R.V.R. & J.C. COLLEGE OF ENGINEERING(A)

DEPARTMENT OF CHEMICAL ENGINEERING

R12 TO R16 CHANGES

S.NO	R12		R16		Remarks	Percentage of syllabus content added or replaced
	Subject Name	Subject code	Subject Name	Subject code		
1.	Mechanical Operations	ChE 225	Mechanical Operations	CH 205	No change	0
2.	Mechanical Operations Laboratory	ChE 261	Mechanical Operations Laboratory	CH 255	No change	0
3.	Chemical Reaction Engineering-I	ChE314	Chemical Reaction Engineering-I	CH 302	One unit is shifted to CRE-II	25
4.	Chemical Reaction Engineering-II	ChE 324	Chemical Reaction Engineering-II	CH 308	One unit is Introduced	25
5.	Petroleum Refinery Engineering	ChE 423 (F)	Petroleum Refining	CH 409(C)	Some topics are added to unit-I	10
6.	Biofuels	ChE 415(B)	Biofuels	CH 404(B)	Some topics are added to unit I and unit II	10
7.	Mass Transfer Operations - I	ChE312	Mass Transfer Operations - I	ChE301	Absorption is included	13
8.	Mass Transfer Operations - II	ChE322	Mass Transfer Operations - II	ChE307	Membrane separation are included	13
9.	Chemical Process Calculations	ChE 215	Chemical Process Calculations	CH203	Crystallization and dissolution unit operation calculation are added	10

10.			Computer Simulators	CH 306(A)		Newly Added Course
11.			General Pharmacy	CH 306(B)		Newly Added Course
12.			Petroleum Exploration	CH 306(C)		Newly Added Course
13.			Computational Fluid Dynamics	CH 312(A)		Newly Added Course
14.			Pre-formulation Studies including Stability Studies	CH 312(B)		Newly Added Course
15.			Petroleum well Logging and Technology	CH 312(C)		Newly Added Course
16.			Computer Aided Process Engineering	CH 406(A)		Newly Added Course
17.			Industrial Pharmacy	CH 406(B)		Newly Added Course
18.			Natural Gas Production and its applications	CH 406(C)		Newly Added Course
19.			Computer Aided Design	CH 409(A)		Newly Added Course
20.			Quality Control of Pharmaceutical Dosage Forms	CH 409(B)		

21.	Membrane Technology	ChE 326 (C)	Advanced Separation Techniques	CH 409(D)		15%
22.			Micro Process & Electronic Programming	CH 410(A)		
23.			Validation and Documentation of Pharmaceuticals	CH 410(B)		
24.			Petrochemical Technology	CH 410(C)		
25.	Process Dynamics and Control	ChE325	Process Dynamics and Control	CH309		Nil
26.	Transport Phenomena	ChE413	Transport Phenomena	CH401	Flow of two adjacent immiscible fluids added. Nuclear heat source is added to Energy transport.	10%
27.	Process Modeling and Simulation	ChE 422	Process Modeling and Simulation	CH405		
28.	Instrumentation & Process Control Laboratory	ChE361	Instrumentation & Process Control Laboratory	CH 453		Nil
29.	Mechanical Operations	ChE 225	Mechanical Operations	CH 205	No change	0
30.	Mechanical Operations Laboratory	ChE 261	Mechanical Operations Laboratory	CH 255	No change	0
31.	Chemical Reaction Engineering-I	ChE314	Chemical Reaction Engineering-I	CH 302	One unit is shifted to CRE-II	25
32.	Chemical Reaction Engineering-II	ChE 324	Chemical Reaction Engineering-II	CH 308	One unit is Introduced	25

33.	Petroleum Refinery Engineering	ChE 423 (F)	Petroleum Refining	CH 409(C)	Some topics are added to unit-I	10
34.	Biofuels	ChE 415(B)	Biofuels	CH 404(B)	Some topics are added to unit I and unit II	10
35.	Introduction to Chemical Engineering	ChE125	Introduction to Chemical Engineering	CH 112		10
36.	Chemical Process Calculations	ChE 215	Chemical Process Calculations	CH 203		20
37.	Professional Ethics & Human Values	ChE 223	Professional Ethics & Human Values	CH 212		0
38.	Material Technology	ChE 311	Material Technology	CH 206		20
39.	Electro-Chemical Engineering	ChE 326 (A)	Electro-Chemical Engineering	CH 306(D)		20
40.	Industrial Pollution Control Laboratory	ChE:454	Pollution Control Laboratory	CH 354		0
41.	Nanotechnology	ChE 423 (D)	Nanotechnology	CH406(D)		10
42.	Inorganic chemical technology	ChE 313	Inorganic chemical technology	CH210		0
43.	Industrial Pollution Control	ChE 321	Industrial Pollution Control	CH 305	Solid waste management topics are added	10
44.	Organic Chemical technology	ChE 323	Organic Chemical technology	CH 304		0
45.	Chemical Technology Lab	ChE 363	Chemical Technology Lab	CH 353	Some experiments are deleted	5
46.	Bio-Chemical Engineering	ChE 414	Bio-Chemical	CH 410(D)	Fermentation	20

		Engineering		technology and Transport phenomena in Bio Process systems topics are added	
47.	Industrial hazards and safety analysis	ChE424 (F)	Industrial hazards and safety analysis		Safety aspects of site selection, layout and unit plot planning. Flammability Characteristics of Liquids and Vapors. Concepts to Prevent Fires and Explosions: Explosion-Proof Equipment and Instruments, Ventilation, Sprinkler Systems. FMEA topics are added	15
48.	Process Instrumentation	ChE 316	Process Instrumentation and Instrumental Methods of analysis	CH 311 CH 211		20
49.	Chemical Engineering Thermodynamics I	ChE 226	Chemical Engineering Thermodynamics I	CH 209		25
50.	Chemical Engineering Thermodynamics II	ChE 315	Chemical Engineering Thermodynamics II	CH 303		30

51.	Energy Engineering (Open Elective)	ChE 415(A)	Energy Engineering (Open Elective)	CH 404(A)		05
52.	Fluidization Engineering (Elective)	ChE 326 (F)	Fluidization Engineering (Elective)	CH 312 (D)		00
53.	Computational Programming Laboratory	ChE 262	Computational Programming Laboratory	CH 256		00
54.	Computer Applications in Chemical Engineering	ChE 411	Course is Removed			Course is Removed
55.	Computer Applications in Chemical Engineering Laboratory	ChE 453	Computer Applications in Chemical Engineering Laboratory	CH 452		00
56.	Computer Aided Process Equipment Design Laboratory	ChE 461	Computer Aided Process Equipment Design Laboratory	CH 454		00
57.	Computer Aided Design	ChE 423 (E)	Computer Aided Design	CH 409(A)		00
58.			Computer Simulators	CH 306(A)		Newly Added Course
59.			Computational Fluid Dynamics	CH 312(A)		Newly Added Course
60.			Computer Aided Process Engineering	CH 406(A)		Newly Added Course

Professor & Head

R.V.R. & J.C. COLLEGE OF ENGINEERING(A)
DEPARTMENT OF CHEMICAL ENGINEERING
R16 TO R18 CHANGES

	R16		R18			
S.NO	Subject Name	Subject code	Subject Name	Subject code	Remarks	Percentage of syllabus content added or replaced
1.	Mechanical Operations	CH 205	Mechanical Operations	CH 216	No change	0
2.	Mechanical Operations Laboratory	CH 255	Mechanical Operations Laboratory	CH 262	No change	0
3.	Chemical Reaction Engineering-I	CH 302	Chemical Reaction Engineering-I	CH 226	One unit is shifted to CRE-II	0
4.	Chemical Reaction Engineering-II	CH 308	Chemical Reaction Engineering-II	CH 313	One unit is Introduced	0
5.	Petroleum Refinery Engineering	CH 409(C)	Petroleum Refining	CHEL02	Some topics are added to unit-I	0
6.	Biofuels	CH 404(B)	Biofuels	CHOL02	Some topics are added to unit I and unit II	5
7.	Mass Transfer Operations - I	CH301	Mass Transfer Operations - I	CH301	Absorption is included	15
8.	Mass Transfer Operations - II	ChE307	Mass Transfer Operations - II	CH307	Membrane separation are included	15
9.	Chemical Process Calculations	CH203	Chemical Process Calculations	CH203	Crystallization and dissolution unit operation calculation are added	0
10.	Computer Simulators	CH 306(A)	Computer Simulators			0

11.	General Pharmacy	CH 306(B)	General Pharmacy	CHEL05		0
12.	Petroleum Exploration	CH 306(C)	Petroleum Exploration	CHEL01		0
13.	Computational Fluid Dynamics	CH 312(A)	Computational Fluid Dynamics	CHEL12		0
14.	Pre-formulation Studies including Stability Studies	CH 312(B)	Pre-formulation Studies including Stability Studies	CHEL06		0
15.	Petroleum well Logging and Technology	CH 312(C)	Petroleum well Logging and Technology			0
16.	Computer Aided Process Engineering	CH 406(A)	Computer Aided Process Engineering	CHEL10		0
17.	Industrial Pharmacy	CH 406(B)	Industrial Pharmacy	CHEL07		0
18.	Natural Gas Production and its applications	CH 406(C)	Natural Gas Production and its applications	CHEL04		0
19.	Computer Aided Design	CH 409(A)	Computer Aided Design	CHEL11		0
20.	Quality Control of Pharmaceutical Dosage Forms	CH 409(B)	Quality Control of Pharmaceutical Dosage Forms	CHEL08		0
21.	Petrochemical Technology	CH 410(C)	Petrochemical Technology	CHEL03		
22.	Process Dynamics and Control	CH309	Process Dynamics and Control	CH309		Nil
23.	Transport Phenomena	CH401	Transport Phenomena	CH401	Flow of two adjacent immiscible fluids added. Nuclear heat source is added to Energy transport.	10%
24.	Process Modeling and Simulation	CH405	Process Modeling and Simulation	CH405		
25.	Instrumentation & Process Control Laboratory	CH 453	Instrumentation & Process Control Laboratory	CH 453		Nil

26.	Mechanical Operations	CH 205	Mechanical Operations	CH 216	No change	0
27.	Mechanical Operations Laboratory	CH 255	Mechanical Operations Laboratory	CH 262	No change	0
28.	Chemical Reaction Engineering-I	CH 302	Chemical Reaction Engineering-I	CH 226	One unit is shifted to CRE-II	25
29.	Chemical Reaction Engineering-II	CH 308	Chemical Reaction Engineering-II	CH 313	One unit is Introduced	25
30.	Petroleum Refinery Engineering	CH 409(C)	Petroleum Refining	CHEL02	Some topics are added to unit-I	10
31.	Biofuels	CH 404(B)	Biofuels	CHOL02	Some topics are added to unit I and unit II	10
32.	Chemical Process Calculations	CH 203	Chemical Process Calculations	CH 203		0
33.	Material Technology	CH 206	Material Technology	CH 222		0
34.	Industrial Pollution Control Laboratory	CH 354	Pollution Control Laboratory	CH 363		0
35.	Nanotechnology	CH406(D)	Nanotechnology	CHEL17		10
36.	Inorganic chemical technology	CH210	Inorganic chemical technology			NEW SUBJECT
37.	Industrial Pollution Control	CH 305	Industrial Pollution Control	CHEL18	Solid waste management topics are added	10
38.	Organic Chemical technology	CH 304	Organic Chemical technology			NEW SUBJECT
39.	Chemical Technology Lab	CH 353	Chemical Technology	CH 362	Some	5

				Lab		experiments are deleted	
40.	Bio-Chemical Engineering	CH 410(D)		Bio-Chemical Engineering	CHEL16		0
41.	Industrial hazards and safety analysis	CH 311		Industrial hazards and safety analysis	CHEL14		0
42.	Process Instrumentation	CH 211		Industrial Instrumentation & Instrumental Methods of Analysis	CH 223		0
43.	Chemical Engineering Thermodynamics I	CH 209		Chemical Engineering Thermodynamics I	CH 225		0
44.	Chemical Engineering Thermodynamics II	CH 303		Chemical Engineering Thermodynamics II	CH 312		0
45.	Energy Engineering (Open Elective)	CH 404(A)		Energy Engineering (Open Elective)	CHOL01		0
46.	Fluidization Engineering (Elective)	CH 312 (D)		Fluidization Engineering (Elective)	CHEL15		00
47.	Computational Programming Laboratory	CH 256		Computational Programming Laboratory	CH 263		00
48.	Computer Applications in Chemical Engineering Laboratory	CH 452		Computer Applications in Chemical Engineering Laboratory			00
49.	Computer Aided Process Equipment Design Laboratory	CH 454		Computer Aided Process Design and Simulation lab	CH 451		00
50.	Computer Aided Design	CH 409(A)		Computer Aided Design	CHEL11		00

15.7%

Professor & Head