




JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
Kakinada-533003, Andhra Pradesh (India)

Program wise Curriculum Analysis of (R20)

Program Code	Program Name	No of Courses having focus on			Total Courses	Percentage
		Employability	Entrepreneurship	Skill development		
	B.Tech – chemical engg.	02	00	24	71	36%


Coordinator


HOD
Director
Dept. of Petroleum Engineering &
Petrochemical Engineering, UCEK (A)
J.N.T.University Kakinada
Kakinada - 533 003 A.P India


REGISTRAR
J.N.T. University Kakinada
Kakinada-533003



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 1

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BS	Mathematics - I			
BS	Engineering Physics			
ES	Engineering Mechanics			
ES	Engineering Drawing			
ES	Programming for problem solving using - C			YES
ES	Engineering Workshop and IT Workshop			Yes
BS	Engineering Physics Laboratory			Yes
ES	Programming for problem solving using - C Laboratory			YES
BS	Physics Virtual Laboratory			YES
MC	Constitution of India			
Total		0	0	5



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Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 1

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BS	Mathematics – II			
BS	Physical Chemistry			
HS	Communicative English			
ES	Elements of Mechanical Engineering			
ES	Basic Electrical and Electronics Engineering			
HS	English Communication Skills Lab			YES
BS	Physical Chemistry Laboratory			YES
ES	Basic Engineering (Mechanical & Electrical) Laboratory			YES
MC	Professional Ethics and Human Values			
MC	Physical Fitness Activities			
Total		0	0	03



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Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 2

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BS	Mathematics – III			
PCC	Organic Chemistry for Chemical Engineers			
PCC	Fluid Mechanics for Chemical Engineers			
PCC	Mechanical Unit Operations			
PCC	Material and Energy Balances			
PCC	Organic Chemistry for Chemical Engineers – Laboratory			YES
PCC	Mechanical Unit Operations – Laboratory			YES
PCC	Fluid Mechanics for Chemical Engineers – Laboratory			YES
SC	Python programming			YES
MC	Environmental Science			
Total		0	0	04



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Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 2

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
HS	Management Science			
BS	Mathematics -IV			
PCC	Mass Transfer Operations – I			
PCC	Chemical Engineering Thermodynamics – I			
PCC	Heat Transfer Operations			
PCC	Mass Transfer Operations – I Laboratory			YES
PCC	Mathematical methods for Chemical Engineers – Laboratory			YES
PCC	Heat Transfer Operations - Laboratory			YES
SC	Industry Exploration Project			YES
Total		0	0	04



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Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 3

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
PCC	Chemical Engineering Thermodynamics-II			
PCC	Instrumentation, Process Dynamics and Control			
PCC	Mass Transfer Operations – II			
OE	Open Elective Course/Job oriented elective (for other branches) i. Introduction to Chemical Engineering ii. Fundamentals of Petroleum Refining Renewable Energy Sources			
PEC	Professional Elective courses i. General Chemical Technology ii. Industrial Pollution and Control iii. Petroleum Refinery Engineering			
PCC	Instrumentation, Process Dynamics and Control – Laboratory			Yes
PCC	Mass Transfer Operations – II - Laboratory			Yes
SC	Soft Computing Techniques	YES		
MC	Essence of Indian Traditional Knowledge			
Total		01	0	03



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Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 3

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
PCC	Chemical Reaction Engineering			
PCC	Transport Phenomena			
PCC	Plant Design and Economics for Chemical Engineers			
PEC	Professional Elective courses i. Process Modelling and Simulation ii. Bio Chemical Engineering iii. Materials Science and Engineering			
OEC	Open Elective Course/Job oriented elective i. Basics of Waste Management ii. Introduction to Petrochemicals iii. Fundamentals of Green Technologies			
PCC	Chemical Reaction Engineering – Laboratory			Yes
PCC	Process Equipment Design & Drawing – Laboratory			Yes
PCC	Simulation – Laboratory			YES
SC	Data Science	YES		
MC	IPR & Patenting			
Total		01	00	3



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Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 4

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
PCC	Professional Elective courses i. Process Intensification ii. Optimization Techniques for Chemical Engineers iii. Fluidization Engineering			
PCC	Professional Elective courses i. Petroleum Production Engineering ii. Computational Fluid Dynamics iii. Petroleum Reservoir Engineering			
PEC	Professional Elective courses i. Industrial Safety & Hazard Management ii. Nanotechnology iii. Natural Gas Engineering			
PEC	Open Elective Courses/ Job oriented elective i. Pipeline Engineering ii. Chemical Process Safety Fundamentals of Liquefied Natural Gas			
OEC	Open Elective Courses/ Job oriented elective i. Hazard Operability and Fault Tree Analysis in Process Plants ii. Heat Integration and Pinch Analysis Design of Experiments and Analysis			
PCC	Universal Human Values 2: Understanding Harmony			Yes
PCC	Cloud Computing			
Total				01



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Course wise Curriculum Analysis (R20)

Program Code:

Program Name: B.Tech – Chemical engg.

Year: 4

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
PROJ	Project (internship in industry)/ Project (in-house) and seminar.			YES
Total				01