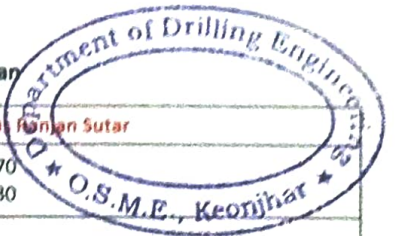


Department of Drilling Engineering
WINTER-2026, Introduction to Reservoir Engineering Lesson Plan



Branch: DRILLING ENGINEERING				Faculty:- Er.Tapas Ranjan Sutar		
Subject:Introduction to Reservoir Engineering/DEPE303(B)		No of periods: 3hrs/week	Total Period: 45 Total week: 15	End Sem exam: 70 Progressive assesment: 30		
Scheduled Session: WINTER-2026 (01.07.2026 to 05.11.2026), AVAILABLE PERIOD: 49						
Month	Week	Period	Date	Topics	Total Periods/Remarks	
JULY	1st	1P	02.07.2026	Briefing of Syllabus and Introduction to the course, its application	1	
		I.Introduction to Reservoir Engineering:				5
		1P	03.07.2026	Definitions, classification of reservoirs		
	2nd	1P	07.07.2026	Overview of reservoir engineering tasks.		
		1P	09.07.2026	Characteristics of crude oil and natural gas		
		1P	10.07.2026	Classification of crude and its physicochemical properties.		
	3rd	1P	14.07.2026	Classification of crude and its physicochemical properties.		
		II. Reservoir Rock Properties:				10
		1P	17.07.2026	Porosity		
	4th	1P	21.07.2026	Effective and relative permeability, determination, combination of permeability in parallel & series beds		
		1P	23.07.2026	Porosity permeability relationship		
		1P	24.07.2026	Fluid saturation determination and significance		
	5th	1P	28.07.2026	Wettability		
		1P	30.07.2026	Capillary pressure, characteristics		
		1P	31.07.2026	Capillary pressure, characteristics		
AUGUST	2nd	1P	04.08.2026	Measurements and uses		
		1P	06.08.2026	Compressibility.		
		1P	07.08.2026			
	3rd	III. Fluid Properties:				6
		1P	11.08.2026	Phase behaviour of hydrocarbon system		
		1P	13.08.2026	Ideal & non Ideal system		
	4th	1P	14.08.2026	Equilibrium ratios		
		1P	18.08.2026	Reservoir fluid sampling		
		1P	20.08.2026	PVT properties determination and application		
	5th	1P	21.08.2026	PVT properties determination and application		
		IV. Fluid Flow in Porous Media				6
		1P	25.08.2026	Darcy's Law		
	SEPTEMBER	1st	1P	28.08.2026	Single-phase and multiphase flow	
			1P	01.09.2026	Relative permeability	
			Tentative 1st Internal Assesment in-between 01.09.2026 to 08.09.2026			
2nd		1P	03.09.2026	Fractional flow		
		1P	08.09.2026	Flow through fractures		
		1P	10.09.2026	Water and gas coning		
3d		V.Reservoir Drive Mechanisms:				5
		1P	11.09.2026	Solution gas drive		
		1P	17.09.2026	Gas cap drive		
4th		1P	18.09.2026	Water drive		
		1P	22.09.2026	Compaction drive		
		1P	24.09.2026	Combination drive		
5th		VI. Material Balance and Reserve Estimation:				6
		1P	25.09.2026	Material balance equations		
		1P	29.09.2026	Material balance equations		
OCTOBER	1st	1P	01.10.2026	Volumetric methods		
		1P	06.10.2026	Volumetric methods		
		1P	08.10.2026	Recovery factors		
	2nd	1P	09.10.2026	Recovery factors		
		VII. Well Testing and Pressure Transient Analysis:				7
		1P	13.10.2026	Objectives of well testing		
	3rd	1P	15.10.2026	Pressure drawdown and buildup tests,		
		1P	16.10.2026	Interpretation		
		1P	22.10.2026	Decline Curve Analysis- methods Types of decline curves		
	4th	1P	23.10.2026	Extrapolation techniques		
		1P	27.10.2026	Limitations		
		Tentative 2nd Internal Assesment in-between 26.10.2026 to 31.10.2026				
	5th	1P	29.10.2026	Extra Class/Doubt clearing class		
		1P	30.10.2026	Extra Class/Doubt clearing class		
		1P	03.11.2026	Extra Class/Doubt clearing class		
NOVEMBER	1st	1P	05.11.2026	Extra Class/Doubt clearing class		

Prepared By: **Er. Tapas Ranjan Sutar**
 Lect-II, Drilling

Tapas
 25-6-26
 Lecturer (Stage-II)
 Drilling Engineering
 O.S.M.E., Keonjhar

Tapas
 25-6-26
 PRINCIPAL
 Orissa School of Mining Engineering
 KEONJHAR