Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NPEC504	**Reservoir Characterization**	0	0	3	1.5

Course Objective
The objective of the course is to develop knowledge on Reservoir simulation
Learning Outcomes
Upon successful completion of this course, students will: • Have the ability to work on simulation of projects related to oil and gas industry • Have to work individually on optimization of process

Sl. No.	Name of Experiment	Contact Hours	Learning outcome
1	Oil Well Model Optimization: Generation of IPR and VLP	3	Students will learn to develop IPR and VLP curve for oil well
2	Production Tubing Size Optimization	3	Tubing size calculation and optimization
3	Gas Well Optimization: Generation of IPR and VLP	3	Students will learn to develop IPR and VLP curve for gas well
4	Designing of Water Injection Wells	3	Able to design water injection well
5	Well-Test Data Interpretation for Pressure Build-up Tests	3	Able to interpret well test data for pressure build up
6	Well Test Data Interpretation for Pressure Drawdown Tests	3	Able to interpret well test data for pressure drawdown
7	Open Hole Log Interpretation	3	Able to interpret well test data for open hole formation
8	Generation of Phase Envelope for a Multiphase/Multicomponent Hydrocarbon Mixture	3	Able to generate phase envelop for oil and gas system
9	Assisted History Matching (ASHM) and Reservoir Performance Prediction Using Material Balance	3	Able to predict reservoir performance through material balance.
10	Compositional Reservoir Simulation	3	Able to learn compositional reservoir simulation
11	Phase-Behavior of Hydrocarbon Systems	3	Able to predict hydrocarbon phase behavior
12	Modelling and Optimization of CO_2 Flooding Processes	3	Able to model and optimize CO_2 Flooding Processes
13	Practice and Review	$3\times2 = 6$	Students will practice experiments and performance will be evaluated
Total Contact Hours		**42**	

Text Book and Reference:

1. Laboratory Manual deigned by Couse Instructor