

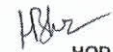


**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
Kakinada-533003, Andhra Pradesh (India)

**Program wise Curriculum Analysis of (R13)**

Program Code	Program Name	No of Courses having focus on			Total Courses	Percentage
		Employability	Entrepreneurship	Skill development		
08	B.Tech – Petrochemical engg.	04	02	23	86	34

  
Coordinator

  
HOD  
Head  
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 (R13)**

Program Code: 08

Program Name: B.Tech –Chemical engg.

Year: 1

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC1101	English - I			
R13PC1102	Mathematics - I			
R13PC1103	Engineering Chemistry			
R13PC1104	Engineering Mechanics			
R13PC1105	Computer Programming			
R13PC1106	Environmental Studies			
R13PC1107	Engineering/ Applied Chemistry Laboratory			YES
R13PC1108	English - Communication Skills Lab - I			YES
R13PC1109	C Programming Lab			YES
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

Kakinada-533003, Andhra Pradesh (India)

## Course wise Curriculum Analysis (R13)

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 1

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC1201	English - II			
R13PC1202	Mathematics - II			
R13PC1203	Mathematics - III			
R13PC1204	Engineering Physics			
R13PC1205	Elements of Mechanical Engineering			
R13PC1206	Engineering Drawing			
R13PC1207	English - Communication Skills Lab - II			YES
R13PC1208	Engineering/ Applied Physics Lab			YES
R13PC1209	Engineering/ Applied Physics - Virtual Labs - Assignments			YES
R13PC1210	Engineering Workshop & IT Workshop			YES
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>04</b>



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

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**Course wise Curriculum Analysis (R13)**

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 2

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC2101	Complex Variables			
R13PC2102	Basic Electrical & Electronics Engineering			
R13PC2103	Organic Chemistry			
R13PC2104	Physical Chemistry			
R13PC2105	Chemical Process Calculations			
R13PC2106	Materials Science & Engineering			
R13PC2107	Basic Engineering (Mech. + Elec.) Lab			
R13PC2108	Physical & Organic Chemistry Lab			YES
R13PC2101	Complex Variables			YES
	<b>Total</b>	0	0	2



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

Kakinada-533003, Andhra Pradesh (India)

## Course wise Curriculum Analysis (R13)

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 2

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC2209	Managerial Economics & Financial Analysis			
R13PC2201	Probability & Statistics			
R13PC2212	Momentum Transfer			
R13PC2203	Mechanical Unit Operations			
R13PC2204	Chemical Engineering Thermodynamics-I			
R13PC2205	Process Heat Transfer			
R13PC2206	Process Instrumentation			
R13PC2207	Momentum Transfer Lab			YES
R13PC2208	Process Heat Transfer Lab			YES
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>02</b>



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Kakinada-533003, Andhra Pradesh (India)

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**Course wise Curriculum Analysis (R13)**

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 3

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC3101	Professional Ethics & Human Values			
R13PC3102	Management Science			
R13PC3103	Petroleum Refinery Engineering			
R13PC3104	Chemical Engineering Thermodynamics-II			
R13PC3105	Petrochemical Engineering – I			
R13PC3106	Mass Transfer Operations – I			
R13PC3107	Mathematical Methods Lab			YES
R13PC3108	Petroleum Analysis Lab			YES
R13PC3109	Mass Transfer Operations Lab - I			YES
R13PC3110	Industrial Visits	YES		
R13PC3111	SWAYAM-NPTEL Courses			
	<b>Total</b>	<b>01</b>	<b>0</b>	<b>03</b>



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Kakinada-533003, Andhra Pradesh (India)

**Course wise Curriculum Analysis (R13)**

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 3

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC3201	Petrochemical Engineering- II			
R13PC3202	Mass Transfer Operations- II			
R13PC3203	Chemical Reaction Engineering -I			
R13PC3204	Process Dynamics & Control			
R13PC3205A	Electronic Instrumentation			
R13PC3205B	Big Data Analytics			
R13PC3205C	Alternative Energy Sources for Automobiles			
R13PC3205D	Waste Water Management			
R13PC3205E	Fundamentals of Liquefied Natural Gas			
R13PC3205F	Computational Fluid Dynamics			
R13PC3206	Mass Transfer Operations Lab - II			YES
R13PC3207	Instrumentation, Process Dynamics & Control Lab			YES
R13PC3208	Chemical Reaction Engineering Lab			YES
R13PC3209	Summer Internship ( 4-6 weeks)	YES		
R13PC3210	Mini Project	YES		
<b>Total</b>		<b>02</b>	<b>00</b>	<b>4</b>



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

**Course wise Curriculum Analysis (R13)**

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 4

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill de01velopment (Yes/No)
R13PC4101	Transport Phenomena			
R13PC4101	Petroleum Refining & Petrochemical Plant Design	yes	yes	
R13PC4101	Chemical Reaction Engineering- II			
R13PC4102	Process Modelling & Simulation			
R13PC4103A	Petroleum Production Engineering			
R13PC4103B	Fluidization Engineering			
R13PC4103C	Process Intensification			
R13PC4103D	Optimization Techniques			
R13PC4104A	Pipeline Engineering			
R13PC4104B	FCC Technology			
R13PC4104C	Process Integration			
R13PC4104D	Computational Methods in Chemical Engineering			YES
R13PC4105	Process Equipment Design & Drawing Lab			YES
R13PC4106	Simulation Lab			YES
R13PC4107	IPR & Patents		YES	
	\ Total	01	02	03





## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

Kakinada-533003, Andhra Pradesh (India)

### Course wise Curriculum Analysis(R13)

Program Code: 08

Program Name: B.Tech – Chemical engg.

Year: 4

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PC4201	Industrial Safety & Hazard Management			YES
R13PC4202	Process Engineering Economics			
R13PC4203	Multicomponent Distillation			
R13PC4204A	Natural Gas Engineering			
R13PC4204B	Prevention of Pollution through Process Integration			
R13PC4204C	Nanotechnology			
R13PC424D	Design & Analysis of Experiments			
R13PC4205	Seminar ( Presentation of SIP Report)			YES
R16PCC4206	Project			YES
	<b>Total</b>			02