

PROGRAMME : BACHELOR OF CHEMICAL ENGINEERING
TYPE : FULL TIME
BATCH : 202 AND ABOVE (NEW UNICORE + NEW CURRICULUM STRUCTURE)

SUMMARY

TYPE OF COURSES	CREDIT HOURS	ELEMENT
A. University Required Course (UNICORE)	20	UNGS (1201, 1301, 2290, 2380) Language (LEED 1301, LMBD – not counted, LQAD 1003, 2003, TQTD 1001, 2002), Co-curricular (CCUB)
B. Kulliyah Required Courses (KRC)	14	MATHS (4 courses x 3 Crs each) Technology Entrepreneurship (MANU) (2 Crs)
C. Engineering Core Courses	89	
D. Engineering Elective Courses	9	
E. Free Elective/ Extra Courses	6	
TOTAL	138	

A. UNIVERSITY REQUIRED COURSES (UNICORE)

No .	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Requirement
1.	CCUB 1061	Usrah 1	0.5	P/F (CT)		
2.	CCUB 1062	Usrah 2	0.5	P/F (CT)	CCUB 1061	
3.	CCUB 2163	Usrah in Action 1 (Community profiling)	1	P/F	CCUB 1062	Year 3
4.	CCUB 3164	Usrah in Action 2	1	P/F		Year 3
5.	LEED 1301	English for Academic Writing	3	Normal Grading		Year 1
6.	*LMBD 1131	Bahasa Melayu 1 (Non-Malay speakers)	1	Normal Grading		Year 1
7.	*LMBD 1132 / LM 2026	Bahasa Melayu 2 (Non-Malay Speakers)	1	Normal Grading	LMBD 1132	Year 2
8	TQTD 1002	Tilawah Al- Quran 1	0.5	P/F		Year 1
9.	TQTD 2002	Tilawah Al Quran 2	0.5	P/F	TQTD 2001	Year 2
10.	UNGS 1201	Sustainable Development: Issues, Policies and Practices	2	Normal Grading		Year 1, 1 st Sem
11	UNGS 1301	Basic Philosophy in Islamic Worldview	3	Normal Grading		Year 1, 1 st Sem
12	UNGS 2290	Knowledge and Civilization in Islam	2	Normal Grading	UNGS 1301	

13	UNGS 2380	Ethic and Fiqh of Contemporary issues	3	Normal Grading		
14	CCLM 2051	Leadership	0.5	Normal Grading		
15	CCFM 2052	Family Management	0.5	Normal Grading		
16	CCSS 1010/2010 /3010	Skill 1	0.5	P/F		
17	CCSS 1010/2010 /3010	Skill 2	0.5	P/F		
18	LQAD 1003	Arabic for Ibadah 1	0.5	Normal Grading		Year 1
19	LQAD 2003	Arabic for Ibadah 2	0.5	Normal Grading	LQAD 1003	Year 2

* Credit Hours Not counted

B. KULLIYAH REQUIRED COURSE (KRC)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Cross-listed Course
1.	MATH 1310	Engineering Mathematics 1	3	Normal Grading		Same code
2.	MATH 1321	Engineering Mathematics 2	3	Normal Grading	MATH 1310	MATH 1320
3.	MATH 2311	Differential Equation	3	Normal Grading	MATH 1321	MATH 2310
4.	MATH 2330	Computational Methods and Statistic	3	Normal Grading	MATH 2311	Same code
5.	MFGA 4210	Technology Entrepreneurship	2	Normal Grading	3 rd year standing	MANU 4211

C. ENGINEERING CORE COURSES (LEVEL 1)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Cross-listed Course
1.	CHEN 1210	Organic Chemistry	2	Normal Grading		BTEN 2211
2.	CHEN 1311	Material Sciences for Chemical Engineers	3	Normal Grading		MATR 2381
3	MECH 1340	Engineering Mechanics	3	Normal Grading		NA
4.	CHEN 1212	Thermodynamics	2	Normal Grading		NA
5	CHEN 1213	Physical Chemistry	2	Normal Grading		NA
6	CHEN 1314	Biochemistry	3	Normal Grading	CHEN 1210	BTEN 2315

7.	CHEN 1315	Principle of Mass and Energy Balance	3	Normal Grading		BTEN 2313
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C. ENGINEERING CORE COURSES (LEVEL 2)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Cross-listed Course
1.	CHEN 2181	Chemical Engineering Laboratory 1	1	Normal Grading	CHEN 1210 CHEN 1314	NA
2.	CHEN 2310	Chemical Thermodynamics	3	Normal Grading	CHEN 1212	NA
3.	CHEN 2311	Heat Transfer	3	Normal Grading		NA
4.	CHEN 2312	Fluid Mechanics for Chemical Engineers	3	Normal Grading		MECH 2340
5.	CHEN 2313	Life Sciences for Chemical Engineers	3	Normal Grading		NA
6.	CHEN 2182	Chemical Engineering Laboratory 2	1	Normal Grading	CHEN 1212 CHEN 2181	NA
7.	CHEN 2214	Mass Transfer	2	Normal Grading	MATH 2311	NA
8.	CHEN 2315	Reaction Engineering	3	Normal Grading	CHEN 1212	BTEN 3317
9.	CHEN 2316	Separation Processes 1	3	Normal Grading	CHEN 1212 CHEN 1315	BTEN 3319

C. ENGINEERING CORE COURSES (LEVEL 3)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Requirement
1.	CHEN 3181	Chemical Engineering Laboratory 3	1	Normal Grading	CHEN 2315 CHEN 2182	NA
2.	CHEN 3210	Separation Processes 2	2	Normal Grading	CHEN 2316	BTEN 4222
3.	CHEN 3311	Process Design	3	Normal Grading	CHEN 2315 CHEN 2316	NA
4.	CHEN 3312	Chemical Process Safety	3	Normal Grading		NA
5.	CHEN 3313	Environmental Engineering	3	Normal Grading	CHEN 1315	BTEN 3316
6.	MFGA 3342	Project Management and Engineering Economics	3	Normal Grading	MATH 1321	NA
7.	CHEN 3182	Chemical Engineering Laboratory 4	1	Normal Grading	CHEN 3181	NA
8.	CHEN 3200	Conceptual Design Project	2	Normal Grading	CHEN 3311	NA

9.	CHEN 3314	Plant and Equipment Design	3	Normal Grading	CHEN 2315	NA
10.	CHEN 3315	Process Control	3	Normal Grading	CHEN 3312	BTEN 4321
11.	CHEN 3316	Reactor Design and Analysis	3	Normal Grading	CHEN 2315	BTEN 4324
12.	CHEN 3500	Engineering Industrial Training	5	P/F	3 rd year standing	EITR 3521

C. ENGINEERING CORE COURSES (LEVEL 4)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Requirement
1.	CHEN 4200	Final Year Project 1	2	Normal Grading	CHEN 2311 CHEN 2214 CHEN 2316	BTEN 4398
2.	CHEN 4300	Integrated Design Project	3	Normal Grading	CHEN 3200 CHEN 3314	BTEN 4300
3.	CHEN 4400	Final Year Project 2	4	Normal Grading	CHEN 4200 CHEN 3500	BTEN 4399
4.	GENE 4301	Engineering Ethics, Safety and Environment	3	Normal Grading	UNGS 2380	GENE 4300

D. ENGINEERING ELECTIVES COURSES (CHOOSE 3 COURSES OUT OF 17)

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Requirement
1.	CHEN 4350	Biosafety	3	Normal Grading	2 nd year standing	NA
2.	CHEN 4351	Cell and Tissue Engineering	3	Normal Grading	2 nd year standing	BTEN 4323
3.	CHEN 4352	Bionanotechnology	3	Normal Grading	2 nd year standing	BTEN 4378
4.	CHEN 4353	Artificial Tissue Engineering	3	Normal Grading	2 nd year standing	BTEN 4373
5.	CHEN 4359	Special Topics in Process Development	3	Normal Grading	2 nd year standing	NA
6.	CHEN 4360	BioMEMs	3	Normal Grading	2 nd year standing	NA
7.	CHEN 4361	Food Process Engineering	3	Normal Grading	2 nd year standing	BTEN 4360
8.	CHEN 4362	Process Integration	3	Normal Grading	2 nd year standing	NA
9.	CHEN 4363	Petrochemical Products and Processing	3	Normal Grading	2 nd year standing	NA
10.	CHEN 4369	Special Topics in Process Industry	3	Normal Grading	2 nd year standing	NA

11.	CHEN 4370	Biomass and Bioenergy	3	Normal Grading	2 nd year standing	BTEN 4351
12.	CHEN 4371	Air Pollution Engineering	3	Normal Grading	2 nd year standing	NA
13.	CHEN 4372	Solid and Hazardous Waste Engineering	3	Normal Grading	2 nd year standing	BTEN 4350
14.	CHEN 4373	Water and Wastewater Treatment Plant Design	3	Normal Grading	2 nd year standing	NA
15.	CHEN 4379	Special Topics in Environmental Engineering	3	Normal Grading	2 nd year standing	NA

E. FREE ELECTIVES/ EXTRA COURSES

No	Course Code	Course Title	Credit Hours	Grading Remarks*	Pre-Requisite	Requirement
1.	CHEN 3313	Environmental Engineering	3	Normal Grading		
2.	CHEN 4350	Biosafety	3	Normal Grading	2 nd year standing	

Undergraduate Grading Remarks

Grading Remarks (*)

Type/Grade	Explanation	Hours Credited	Hours Earned
Normal	Normal Grading(A,B,C,D, etc)	Yes	Yes
PA/FA	Pass / Fail Course or for practical training	Yes	Yes
AU	Course Audited	No	No
PR	Passed Resit	Yes	Yes
FR	Failed Resit	Yes	No
EX	Exemption	Yes	Yes
Y	Barred from Final Exam	Yes	No
I	Incomplete	No	No