

COMSATS University Islamabad

Registrar Secretariat, Academic Unit (PS)

No: CUI-Reg/Notif-2286/18/2765

September 12, 2018

Notification

On recommendations of 20th meeting of Board of Studies for Chemical Engineering, Board of Faculty of Engineering in its 25th meeting held on April 26, 2018 recommended the revised Scheme of Studies of Bachelor of Science in Chemical Engineering, effective from Fall 2018;

Nomenclature: "Bachelor of Science in Chemical Engineering"

i.	Minimum Duration:	04 Years
ii.	Minimum No. of Semesters:	08
iii.	Main Courses (including Labs):	
	a. Engineering Courses (List Attached)	28
	b. Non Engineering Courses (List Attached)	15
iv.	Elective courses (List Attached)	02
v.	Total No. of Courses:	45
vi.	Total No of Credit Hours	137

Note:

The Regulations relating to Undergraduate Degree Programs approved by the Competent Authority and amended from time to time shall also be applicable to this program.



Mian Gul Muhammed
Additional Registrar (Acad)

Distribution:

1. All Directors, CUI Campuses
2. In-charge (Academics) CU Islamabad Campus
3. In-charge, CUI Virtual Campus
4. Dean, Faculty of Engineering
5. Chairperson, Department of Chemical Engineering
6. Controller of Examinations, CUI
7. All HoDs/Incharges of Academics/Examinations Sections, CUI, Campuses

CC:

1. PS to Rector, CUI
2. PS to Registrar, CUI

List of Courses:**List of Engineering Courses:**

Serial No.	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	CHE111	Introduction to Chemical Engineering	3(3, 0)	
2.	CHE141	General Engineering	3(2, 1)	
3.	CHE113	Chemical Process Principles	3(3, 0)	
4.	CHE215	Thermodynamics I for Chemical Engineers	3(3, 0)	CHM201
5.	CHE214	Fluid Mechanics for Chemical Engineers	4(3, 1)	PHY132
6.	CHE222	Transport Phenomena	3(3, 0)	MTH102
7.	CHE112	Particulate Technology	4(3, 1)	
8.	CHE221	Chemical Process Industries	3(3, 0)	
9.	CHE223	Fuels and Energy	4(3, 1)	
10.	CHE324	Mass Transfer Operations	4(3, 1)	
11.	CHE325	Heat Transfer Operations	4(3, 1)	
12.	CHE332	Thermodynamics II for Chemical Engineers	4(3, 1)	CHE215
13.	CHE316	Unit Processes	3(3, 0)	CHM201
14.	CHE346	Chemical Engineering Process Design Project	1(0, 1)	
15.	CHE242	Engineering Materials	3(3, 0)	
16.	CHE331	Chemical Reaction Engineering	4(3, 1)	CHE316
17.	CHE333	Simultaneous Heat and Mass Transfer Operations	4(3, 1)	CHE324, CHE325
18.	CHE426	Process Instrumentation	2(2, 0)	
19.	CHE427	Process Control	3(2,1)	
20.	CHE435	Chemical Engineering Plant Design	3(3, 0)	
21.	CHE445	Chemical Engineering Plant Design Project I	3(0, 3)	
22.	CHE447	Chemical Engineering Plant Design Project II	3(0, 3)	CHE331

23.	CHE429	Maintenance Engineering and Safety	2(2, 0)	
24.	CHE436	Petroleum Refinery Engineering	3(3, 0)	
25.	CHE444	Industrial Management and Production Engineering	2(2, 0)	
26.	CHE437	Process Modeling and Simulation	3(2, 1)	
27.	CHE438	Biochemical Engineering	3(3, 0)	
28.	CHE343	Industrial Training (4-6weeks)	1(0, 1)	

List of Non-Engineering Courses:

Serial No.	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	CHM100	Chemistry I	4(3, 1)	
2.	CHM201	Chemistry II	4(3, 1)	CHM100
3.	CSC141	Introduction to Computer Programming	4(3,1)	
4.	ECO302	Process Economics	3(3, 0)	
5.	EEE111	Introduction to Computers and Computing	1(0, 1)	
6.	HUM100	English Comprehension and Composition	3(3, 0)	
7.	EEE113	Engineering Drawing	1(0, 1)	
8.	HUM102	Report Writing Skills	3(3, 0)	HUM100
9.	HUM110	Islamic Studies	3(3, 0)	
10.	HUM111	Pakistan Studies	3(3, 0)	
11.	MTH101	Calculus I	3(3, 0)	
12.	MTH102	Calculus II	3(3, 0)	MTH101
13.	MTH242	Differential Equations	3(3, 0)	MTH102
14.	MTH375	Numerical Computations	4(3, 1)	MTH242
15.	PHY132	Physics for Chemical Engineers	4(3, 1)	

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List of Elective Courses:

Serial No.	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	CHE415	Oil and Gas Production and Processing	3(3, 0)	
2.	CHE428	Polymer Engineering	3(3,0)	
3.	CHE416	Petrochemical Engineering	3(3, 0)	
4.	CHE417	Corrosion Engineering	3(3, 0)	
5.	CHE418	Gas Processing	3(3, 0)	
6.	CHE446	Chemical Process Design and Simulations	3(3, 0)	
7.	CHE450	Polymer and Rubber Technology	3(3, 0)	
8.	CHE462	Biochemical Separations	3(3, 0)	
9.	CHE463	Biochemical Process and Products	3(3, 0)	
10.	CHE470	Coal Combustion Technology	3(3, 0)	
11.	CHE471	Renewable Energy Resources	3(3, 0)	
12.	CHE472	Industrial Energy Systems	3(3, 0)	
13.	CHE480	Risk Management and Safety	3(3, 0)	
14.	CHE481	Environmental Engineering	3(3, 0)	
15.	CHE482	Waste Management	3(3, 0)	
16.	CHE483	Fundamentals of Environmental Processes	3(3, 0)	
17.	CHE490	Nuclear Engineering	3(3, 0)	
18.	CHE491	Novel Separation Processes	3(3, 0)	
19.	CHE492	Mineral Processing Technology	3(3, 0)	
20.	CHE494	Fuel Cell Technology	3(3, 0)	
21.	CHE495	Composite Materials	3(3, 0)	
22.	CHE434	Chinese	3(3, 0)	

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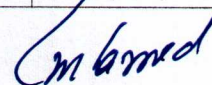
Bachelor of Science in Chemical Engineering

Tentative Plan of Studies

(w.e.f. Fall 18)

The course offering in each semester as given below is not fixed. It may vary depending on the availability of faculty and needs of the students.

Semester 1			
Course Code	Course Title	Credit Hours	Pre-Requisite (s)
CHM100	Chemistry I	4(3, 1)	
MTH101	Calculus I	3(3, 0)	
HUM100	English Comprehension and Composition	3(3, 0)	
EEE113	Engineering Drawing	1(0, 1)	
CHE111	Introduction to Chemical Engineering	3(3, 0)	
CHE141	General Engineering	3(2, 1)	
		17(14, 3)	
Semester 2			
MTH102	Calculus II	3(3, 0)	MTH101
HUM110	Islamic Studies	3(3, 0)	
EEE111	Introduction to Computers and Computing	1(0, 1)	
PHY132	Physics for Chemical Engineers	4(3, 1)	
CHE112	Particulate Technology	4(3, 1)	
CHE113	Chemical Process Principles	3(3, 0)	
		18(15, 3)	
Semester 3			
CHM201	Chemistry II	4(3, 1)	CHM100
HUM111	Pakistan Studies	3(3, 0)	
CHE214	Fluid Mechanics for Chemical Engineers	4(3, 1)	PHY132
CHE221	Chemical Process Industries	3(3, 0)	
CHE242	Engineering Materials	3(3, 0)	
		17(15, 2)	
Semester 4			
MTH242	Differential Equations	3(3, 0)	MTH102
CSC141	Introduction to Computer Programming	4(3, 1)	
CHE215	Thermodynamics I for Chemical Engineers	3(3, 0)	CHM201
CHE222	Transport Phenomena	3(3, 0)	MTH102
CHE223	Fuels and Energy	4(3, 1)	
		17(15, 2)	
Semester 5			
MTH375	Numerical Computations	4(3, 1)	MTH242
HUM102	Report Writing Skills	3(3, 0)	HUM100



CHE316	Unit Processes	3(3, 0)	CHM201
CHE324	Mass Transfer Operations	4(3, 1)	
CHE325	Heat Transfer Operations	4(3, 1)	
		18(15, 3)	
Semester 6			
ECO302	Process Economics	3(3, 0)	
CHE331	Chemical Reaction Engineering	4(3, 1)	CHE316
CHE332	Thermodynamics II for Chemical Engineers	4(3, 1)	CHE215
CHE333	Simultaneous Heat and Mass Transfer Operations	4(3, 1)	CHE324, CHE325
CHE346	Chemical Engineering Process Design Project	1(0, 1)	
		16(12, 4)	
CHE343	Industrial Training (4-6 Weeks)	1(0, 1)	
		1(0, 1)	
Semester 7			
CHE426	Process Instrumentation	2(2, 0)	
CHE427	Process Control	3(2, 1)	
CHE435	Chemical Engineering Plant Design	3(3, 0)	
CHE436	Petroleum Refinery Engineering	3(3, 0)	
	Elective I	3(3, 0)	
CHE445	Chemical Engineering Plant Design Project I	3(0, 3)	
		17(13, 4)	
Semester 8			
CHE429	Maintenance Engineering and Safety	2(2, 0)	
CHE437	Process Modeling and Simulation	3(2, 1)	
CHE438	Biochemical Engineering	3(3, 0)	
CHE444	Industrial Management and Production Engineering	2(2, 0)	
	Elective II	3(3, 0)	
CHE447	Chemical Engineering Plant Design Project II	3(0, 3)	CHE331
		16(12, 4)	
		137(111, 26)	

Completed