

Department of Petroleum Engineering

Details of Departmental Compulsory (DC) Courses

Departmental Compulsory (DC) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PEC201	Drilling Technology	3-0-0	Theory
2	PEC202	Elements of Reservoir Engineering	3-0-0	Theory
3	PEC203	Drilling Fluids and Cements	3-0-0	Theory
4	PEC204	Reservoir Engineering Practical	0-0-2	Practical
5	PEC205	Drilling Fluids and Cementing Practical	0-0-2	Practical
6	PEC206	Elements of Petroleum Production Engineering	3-0-0	Theory
7	PEC207	Petroleum Formation Evaluation	3-0-0	Theory
8	PEC208	Reservoir Fluid Thermodynamics	3-0-0	Theory
9	PEC209	Petroleum Product Testing Practical	0-0-2	Practical
10	PEC210	Drilling Simulation Practical	0-0-2	Practical
11	PEC301	Applied Petroleum Reservoir Engineering and Management	3-0-0	Theory
12	PEC302	Petroleum Production Operations	3-0-0	Theory
13	PEC303	Natural Gas Engineering	3-0-0	Theory
14	PEC304	Petroleum Production Engineering Practical	0-0-2	Practical
15	PEC305	Process Engineering Practical	0-0-2	Practical
16	PEC306	Directional Drilling	3-0-0	Theory
17	PEC307	Oil and Gas Well Testing	3-0-0	Theory
18	PEC308	Enhanced Oil Recovery Practical	0-0-2	Practical
19	PEC309	Reservoir Characterization Practical	0-0-2	Practical
20	PEC401	Project - I	0-0-0 (6)	Non-Contact
21	PEC402	Project - II	0-0-0 (6)	Non-Contact
22	PEC501	Formation Evaluation and Production Logging	3-0-0	Theory
23	PEC502	Advanced Well Testing	3-0-0	Theory
24	PEC503	Numerical Methods for Petroleum Engineers	3-0-0	Theory
25	PEC504	Advanced Production Technologies	3-0-0	Theory
26	PEC505	Petroleum Economics, Risk and Uncertainty Management	3-0-0	Theory
27	PEC506	Reservoir Simulation Practical	0-0-3	Practical
28	PEC507	Term paper or Mini Project	0-0-2	Practical
29	PEC508	Petroleum Geomechanics and Hydraulic Fracturing	3-0-0	Theory
30	PEC509	Advanced Drilling Technology	3-0-0	Theory
31	PEC510	Petroleum Instrumentation and Measurements Practical	0-0-3	Practical
32	PEC511	Development of Working Models Practical	0-0-2	Practical
33	PEC512	Health, Safety and Environment in Oil and Gas Industry	3-0-0	Theory
34	PEC513	Introduction to Python and Petroleum Data Analysis	3-0-0	Theory
35	PEC520	Research Methodology	3-0-0	Theory
36	PEC597	Thesis	0-0-0 (36)	Non-Contact
37	PEC598	Thesis	0-0-0 (18)	Non-Contact
38	PEC599	Thesis	0-0-0 (S/X)	Audit
39	PES401	Internship	0-0-0 (S/X)	Audit

Details of Engineering Science Option (ESO) Courses

Engineering Science Option (ESO) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PEE201	Introduction to Petroleum Engineering	3-0-0	Theory
2	PEE202	Petroleum Environmental Management	3-0-0	Theory

Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PED401	Offshore Drilling and Petroleum Production Practices	3-0-0	Theory
2	PED402	Enhanced Oil Recovery Techniques	3-0-0	Theory
3	PED403	Drilling System Design	3-0-0	Theory
4	PED404	Petroleum Engineering Design	3-0-0	Theory
5	PED405	Pipeline Engineering	3-0-0	Theory
6	PED406	Reservoir Modeling and Simulation	3-0-0	Theory
7	PED407	Advanced Well Completion Practices	3-0-0	Theory
8	PED501	Reservoir Simulation	3-0-0	Theory
9	PED502	Well Intervention, Workover and Stimulation Techniques	3-0-0	Theory
10	PED503	Enhanced Oil and Gas Recovery Methods	3-0-0	Theory
11	PED504	Profile Modification & Water Shutoff	3-0-0	Theory

Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	Course Code	Course Name	L-T-P	Course Type
1	PEO301	Heat and Mass Transfer in Petroleum Operations	3-0-0	Theory
2	PEO302	Oil & Gas Field Development and Planning	3-0-0	Theory
3	PEO401	Petroleum Environment, Health and Safety Practices	3-0-0	Theory
4	PEO402	Well Performance	3-0-0	Theory
5	PEO403	Transportation and Marketing of Petroleum and Petroleum Products	3-0-0	Theory
6	PEO404	Petroleum Resource Management and Project Evaluation	3-0-0	Theory
7	PEO405	Integrated Reservoir Management	3-0-0	Theory
8	PEO406	Reservoir Geomechanics	3-0-0	Theory
9	PEO501	Fluid Flow through Porous Media	3-0-0	Theory
10	PEO502	Flow Assurance	3-0-0	Theory
11	PEO503	Unconventional Hydrocarbon Resources	3-0-0	Theory
12	PEO505	Oil & Gas Processing Plant Design	3-0-0	Theory
13	PEO506	Carbon Capture, Utilization And Sequestration	3-0-0	Theory