

## B.Tech Curriculum - Chemical Engineering

From Academic year 2019-20

### Semester – I

S.No	Course No	Course Name	Category	L-T-P-C
1.	ES1101/ EA1101	Computational Engineering/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3
2.	CY1101/ CY1202	Physical and Theoretical Chemistry/ Organic and Inorganic Chemistry	SCY	2-1-0-3
3.	ID1101	Concepts in Engineering and Design	BET	1-0-2-2
4.	MA1101	Calculus	SMA	3-1-0-4
5.	PH1101	Introduction to Classical Mechanics	SPH	2-1-0-3
6.	PH1103/CY1204	Physics Laboratory/Chemistry Laboratory	SPH/SCY	0-0-3-2
7.	EA1103	Workshop-I	BES	0-0-3-2
8.	HS11XX	Language Course (Pass/Fail)	HPF	2-0-0-2
<b>Total</b>				<b>22/21</b>

### Semester – II

S.No	Course No	Course Name	Category	L-T-P-C
1.	ES1101/ EA1101	Computational Engineering/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3
2.	CY1101/CY1202	Physical and Theoretical Chemistry / Organic and Inorganic Chemistry	SCY	2-1-0-3
3.	ES2101	Engineering Mechanics	BET	3-1-0-4
4.	MA1202	Differential Equations and Matrices	SMA	3-1-0-4
5.	PH1202	Introduction to Electrodynamics and Quantum Mechanics	SPH	2-1-0-3
6.	PH1103/CY1204	Physics Laboratory/Chemistry Laboratory	SPH/SCY	0-0-3-2
7.	EA1202	Workshop-II	BES	0-0-3-2
<b>Total</b>				<b>21/22</b>

### Semester - III

S.No	Course No	Course Name	Category	L-T-P-C
1.	BS2101	Life Sciences	SLS	2-0-0-2
2.	CH2101	Material and Energy Balances	PMT	2-1-0-3
3.	CH2103	Fluid and Particle Mechanics	PMT	3-1-0-4
4.	CH2150	Applied Process Engineering I	PMT	- - - 1
5.	CH2191	Fluid and Particle Mechanics Laboratory	PML	0-0-3-2
6.	ES1201	Basic Electrical Engineering	BET	3-1-0-4
7.	HSE1	Humanities Elective-1	HSS	3-0-0-3
8.	MAE1	Mathematics Elective-1	SMA	3-0-0-3
<b>Total</b>				<b>22</b>

### Semester - IV

S.No	Course No	Course Name	Category	L-T-P-C
1.	CH2202	Chemical Engineering Thermodynamics	PMT	3-1-0-4
2.	CH2204	Process Heat Transfer	PMT	2-1-0-3
3.	CH2206	Fundamentals of Mass Transfer	PMT	2-1-0-3
4.	CH2250	Applied Process Engineering II	PMT	- - - 1
5.	CH2292	Heat Transfer Laboratory	PML	0-0-3-2
6.	ES2103	Ecology and Environment	BET	2-0-0-2
7.	HSE2	Humanities Elective-2	HSS	3-0-0-3
8.	MAE2	Mathematics Elective-2	SMA	3-0-0-3
<b>Total</b>				<b>21</b>

**Semester – V**

S.No	Course No	Course Name	Category	L-T-P-C
1.	CH3101	Homogeneous Reaction Engineering	PMT	2-1-0-3
2.	CH3103	Separation and Purification Processes	PMT	2-1-0-3
3.	CH3105	Transport Phenomena	PMT	2-1-0-3
4.	CH3107	Computational Techniques for Chemical Engineers	PMT	3-0-3-5
5.	CH3150	Applied Process Engineering III	PMT	- - - 1
6.	CH3191	Mass Transfer Laboratory	PML	0-0-3-2
7.	DPE1	Department Elective-1	PMT	3-0-0-3
8.	FRE1	Free Elective-1	FRE	3-0-0-3
<b>Total</b>				<b>23</b>

**Semester – VI**

S.No	Course No	Course Name	Category	L-T-P-C
1.	CH3202	Heterogeneous Reaction Engineering	PMT	2-1-0-3
2.	CH3204	Process Control and Instrumentation	PMT	2-1-0-3
3.	CH3206	Process Equipment Design	PMT	2-0-3-4
4.	CH3250	Applied Process Engineering IV	PMT	- - - 1
5.	CH3292	Reaction Engineering Laboratory	PML	0-0-3-2
6.	CH3294	Process Control Laboratory	PML	0-0-3-2
7.	HSE3	Humanities Elective-3	HSS	3-0-0-3
<b>Summer</b>				
1.	IT3202	Industrial/Research Internship	PIT	- - - 2
<b>Total</b>				<b>20</b>

**Semester - VII**

S.No	Course No	Course Name	Category	L-T-P-C
1.	CH4101	Process Synthesis and Economics	PMT	3-0-0-3
2.	CH4103	Process Safety and Industrial Pollution	PMT	3-0-0-3
3.	DPE2	Department Elective-2	PMT	3-0-0-3
4.	DPE3	Department Elective-3	PMT	3-0-0-3
5.	CH4150	Project I	PMP	- - - 3
6.	FRE2	Free Elective-2	FRE	3-0-0-3
<b>Total</b>				<b>18</b>

**Semester - VIII**

S.No	Course No	Course Name	Category	L-T-P-C
1.	CH4202	Bioprocess Engineering	PMT	3-0-0-3
2.	DPE4	Department Elective-4	PMT	3-0-0-3
3.	CH4250	Project-II	PMP	- - - 6
4.	FRE3	Free Elective-3	PMT	3-0-0-3
5.	HS4202	Professional Ethics	HPE	2-0-0-2
6.	IL4202	Industrial Lecture	PIL	1-0-0-1
<b>Total</b>				<b>18</b>

Total Credits – 165