	3	
SBT 1123	Introductory Microbiology	3	
SBT 1213	Organic Chemistry II	3	
SBT 1223	Principles of Biochemistry	3	
SBT 1233	Principles of Cell Biology	3	
SBT 1294	Calculus for Biology	3	
SBT 2113	Genetics	3	
SBT 2123	Principles of Cell and Tissue Culture	3	
SBT 2133	Fermentation Technology	3	
SBT 2213	Molecular Biology	3	
SBT 2223	Enzymology	3	
SBT 2253	Bioinformatics	3	
SBT 2242	Biostatistics	2	
SBT 2252	Medical Biotechnology	3	
SBT 3113	Basic Genetic Engineering	3	
SBT 3123	Protein Biotechnology	3	
SBT 3133	Bioprocess Design and Optimisation	3	
SBT 3153	Instrumentation in Biotechnology Research	3	
SBT 3143	Chemistry and Biochemistry of Natural Products	3	
SBT 3212	Halāl and Harām in Food Processing	2	
SBT 3222	Research Methodology	2	
SBT 3001	Project Seminar	1	
SBT 4122	Biotechnology, Law and Ethics	2	
	Commercialisation and Current Issues in Biotechnology	2	
SBT 4223	Natural Resource Management in Biotechnology	3	
SBT 3006	Internship	6	
SBT 4102	Final Year Project I	4	SBT 1223
SBT 4206	Final Year Project II	4	SBT 4102
TOTAL		82	

Study Plan

YEAR 1

Course Code	Title	Credit Hours
SBT 1113	Organic Chemistry I	3
SBT 1123	Principles of Microbiology	3
KOS 1110	Computers in Science	3
MGT 2010K	Principles and Practices of Management	3
UNGS 2090K	Islamic Worldview, Knowledge & Civilization	2
TQB/TQS 1001K	Tilawah al-Qur'an I	0.5
TOTAL		14.5

Course Code	Title	Credit Hours
SBT 1213	Organic Chemistry II	3
SBT 1223	Principles of Biochemistry	3
SBT 1233	Principles of Cell Biology	3
SMS 1294	Calculus for Biology	3
	Ethics and <i>Fiqh</i> of Contemporary Issues	2
	Hubungan Etnik • <i>for Malaysian students</i>	2
TQS/B 2001K	Tilawah al-Qur'an II	0.5
	Bahasa Melayu I (<i>for International Students</i>) / Bahasa Melayu I (<i>for Nusantara Students</i>)	1 1
	Quranic Language I	0.5
CCHB/S 1011K	Usrah 1 (Budi)	0.5
TOTAL		17.5 / 16.5

YEAR 2

Course Code	Title	Credit Hours
SBT 2113	Genetics	3
SBT 2123	Principles of Cell and Tissue Culture	3
SBT 2133	Fermentation Technology	3
	Tamadun Islam dan Tamadun Asia (TITAS) • <i>for Malaysian students</i>	2
	Bahasa Melayu II (<i>for International Students</i>) / Bahasa Melayu II (<i>for Nusantara Students</i>)	1 1
CCHB/S 1012K	Usrah 2 (Budi)	0.5
	Malay Virtues, Heritage and Malaysian Society • <i>for Non-Malaysian students</i>	2
LE 4000K	English for Academic Writing (EAW)	3
CCLM 2051K	Leadership and Management	0.5
	Quranic Language II	0.5
TOTAL		15.5 (16.5 for international student)

Course Code	Title	Credit Hours
SBT 2213	Molecular Biology	3
SBT 2223	Enzymology	3
SBT 2253	Bioinformatics	3
SBT 2242	Biostatistics	2
SBT 2252	Medical Biotechnology	3
	Creative Thinking and Problem Solving	2
	Family Management and Parenting	0.5
TOTAL		16.5

YEAR 3

Course Code	Title	Credit Hours
SBT 3113	Basic Genetic Engineering	3
SBT 3123	Protein Biotechnology	3
SBT 3163	Bioprocess Design and Optimisation	3
	Instrumentation in Biotechnology Research	3
	Chemistry and Biochemistry of Natural Products	3
		0.5
)	1
TOTAL		16.5

Course Code	Title	Credit Hours
SBT XXXX	Concentration Courses (Package I)	3
SBT XXXX	Concentration Courses (Package I)	3
SBT XXXX	Concentration Courses (Package I)	3
SBT XXXX	Concentration Courses (Package I)	3
SBT 3212	Halal and Haram in Food Processing	2
SBT 3001	Project Seminar	1
SBT 3222	Research Methodology	2
CCxx3xx2K	Skill II	0.5
TOTAL		17.5

YEAR 4

Course Code	Title	Credit Hours
SBT XXXX	Concentration Courses (Package II)	3
SBT XXXX	Concentration Courses (Package II)	3
SBT XXXX	Concentration Courses (Package II)	3
	Biotechnology, Law and Ethics	2
	Final Year Project I	4
)	1
TOTAL		16

Course Code	Title	Credit Hours
SBT 4206	Final Year Project II	4
SBT 4212	Commercialisation and Current Issues in Biotechnology	2
SBT 4223	Natural Resource Management in Biotechnology	3
TOTAL		9

* Students are required to choose one of the three Concentrations, as shown below:

Concentration Courses (21 CH)

1. Food Biotechnology Concentration

Course Code	Title	Credit Hours
SBT 4313	Food Biotechnology	3
SBT 4323	Applied Molecular Genetics	3
SBT 4333	Food Chemistry	3
SBT 4343	Analytical Methods for Functional Foods and Nutraceuticals	3

Course Code	Title	Credit Hours
SBT 4353	Food Process Engineering	3
SBT 4363	Fats and Oils Chemistry and Technology	3
SBT 4373	Food Toxicology and Assessment	3
SBT 4383	Food, Nutrition and Health	3

2. Environmental Biotechnology Concentration

Course Code	Title	Credit Hours
SBT 4413	Environmental Biotechnology	3
SBT 4423	Environmental Laws and Policies	3
SBT 4613	Environmental Health	3
SBT 4443	Biodiversity	3

Course Code	Title	Credit Hours
SBT 4453	Waste Management and Usage	3
SBT 4463	Environmental Toxicology/ Pollution	3
SBT 4473	Environmental Microbiology	3
SBT 4483	Bioremediation	3

3. Marine Biotechnology Concentration

Course Code	Title	Credit Hours
SBT 4513	Oceanography	3
SBT 4523	Marine Biology	3
SBT 4623	Marine Microbiology	3
SBT 4543	Marine Pollution	3

Course Code	Title	Credit Hours
SBT 4553	Marine Ecology	3
SBT 4563	Marine Natural Products and Processes	3
SBT 4573	Marine Monitoring	3
SBT 4583	Aquaculture	3