

PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	191HS1T01	Communicative English		✓		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	191BS1T01	Differential Equations and Linear Algebra		✓		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	191BS1T02	Engineering Physics				
4	191ES1T01	Programming for Problem Solving Using C	✓			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.
5	191HS1L01	Communicative English Lab-I		✓		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	191BS1L01	Engineering Physics Lab	✓			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	191ES1L01	Programming for Problem Solving Using C Lab		✓		Students are able to demonstrate technical skills related to control structures, arrays, string formulas enabling them to be employed in software industry.
8	191ES1L02	Basic Engineering Workshop		✓		Engineering Workshop helps the students by improving their skills by knowing the construction of various wooden joints and various fitting joints, by understanding different black smithy work and preparing various sheet metal models.
9	191MC1A01	Environmental Science	✓			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.
10	191MC1A02	Constitution of India				

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
11	191BS2T05	Partial Differential Equations and Vector Calculus		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using partial differential equations, vector differentiation, vector integration and their applications in various engineering disciplines.
12	191BS2T06	Chemistry of Materials		✓		
13	191ES2T02	Engineering Graphics and Design		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using partial differential equations and their applications in various engineering disciplines.
14	191ES2T03	Essential Electrical and Electronics Engineering	✓			Students are able to acquire technical skill of characterizing electronic devices, modelling and analysis of electronic circuits in logging industry.
15	191ES2T04	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.
16	191HS2L02	Communicative English Lab-II		✓		Students are able to demonstrate technical skills to express fluently in both written as well as oral form of language which is very much essential for the career growth
17	191BS2L04	Engineering Chemistry Lab				
18	191ES2L03	Essential Electrical and Electronics Engineering Lab		✓		Students are able to acquire technical skill of characterizing electronic devices, modelling and analysis of electronic circuits in logging industry.
19	191ES2L13	Petroleum Technology Workshop	✓			Students are able to demonstrate technical skill of characterizing technologies, modelling and analysis of petroleum industry.
20	191PR2P01	Engineering Exploration Project		✓		Students will be able to demonstrate problem identification, analysis, design solutions or applications in electronics and communication domain through the acquired technical, cognitive, communication and creative skills to address societal needs.

III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
21	171BS3T09	Complex Variables		✓		Students are able to demonstrate problem solving skills by analytical properties of functions of complex variables , complex integration and conformal mapping
22	171ES3T16	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
23	171ES3T17	General Geology	✓			Students are able to acquire skills related to various aspects of various structures enabling them to be employed as petroleum geologists.
24	171ES3T18	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.
25	171PT3T01	Chemical Process Calculations		✓		Students are able to demonstrate Problem solving skills to analyze stylometric relations of chemicals and performance characteristics of it.
26	171ES3T05	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
27	171ES3L09	Basic Engineering 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.
28	171ES3L10	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.
29	171HS3A10	Employability Skills - I	✓			Students are able to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.
30	171HS3A09	Professional Ethics And Human Values		✓		Students are able to acquire skills which help them in becoming a professional with ethical and human values

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
30	171BS4T10	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.
31	171PT4T02	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.
32	171PT4T03	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.
33	171PT4T04	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.
34	171PT4T05	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.
35	171HS4T05	Management Science	✓			
36	171PT4L01	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.
37	171PT4L02	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.
38	171HS4A11	Employability Skills - II	✓			Students are able to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.
39	171HS4A08	IPR And Patents			✓	It helps the graduates safe guard the IP and innovations at their place of work.

V SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
40	171PT5T06	Process Dynamics and Control		✓		Students are able to demonstrate technical skill of characterizing different controllers, modelling and analysis of control valves.
41	171PT5T07	Petroleum Exploration		✓		Students are able to demonstrate technical skill of characterizing different exploration methods, modeling and analysis of structures.
42	171PT5T08	Process Instrumentation		✓		Students are able to demonstrate technical skill of characterizing different types of instruments, modelling and analysis of instruments.
43	171PT5T09	Well Logging and Formation Evaluation		✓		Students are able to demonstrate technical skill of characterizing different logging tools, modelling and analysis of formations.
44	171PT5T10	Drilling Technology		✓		Students are able to demonstrate technical skill of characterizing different drilling methods, modelling and analysis of well bore.
45	171PT5E01	Well Engineering and Design		✓		Students are able to demonstrate technical skill of characterizing different well designs, modelling and analysis of well bore.
46	171PT5E02	Fundamentals of Liquefied Natural Gas	✓			Students are able to acquire skills related to various aspects of different crude behaviour enabling them to be employed as process and transport engineers.
47	171PT5E03	Pipeline Engineering		✓		Students are able to demonstrate technical skill of characterizing different material behaviours, modelling and analysis of pipeline operations.
48	171PT5L03	Instrumentation, Process Dynamics and Control Lab		✓		Students are able to acquire skills related to various aspects of different controllers behaviour enabling them to be employed as production engineers.
49	171PT5L04	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.
50	171HS5T06	Employability Skills - III	✓			Students are able to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.
51	171PT5S01	MOOCs – I	✓			Students are able to demonstrate technical skill of various online courses available adding to their curricular courses

VI SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
52	171PT6T11	Well Completions, Testing and Services		✓		Students are able to demonstrate technical skill of characterizing different wells , modelling and analysis of completions.
53	171PT6T12	Petroleum Production Engineering		✓		Students are able to demonstrate technical skill of characterizing different fluid flow properties , modelling and analysis of production.
54	171PT6T13	Petroleum Reservoir Engineering - I		✓		Students are able to demonstrate technical skill of characterizing different rock properties , modelling and analysis of reservoir.
55	171PT6T14	Surface Production Operations		✓		Students are able to demonstrate technical skill of characterizing different separators , modelling and analysis of production.
56	171PT6E04	Petroleum Refining and Petrochemical Engineering		✓		Students are able to demonstrate technical skill of characterizing different heaters, treaters, distillation columns , modelling and analysis of refinery.
57	171PT6E05	Storage and Transportation of Crude Oil and Natural Gas.	✓			Students are able to acquire skills related to various aspects of different crude behaviour enabling them to be employed as process and transport engineers
58	171PT6E06	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 .
59	171PT6E07	Natural Gas Hydrates		✓		Students are able to demonstrate technical skill of characterizing different feeds from well , modelling and analysis of hydrates.
60	171PT6E08	Natural Gas Engineering		✓		Students are able to demonstrate technical skill of characterizing different gas wells , modelling and analysis of fluid behaviours.
61	171PT6E09	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.
62	171PT6L05	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.

63	171PT6L06	Petroleum Reservoir Simulation 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.
64	171HS6T07	Employability skills - IV	✓			Students are able to acquire skills to be placed in a company as it will impart employability skills in students, which will enable the students to feel comfortable to face several competitive examinations with confidence and competence.
65	171PT5S02	MOOCs – II		✓		Students are able to demonstrate technical skill of various online courses available adding to their curricular courses

VII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
66	R1641019	IPR and PATENTS			✓	Students are able to safe guard the IP and innovations at their place of work.
67	R1641271	Integrated Asset Management			✓	Students are able to demonstrate Competency in the domain of Integrated asset management enabling them to become an entrepreneur.
68	R1641272	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.
69	R1641273	Surface Production Operations		✓		Students are able to demonstrate technical skill of characterizing different separators , modelling and analysis of production.
70	R1641274	Oil and Gas Processing Plant Design		✓		Students are able to demonstrate technical skill of characterizing different separators, compressors , pumps , modelling and analysis of production.
71	R1641277	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.
72	R1641278	Petroleum Reservoir Simulation 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.
73	R164127A	Natural Gas Hydrates		✓		Students are able to demonstrate technical skill of characterizing different feeds from well , modelling and analysis of hydrates.
74	R164127B	pipeline engineering		✓		Students are able to demonstrate technical skill of characterizing different material behaviours , modelling and analysis of pipeline operations.
75	R164127C	Horizontal well technology				
76	R164127D	Coal Bed Methane Engineering				
77	R164127E	Offshore engineering				
78	R164127F	Reservoir stimulation				

VIII SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
79	R1642271	EOR Techniques		✓		Students are able to demonstrate technical skill of characterizing different crude oils , modelling and analysis of reservoir for recovery.
80	R1642272	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.
81	R1642273	Petroleum Economics Policies and Regulations			✓	Students are able to acquire skills related to different energy laws enabling them to be employed for energy sector.
82	R164227A	Shale Gas Reservoir Engineering	✓			Students are able to acquire skills related to design, synthesize and evaluate the performance of CBM & shale wells enabling them to be employed for designing and evaluation well for methane and oil extraction.
83	R164227B	Subsea Engineering		✓		Students are able to demonstrate technical skill of characterizing different subsea structures , modelling and analysis of production.
84	R164227C	Reservoir Modeling & Simulation	✓			Students are able to demonstrate problem solving skills by modelling physical phenomenon using Practical Reservoir Modelling & Simulation (MATLAB Based) in various engineering disciplines.
85	R1642275	Seminar(SIP Report Presentation)		✓		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.
86	R1642276	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.
		Total	24	51	5	


Program Coordinator

Head of the Department

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