



DEPARTMENT OF CHEMICAL ENGINEERING
SRI VENKATESWARA UNIVERSITY COLLEGE OF ENGINEERING: TIRUPATI-517502
R-20 – Scheme of Instruction effective from the academic year 2020-2021

V Semester (Third Year)

S. No	Course Code	Category	Course Title	Scheme of Instruction, Hrs/Week				Credits	Scheme of Evaluation, Marks		Total Marks
				L	T	P	Total		Internal	End Sem	
1	CH501C	PCC	Mass Transfer Operations -II	3	0	0	3	3	40	60	100
2	CH502C	PCC	Chemical Reaction Engineering-I	3	0	0	3	3	40	60	100
3	CH503C	PCC	Process Dynamics And Control	3	0	0	3	3	40	60	100
4	CH504C	PCC	Material Science	2	0	0	2	2	40	60	100
5	CH505E	ESC	Industrial Management	2	0	0	2	2	40	60	100
	CH506C	PEC	Professional Elective-I	3	0	0	3	3	40	60	100
6	CH507L	PCC Lab	Mass Transfer Operations Lab	0	0	3	3	1.5	40	60	100
7	CH508L	PCC Lab	Process Dynamics & Control Lab	0	0	3	3	1.5	40	60	100
8	CH509S	SOC	Computational Techniques Lab	1	0	2	3	2	100	--	100
10	MC510A	MC	Universal Human Values	2	0	0	2	0	100	--	100
11	CH511I	Community Service Project (CSP) after second year (To be evaluated during V semester) with duration greater than 45 hours.		0	0	0	0	1.5	100	0	100
TOTAL				19	0	8	27	22.5	620	480	1100

L – Lecturers; T. – Tutorials; P – Practicals

Category	CREDITS
Engineering Science Course – ESC	02
Professional Elective Course -PEC	03
Professional Core Course-PCC	14
Skill Oriented Course – SOC	02
Community Service	1.5
TOTAL CREDITS	22.5



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VI Semester (Third Year)

S. No	Course Code	Category	Course Title	Scheme of Instruction, Hrs/Week				Credits	Scheme of Evaluation, Marks		Total Marks
				L	T	P	Total		Internal	End Sem	
1	CH601C	PCC	Chemical Reaction Engineering -II	3	0	0	3	3	40	60	100
2	CH602C	PCC	Transport Phenomena	3	0	0	3	3	40	60	100
3	CH603C	PCC	Plant Design & Process Economics	3	0	0	3	3	40	60	100
4	CH604C	PEC	Professional Elective-II	3	0	0	3	3	40	60	100
5	CH605C	OEC	Open Elective – I (Through MOOCs)	3	0	0	3	3	100	--	100
6	CH606C	OEC	Open Elective – II (Through MOOCs)	3	0	0	3	3	100	--	100
7	CH607L	PCC Lab	Reaction Engineering Lab	0	0	3	3	1.5	40	60	100
8	CH608S	SOC	Simulation Lab	1	0	2	3	2	100		100
9	MC609A	MC	Professional Ethics in Engineering	2	0	0	2	0	100		100
10		Summer Internship with duration of 4 to 6 weeks (To be evaluated during VII semester)									
TOTAL				21	0	5	26	21.5	600	300	900

L – Lectures; T – Tutorials; P – Practicals

Category	CREDITS
Professional Core Course-PCC	10.5
Professional Elective Course -PEC	03
Open Elective Course - OEC	06
Skill Oriented Course - SOC	2
TOTAL CREDITS	21.5



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VII Semester (Fourth Year)

S. No.	Course Code	Category	Course title	Scheme of Instruction, Hr/Week				Credits	Scheme of Evaluation, Marks		Total Marks
				L	T	P	Total		Internal	External	
1	CH701C	PCC	Process Equipment Design & Drawing	0	0	3	3	1.5	40	60	100
	CH702C	PCC	Optimization Techniques	3	0	0	3	3	40	60	100
2	CH703C	PEC	Professional Elective-III	3	0	0	3	3	40	60	100
3	CH704C	PEC	Professional Elective – IV	3	0	0	3	3	40	60	100
4	CH705C	PEC	Professional Elective – V	3	0	0	3	3	40	60	100
5	CH706C	OEC	Open Elective – III (Through MOOCs)	3	0	0	3	3	100	--	100
6	CH707C	OEC	Open Elective – IV (Through MOOCs)	3	0	0	3	3	100	--	100
7	CH708S	SOC	Internet of Things and applications	1	0	2	3	2	100	-	100
9	CH708I	Summer Internship with duration of 4 to 6 weeks (To be evaluated during VII semester)		-	-	-	-	3	100	-	100
TOTAL				19	0	5	24	24.5	600	300	900

L – Lectures; T – Tutorials; P – Practicals

Category	CREDITS
Professional Core Course-PCC	4.5
Professional Elective Course -PEC	09
Open Elective Course – OEC	06
Skill Oriented Course – SOC	02
Internship	03
TOTAL CREDITS	24.5



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VIII Semester (Fourth Year)

S.No	Category	Course Code	Course title	Scheme of Instruction, Hr/Week				Credits	Scheme of Evaluation, Marks		Total Marks
				L	T	P	Total		Internal	External	
1	Major Project	CH801P	Project-Work and Internship	0	0	24	24	12	40	60	100
TOTAL				0	0	24	24	12	40	60	100

L – Lectures; T – Tutorials; P – Practicals

Total:

Semester	I	II	III	IV	V	VI	VII	VIII	Total
Credits	19	18	23	23	22.5	21.5	24.5	12	163.5

Professional Elective- List of Subjects:

Professional Elective-I:	Industrial Safety & Hazard Analysis
	Energy Engineering
	Industrial Effluent Treatment
Professional Elective-II:	Process Instrumentation
	Polymer Science & Engineering
	Bio Process Engineering
Professional Elective-III	Petroleum Refining Processes
	CO ₂ Capture and Utilization
	Water Conservation & Management
Professional Elective-IV	Fluidization Engineering
	Fuel Cell Systems
	Fundamentals of Nanotechnology
Professional Elective-V	Process Modelling & Simulation
	Computational Fluid Dynamics
	Membrane Separations