

PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	171HS1T01	English - I		✓		Students are able to demonstrate communication skills express their thoughts fluently in both written as well as oral form of language which is very much essential for the career growth and enhances the language competency.
2	171BS1T01	Mathematics - I		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using ordinary differential equations, system of linear equations in various engineering disciplines.
3	171HS1T02	Environmental Studies				
4	171BS1T03	Engineering Chemistry				
5	171ES1T02	Engineering Mechanics		✓		Students are able to acquire skills related to principles of friction, kinetics, kinematics, resolving forces, trusses etc which forms the crux of design sciences.
6	171ES1T01	Computer Programming	✓			Students are able to acquire programming skills related to Structured programming, arrays, functions, pointers, structures and unions that enable them to be employed as a software developer.
7	171HS1L01	English Communication Skills Lab - I		✓		Students are able to demonstrate technical skills to express fluently in both written as well as oral forms of language which is very much essential for career growth.
8	171BS1L01	Engineering Chemistry Lab				
9	171ES1L01	Computer Programming Lab	✓			Students are able to acquire programming skills related to Structured programming, arrays, functions, pointers, structures and unions enabling them to be employed as a software developer.

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
10	171HS2T03	English - II		✓		Students are able to demonstrate communication skills express their thoughts fluently in both written as well as oral form of language which is very much essential for the career growth and enhances the language competency.
11	171BS2T06	Mathematics - III		✓		Students are able to demonstrate problem solving skills by evaluating improper and vector integrals applicable in various engineering disciplines.
12	171BS2T02	Mathematics - II		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using partial differential equations and their applications in various engineering disciplines.
13	171BS2T07	Engineering Physics				
14	171ES2T03	Engineering Drawing		✓		Students are able to acquire skills related to creating technical drawings by displaying from different angles of projection and adding dimensional information.
15	171ES2T07	Elements of Mechanical Engineering		✓		Students are able to demonstrate Problem solving skills to analyse thermodynamic relations of mechanical systems and performance characteristics of pumps and compressors
16	171HS2L02	English Communication Skills Lab - II		✓		Students are able to demonstrate technical skills to express fluently in both written as well as oral forms of language which is very much essential for career growth.
17	171BS2L02	Engineering Physics Lab				
18	171ES2L02	Engineering Workshop and IT Workshop		✓		Students are able to acquire skills related to system troubleshooting, implement MS office tools, develop LaTeX documents and to work with Linux

III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
19	R1621081	Complex Variables		✓		Students are able to demonstrate problem solving skills by analytical properties of functions of complex variables , complex integration and conformal mapping
20	R1621012	Basic Electrical And Electronics Engineering		✓		Students are able to acquire skills related to basic electrical and electronic principles enabling them to be employed for designing logging tools
21	R1621272	General Geology	✓			Students are able to acquire skills related to various aspects of various structures enabling them to be employed as petroleum geologists.
22	R1621273	Surveying And Offshore Structures	✓			Students are able to acquire skills related to various aspects of various offshore structures enabling them to be employed as offshore engineers.
23	R1621084	Chemical Process Calculations		✓		Students are able to demonstrate Problem solving skills to analyze stylometric relations of chemicals and performance characteristics of it.
24	R1621271	Materials Science And Engineering	✓			Students are able to acquire skills related to various aspects of material design enabling them to be employed as material designers
25	R1621085	Basic Engineering (Mech. + Elec.) Lab	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of electric circuits/networks enabling them to be employed for designing and manufacturing of electrical equipment in logging industry.
26	R1621274	Geology And Surveying Lab	✓			Students are able to acquire skills related to various aspects of various structures enabling them to be employed as petroleum geologists.
27	R1621075	Managerial Economics And Financial Analysis			✓	Students are able to apply the knowledge of economic and financial management enabling them to become an entrepreneur in any domain of their choice.

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
28	R1622271	Probability And Statistics		✓		Students are able to demonstrate problem solving skills by learning about random variables , probability distributions, sampling theory , test of hypothesis , correlation and regression.
29	R1622272	Momentum Transfer		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using fluid flow behaviour and designing of fluid flow in various engineering disciplines.
30	R1622273	Petroleum Geology	✓			Students are able to acquire skills related to various aspects of various structures , traps, stratigraphy's enabling them to be employed as petroleum geologists.
31	R1622274	Thermodynamics For Petroleum Engineers		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using phase equilibrium in the fluid systems in various engineering disciplines.
32	R1622275	Process Heat Transfer		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using heat flow systems, study of temperature behaviour in various engineering disciplines.
33	R1622276	Petroleum Exploration	✓			Students are able to demonstrate technical skill of characterizing structures, modelling and analysis of structures by exploration methods.
34	R1622277	Momentum Transfer Lab		✓		Students are able to acquire skills related to various aspects of different fluid flow behaviour and designing of fluid flow enabling them to be employed as production engineers.
35	R1622278	Process Heat Transfer Lab		✓		Students are able to acquire skills related to various aspects of heat flow systems, study of temperature behaviour in petroleum systems enabling them to be employed as production engineers.
36	R1621019	Professional Ethics And Human Values		✓		Students are able to demonstrate their skills as they inculcate human values to grow as responsible human beings with proper personality and helps them to maintain ethical conduct and discharge their professional duties.

V SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
37	RT31086	Process Instrumentation		✓		Students are able to demonstrate technical skill of characterizing different types of instruments, modelling and analysis of instruments.
38	RT31271	Petroleum Exploration		✓		Students are able to demonstrate technical skill of characterizing different exploration methods, modeling and analysis of structures.
39	RT31272	Well Logging And Formation Evaluation		✓		Students are able to demonstrate technical skill of characterizing different logging tools, modelling and analysis of formations.
40	RT31273	Drilling Technology		✓		Students are able to demonstrate technical skill of characterizing different drilling methods, modelling and analysis of well bore.
41	RT31274	Well Engineering		✓		Students are able to demonstrate technical skill of characterizing different well designs, modelling and analysis of well bore.
42	RT31275	Process Dynamics And Control		✓		Students are able to demonstrate technical skill of characterizing different controllers, modelling and analysis of control valves.
43	RT31277	Instrumentation And Process Control Lab		✓		Students are able to acquire skills related to various aspects of different controllers behaviour enabling them to be employed as production engineers.
44	RT31278	Drilling Fluids Lab		✓		Students are able to acquire skills related to different aspects of various mud behaviour enabling them to be employed as mud engineers.

VI SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
45	RT32271	Well Completions		✓		Students are able to demonstrate technical skill of characterizing different wells , modelling and analysis of completions.
46	RT32272	Petroleum Reservoir Engineering-I		✓		Students are able to demonstrate technical skill of characterizing different rock properties , modelling and analysis of reservoir.
47	RT32273	Petroleum Production Engineering And Design		✓		Students are able to demonstrate technical skill of characterizing different fluid flow properties , modelling and analysis of production.
48	RT32274	Petroleum Refinery And Petrochemical Engineering		✓		Students are able to demonstrate technical skill of characterizing different heaters, treaters, distillation columns , modelling and analysis of refinery.
49	RT32275	Surface Production Operations		✓		Students are able to demonstrate technical skill of characterizing different separators , modelling and analysis of production.
50	RT32277	Petroleum Analysis Lab				Students are able to acquire skills related to various aspects of different crude behaviour enabling them to be employed as refining engineers.
51	RT32278	Drilling Simulation Lab				Students are able to acquire skills related to various aspects of different well behaviour enabling them to be employed as well engineers.
52	RT32056	IPR Patents			✓	It helps the graduates safe guard the IP and innovations at their place of work.

VII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
53	RT41271	Integrated Asset Management			✓	Students are able to demonstrate Competency in the domain of Integrated asset management enabling them to become an entrepreneur.
54	RT41272	Enhanced Oil Recovery Techniques		✓		Students are able to demonstrate technical skill of characterizing different crude oils , modelling and analysis of reservoir for recovery.
55	RT41273	HSE And FE In Petroleum Industry			✓	Students are able to apply the knowledge of safety management enabling them to become an entrepreneur in any domain of their choice.
56	RT41274	Petroleum Reservoir Engineering – II		✓		Students are able to demonstrate technical skill of characterizing different well fluid behaviours , modelling and analysis of reservoir for flow test.
57	RT41016F	Green Fuel Technologies				
58	RT41016A	Energy Management				
59	RT41016B	Fundamentals Of Petroleum Industry				
60	RT41016C	Offshore Engineering				
61	RT41016D	Pipeline Engineering		✓		Students are able to demonstrate technical skill of characterizing different material behaviours , modelling and analysis of pipeline operations.
62	RT41279	Coal Bed Methane Engineering	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of CBM wells enabling them to be employed for designing and evaluation well for methane extraction.
63	RT4127L	Petroleum Equipment Design And Simulation Lab		✓		Students are able to acquire skills related to design, synthesize and evaluate the performance of process equipment's enabling them to be employed for designing and evaluation of fluid behaviour in production.
64	RT4127M	Petroleum Reservoir Engineering Lab		✓		Students are able to acquire skills related to design, synthesize and evaluate the performance of reservoir rocks enabling them to be employed for designing and evaluation of fluid behaviour in cores.

65	RT4127N	Presentation Of Sip Report	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in petroleum engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
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VIII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
66	RT42275	Project	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in petroleum technology domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
67	RT42271	Petroleum Economics And Regulations And Policies			✓	Students are able to acquire skills related to different energy laws enabling them to be employed for energy sector.
68	RT42272A	Reservoir Modeling And Simulation	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of reservoir rocks enabling them to be employed for designing and evaluation of fluid behaviour in wells.
69	RT42272B	Horizontal Well Technology	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of horizontal wells enabling them to be employed for designing and evaluation of well integrity.
70	RT42272C	Lng-Processes And Transportation And Storage	✓			Students are able to acquire skills related to various aspects of different crude behaviour enabling them to be employed as process and transport engineers.
71	RT42273A	Reservoir Stimulation		✓		Students are able to acquire skills related to design, synthesize and evaluate the performance of reservoir rocks enabling them to be employed for designing and evaluation of formation for treatment .
72	RT42273B	Subsea Engineering		✓		Students are able to demonstrate technical skill of characterizing different subsea structures , modelling and analysis of production.
73	RT42273C	Fundamentals Of Multiphase Flow		✓		Students are able to demonstrate technical skill of characterizing different rock properties , modelling and analysis of flow behaviour.

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B. Tech Petroleum Technology

74	RT42274A	Natural Gas Hydrates		✓		Students are able to demonstrate technical skill of characterizing different feeds from well , modelling and analysis of hydrates.
75	RT42274B	Advanced Natural Gas Engineering		✓		Students are able to demonstrate technical skill of characterizing different gas wells , modelling and analysis of fluid behaviours.
76	RT42274C	Petroleum Biotechnology		✓		Students are able to demonstrate technical skill of characterizing different microbes , modelling and analysis of fluid behaviours with microbes.
	Total		15	44	4	


Program Coordinator


Head of the Department

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