



**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		
27	B.Tech – Petroleum engg.	03	01	22	83	32

*NW*  
Coordinator

*KSR*  
HOD

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

*Dudeti*  
**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: 27

Program Name: B.Tech –Petroleum engg.

Year: 1

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13HS1101	English – I			
R13BS1102	Mathematics - I			
R13ES1103	Engineering Chemistry			
R13ES1104	Elements of Mechanical Engineering			
R13BS1105	Engineering Drawing			
R13ES1106	Environmental Studies			
R13HS1107	Engineering/Applied Chemistry Laboratory			Yes
R13BS1108	English - Communication Skills Lab – I			YES
R13ES1109	Engineering Workshop			YES
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>



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**Course wise Curriculum Analysis (R13)**

Program Code: 27

Program Name: B.Tech – Petroleum engg.

Year: 1

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13HS1201	English – II			YES
R13BS1202	Mathematics – II(Numerical methods &Integral transforms)			
R13BS1203	Mathematics – III (Differential equations)			
R13BS1204	Engineering Physics			
R13HS1205	Engineering Mechanics			
R13ES1206	Computer Programming			
R13BS1207	English - Communication Skills Lab - II			YES
R13HS1208	Engineering /AppliedPhysics Lab			YES
R13ES1209	Engineering /Applied Physics – Virtual Labs - Assignments			YES
R13PE1210	Computer Programming - Lab			YES
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>04</b>



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Program Code: 27

Program Name: B.Tech – Petroleum engg.

Year: 2

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE2101	Complex Variables			
R13PE2102	Basic Electrical & Electronics Engineering			
R13PE2103	General Geology			
R13PE2104	Surveying & Offshore Structures			
R13PE2105	Chemical Process Calculations			
R13PE2106	Materials Science & Engineering			
R13PE2107	Basic Engineering (Mech. + Elec.) Lab			YES
R13PE2108	Geology & Surveying Lab			YES
R13MC2109	Managerial Economics & Financial Analysis		YES	
MOOCS (NPTEL/SWAYAM) for Honors/Minor Degree				
<b>Total</b>		0	01	02



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Program Code:27

Program Name: B.Tech – Petroleum engg.

Year: 2

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE2201	Probability & Statistics			
R13PE2202	Momentum Transfer			
R13PE2203	Petroleum Geology			
R13PE2204	Thermodynamics for Petroleum Engineers			
R13PE2205	Process Heat Transfer			
R13PE2206	Petroleum Exploration			
R13PE2207	Momentum Transfer Lab			YES
R13PE2208	Process Heat Transfer Lab			YES
R13MC2209	Professional Ethics & Human Values			
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>02</b>



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**Course wise Curriculum Analysis (R13)**

Program Code: 27

Program Name: B.Tech – Petroleum engg.

Year: 3

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE3101	Management Science			
R13PE3102	Process Dynamics & Control			
R13PE3103	Process Instrumentation			
R13PE3104	Well Logging & Formation Evaluation			
R13PE3105	Drilling Technology			
R13PE3106	Mathematical Methods Lab			Yes
R13PE3107	Instrumentation, Process Dynamics & Control Lab			Yes
R13PE3108	Drilling Fluids Lab			YES
R13PE3109	Industrial Visits	YES		
R13MC3110	SWAYAM-NPTEL Courses			
<b>Total</b>		01	0	03



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**Course wise Curriculum Analysis (R13)**

Program Code: 27

Program Name: B.Tech – Petroleum engg.

Year: 3

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE3201	Well Completions, Testing & Servicing			
R13PE3202	Petroleum Production Engineering			
R13PE3203	Petroleum Reservoir Engineering-I	YES		
R13PE3204	Petroleum Refinery & Petrochemical Engineering			
R13PE3205A	Electronic Instrumentation			
R13PE3205B	Big Data Analytics			
R13PE3205C	Alternative Energy Sources for Automobiles			
R13PE3205D	Waste Water Management			
R13PE3205E	Fundamentals of Liquefied Natural Gas			
R13PE3205F	Computational Fluid Dynamics			
R13PE3206	Drilling Simulation Lab			YES
R13PE3207	Petroleum Analysis Lab			YES
R13PE3208	Petroleum Reservoir Engineering Lab			YES
R13PE3209	Summer Internship ( 4-6 weeks)			YES
R13MC3210	Mini Project			
	<b>Total</b>	01		04



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**Course wise Curriculum Analysis (R13)**

Program Code: 27

Program Name: B.Tech – Petroleum engg.

Year: 4

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE4101	Integrated Asset Management			
R13PE4102	Petroleum Reservoir Engineering - II	YES		
R13PE4103	Surface Production Operations			
R13PE4104	Oil & Gas Processing Plant Design			
R13PE4105A	Natural Gas Hydrates			
R13PE4105B	Pipeline Engineering			
R13PE4105C	Horizontal Well Technology			
R13PE4106A	Coal Bed Methane Engineering			
R13PE4106B	Offshore Engineering			
R13PE4106C	Reservoir Stimulation			
R13PE4107	IPR & Patents			
R13PE4108	Petroleum Equipment Design & Simulation Lab			YES
R13PE4109	Petroleum Reservoir Simulation Lab			YES
	<b>Total</b>	<b>01</b>	<b>00</b>	<b>02</b>





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Program Name: B.Tech – Petroleum engg.

Year: 4

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R13PE4201	EOR Techniques			
R13PE4202	HSE & FE in Petroleum Industry			
R13PE4203	Petroleum Economics, Policies & Regulations			
R13PE4204A	Shale Gas Reservoir Engineering			
R13PE4204B	Subsea Engineering			
R13PE4204C	Reservoir Modelling & Simulation			YES
R13PE4205	Seminar ( SIP Report Presentation)			YES
R13PE4206	Project			
	<b>Total</b>			02