COURSE STRUCTURE

AND

DETAILED SYLLABUS

R16

CHEMICAL ENGINEERING

For

B.Tech 4-Year Degree Course

(Applicable for the students admitted into E1 during theAcademic Year 2016-17)

(I – IV Years Syllabus)

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

Basar, Nirmal, Telangana - 504107

COURSE STRUCTURE

FIRST YEAR (E1) – SEMESTER – I

SL.No.	Subject Code	Subject Name	L-T-P	Credits
1	MA1101	Mathematics-I	4-1-0	4
2	CY1001	Chemistry	4-1-0	4
3	CS1101	Programming In C	4-1-0	4
4	HS1001	English	4-0-0	3
5	CH1101	Engineering Thermodynamics	4-0-0	4
6	HS1601	English Communication Lab	0-0-3	2
7	CY1601	Chemistry Lab	0-0-3	2
8	CS1701	Programming in C Lab	0-0-3	2
9	HS1101	Communication Skills-I	2-0-0	0
		Total	22-3-9	25

FIRST YEAR (E1) – SEMESTER – II

SL.No.	Subject Code	Subject Name	L-T-P	Credits
1	CH1201	Chemical Process Calculations	4-0-0	4
2	PH1001	Physics	4-0-0	4
3	MA1201	Mathematics-II	4-0-0	4
4	EE1001/2001	Basic Electrical and Electronics Engineering	4-0-0	4
5	CS1201	Scripting Languages	4-0-0	3
6	HS1201	Communication Skills-II	2-0-0	1
7	CE1601	Engineering Drawing	0-0-3	2
8	PH1601	Physics Lab	0-0-3	2
9	EE1601/2601	Basic Electrical and Electronics Engineering Lab	0-0-3	2
		Total	22-0-9	26

SECOND YEAR (E2) – SEMESTER – I

SL.No.	Subject Code	Subject Name	L-T-P	Credits
1	CY2101	Organic Chemistry	4-0-0	4
2	BSBE2001	Environmental Science	4-0-0	3
3	MA2104	Mathematics –III	4-0-0	4
4	CH2101	Chemical Engineering Fluid Mechanics	4-0-0	4
5	CH2102	Chemical Engineering Thermodynamics	4-0-0	4
6	HS2102	Soft Skills-I	2-0-0	1
7	CY2701	Organic Chemistry Lab	0-0-3	2
8	CH2701	Chemical Engineering Fluid Mechanics Lab	0-0-3	2
9	CH2901	Seminar-I	0-0-2	1
		Total	22-0-8	25

SECOND YEAR (E2) – SEMESTER – II

SL. No.	Subject Code	Subject Name	L-T-P	Credits
1	CY2201	Analytical Chemistry	4-0-0	3
2	MM2206*	Material Science	4-0-0	4
3	CH2201	Process Heat Transfer	4-0-0	4
4	CH2202	Mechanical Unit Operations	4-0-0	4
5	CH2203	Mass Transfer Operations-I	4-0-0	4
6	BM2201	Personality Development-I	2-0-0	1
7	CH2801	Process Heat Transfer Lab	0-0-3	2
8	CH2802	Mechanical Unit Operations Lab	0-0-3	2
9	CH2902	Seminar-II	0-0-2	1
		Total	**22-0-8**	**25**

*Code Changed to MM2206 with reference to the mails from the HoD, MME, dated 11/11/2020 and Former HoD, MME, dated 07/11/2020

THIRD YEAR (E3) – SEMESTER – I

SL.No.	Subject Code	Subject Name	L-T-P	C
1	BM3001	Managerial Economics and Financial Analysis	4-0-0	3
2	CH3101	Chemical Reaction Engineering-I	4-0-0	4
3	CH3102	Mass Transfer Operations-II	4-0-0	4
4	CH3103	Energy Engineering	4-0-0	4
5	CH3104	Environmental Pollution and Control Engineering	4-0-0	3
6	BM3101	Personality Development-II	2-0-0	1
7	CH3701	Mass Transfer Operations Lab	0-0-3	2
8	CH3702	Energy and Environmental Engineering Lab	0-0-3	2
9	CH3703	Introduction to Software Tools for Chemical Engineering Lab	0-0-3	2
10	CH3901	Seminar-III	0-0-3	1
		Total	22-0-9	26

THIRD YEAR (E3) – SEMESTER – II

SL. No.	Subject Code	Subject Name	L-T-P	Credits
1	CS3001	Object Oriented Programming Structures through Java	4-0-0	4
2	CH3201	Chemical Reaction Engineering - II	4-0-0	4
3	CH3202	Instrumentation and Process Control	4-0-0	4
4	CH3203	General Chemical Technology	4-0-0	4
5	CH3204	Plant Design and Economics	4-0-0	3
6	HS3201	Soft Skills - II	2-0-0	1
7	CH3801	Chemical Reaction Engineering Lab	0-0-3	2
8	CH3802	Instrumentation and Process Control Lab	0-0-3	2
9	CS3601	Object Oriented Programming Structures through Java Lab	0-0-3	2
10	CH3902	Seminar - IV	0-0-2	1
11	CH3000	Comprehensive Viva Voce - I		1
		Total	**22-0-11**	**28**

FOURTH YEAR (E4) – SEMESTER – I

SL. No.	Subject Code	Subject Name	L-T-P	Credits
1	CH3900	Summer Internship		6
2	CH4101	Process Equipment Design	4-0-0	4
3	CH4102	Process Modeling and Simulation	4-0-0	4
4	CH4103	Transport Phenomena	4-0-0	4
5	CH4401	Process Optimization (Elective-I)	4-0-0	3
6	CH4413	Computational Fluid Dynamics (Elective-II)	4-0-0	3
7	CH4701	Process Equipment Design & Drawing Lab	0-0-3	2
8	CH4702	Process Simulation Lab	0-0-3	2
		Total	20-0-6	28

FOURTH YEAR (E4) – SEMESTER – II

SL. No.	Subject Code	Subject Name	L-T-P	Credits
1	XXXX	Open Elective	4-0-0	3
2	CH4800	Project	0-0-24	16
3	CH4000	Comprehensive Viva Voce - II		1
		Total	4-0-24	20