PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	192PE1T01	Offshore Drilling.		✓		Students are able to demonstrate technical skill of characterizing different crude oils , modelling and analysis of reservoir for recovery.
2	192PE1T02	Fundamentals of Petroleum Geology and Reservoir Engineering. (NON-PE stream)		✓		Students are able to demonstrate technical skill of characterizing different offshore structures, modelling and analysis of drilling.
3	192PE1T03	Reservoir Stimulation (PE stream)	✓			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 .
4	192PE1T04	Petroleum Well Drilling and Production Engineering. (NON-PE stream)		✓		Students are able to demonstrate technical skill of characterizing different drilling and production methods, modelling and analysis of subsurface exploration.
5	192PE1E01	Advanced Numerical Methods and Applied Statistics		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using Advanced Numerical Methods and Applied Statistics (MATLAB Based) in various engineering disciplines.
6	192PE1E02	CBM and Shale Gas Engineering			✓	Students are able to acquire skills related to design, synthesize and evaluate the performance of CBM and shale wells enabling them to be employed for designing and evaluation well for methane and oil extraction.
7	192PE1E03	Transportation of Oil and Gas		✓		Students are able to demonstrate technical skill of characterizing different crude oils , modelling and analysis of reservoir for recovery.
8	192PE1E04	Advanced Well Logging Techniques		✓		Students are able to demonstrate technical skill of characterizing different lift types , modelling and analysis of fluid behaviours in well testing.

		and Well Testing Analysis				
9	192HS1T01	Research Methodology and IPR		✓		Students can gain knowledge about the methods of study, observation, comparison and experiment along with different types of Intellectual property rights
10	192PE1L01	Advanced Numerical Methods and		✓		Students are able to demonstrate technical skill of characterizing different gas wells , modelling and analysis of fluid behaviours.
11	192PE1L02	Drilling Simulation Laboratory	✓			Students are able to learn the concepts of different drilling properties and analyse them by using software

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
12	192PE2T05	Artificial Lift Techniques		✓		Students are able to demonstrate technical skill of characterizing different lift types , modelling and analysis of fluid behaviours in wells.
13	192PE2T06	Reservoir Modeling and Simulation		✓		Students are able to demonstrate problem solving skills by modelling physical phenomenon using Practical Reservoir Modelling and Simulation (MATLAB Based) in various engineering disciplines.
14	192PE2E05	Advanced EOR Techniques		✓		Students are able to demonstrate technical skill of characterizing different crude oils , modelling and analysis of reservoir for recovery.
15	192PE2E06	Advanced Well Completions		✓		Students are able to demonstrate technical skill of characterizing different wells , modelling and analysis of completions.
16	192PE2E07	Flow Assurance		✓		Students are able to demonstrate technical skill of characterizing different fluid flow properties , modelling and analysis of flow in wells.
17	192PE2E08	Advanced Horizontal Well Technology				
18	192PE2L03	Reservoir Simulation Laboratory	✓	✓		Students are able to acquire skills related to various aspects of different reservoirs enabling them to be employed as Reservoir Engineers.
19	192PE2L04	Flow Assurance Laboratory		✓		Students are able to demonstrate technical skill of characterizing different fluid flow properties , modelling and analysis of flow in wells.
20	192PE2P01	Mini Project with Seminar	✓			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.
21	192MC1A01/ 192MC2A01	English for Research Paper Writing		✓		Students are able to demonstrate communication writing skills to express fluently in writing form of language which is very much essential for the career growth in research

22	192MC1A02/ 192MC2A02	Disaster Management				
23	192MC1A03/ 192MC2A03	Sanskrit for Technical Knowledge				
24	192MC1A04/ 192MC2A04	Value Education				
25	192MC1A05/ 192MC2A05	Constitution of India				
26	192MC1A06/ 192MC2A06	Pedagogy Studies				
27	192MC1A07/ 192MC2A07	Stress Management by Yoga				
28	192MC1A08/ 192MC2A08	Personality Development through Life Enlightenment Skills				
29	192MC1A09/ 192MC2A09	Soft Skills		✓		The students are able to demonstrate Business Communication skills to analze the mistakes in Body language ,formal written communication in the organizations.

III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
30	192ST3O01	Repair & Rehabilitation of Structures	✓			Students Are Able To Acquire Skills Related To Various Aspects Of Studying Detroitation Of Concrete Structures And Rehabilitation Of These Using Advanced Technologies, Like Preservation Of Monuments And Other Detroited Structures Enabling Them To Be Employed In Civil Industry
31	192ST3O02	Green Building Systems		✓		Students Are Able To Demonstrate Technical Skill Of Various Green Principles Related To Buildings In Constructional Activities
32	192ST3O03	Basic Concrete Technology	✓			Students Are Able To Acquire Cognitive Skills Related To Properties Of Concrete, Design And Test The Concrete Useful In Constructional Activities Enabling Them To Be Employed In Constructional Sector.
33	192ST3O04	Basic Foundation Engineering		✓		Students Are Able To Acquire Skills Related To Basic Concepts Of Foundations And Their Importance To Various Structures/Buildings
34	192PD3O01	Renewable Energy Technologies		✓		Students Are Able To Acquire Skills Related To Solar, Wind And Bio-Mass Energy Resources And Conversion Principles And Techniques Of Various Renewable Resources.
35	192PD3O02	Hybrid Electric Vehicles	✓			Students Are Able To Acquire Skills Related To Various Types Hybrid Vehicles Operations And Control Enabling The Students To Get Employed In Ev Sector.
36	192PD3O03	Energy Audit and conservation Management			✓	The Course Focuses On The Loss And Profit Studies And Other Company Maintenance Actives, Creates The Intrust Among The Students To Have Own Company.
37	192PD3O04	Neural Networks and Fuzzy Logic	✓			Students Are Able To Acquire Skills Related To Design, Synthesize And Evaluate The Performance Of Ann Enabling Them To Be Employed For Designing Artificial Intelligence Systems
38	192PD3O05	Industrial Safety			✓	This Course Helps To Enable The Students Learn About Environmental Factors Related To Human, To Enrich The Students With Anthropometric Principles For Work Space Design And To Make The Students To Acquire

						Knowledge On Advance Effects Of Air Pollution, Safety Regulations And Standards.
39	192PD3O06	Composite Materials		✓		Students Are Able To Acquire Skills Related To Synthesis And Characterization Of Various Types Of Composite Materials
40	192TE3O01	Energy Systems	✓			Students Are Able To Acquire Skills Related To The Importance Of Energy Management In The Functional Area And Carrying Out Budgeting And Risk Analysis Of Projects Enabling Them To Be Employed In Energy Sector.
41	192TE3O02	Fuels and Combustion	✓			Students Are Able To Acquire Skills In Analysing Various Fuels And The Effect Of Combustion Of Fuels On Environment Enabling Them To Be Employed In Automotive, Aerospace Sectors.
42	192TE3O03	Green Engineering Technology		✓		-Students Are Able To Acquire Skills In Analyzing The Significance Of Alternative Sources Of Energy, Green Energy Systems.
43	192TE3O04	IC Engines	✓			Students Are Able To Acquire Skills Related To The Engine Performance By Using Turbo Charging And Super Charging And Enabling Them To Be Employed In Automotive Industries.
44	192TE3O05	Automotive Technology	✓			Students Are Able To Acquire Skills Related To The Concepts Of Transmission System, Various Braking Systems And Suspension Systems Enabling Them To Be Employed In Automotive Sector.
45	192ES3O01	Embedded System Design				
46	192ES3O02	Digital System Design				
47	192ES3O03	Programming Languages for				
48	192ES3O04	Sensors & Actuators				
49	192VD3O01	Physical Design Automation	✓			Students Are Able To Acquire Knowledge Related To Partitioning, Placement And Routing Techniques In A Physical Design , Enabling Them To Be Employed For Designing And Manufacturing And Utilisation Of Ics.

50	192VD3O02	VLSI Technology	✓			Students Are Able To Acquire Skills Related To Design, And Processing Technology, Enabling Them To Be Employed For Designing And Manufacturing Of Vlsi Chips
51	192VD3O03	Nano-electronics	✓			Students Are Able To Acquire Knowledge Related To Different Nanoelectronics Building Blocks Such As Carbon Nanotubes, Quantum Dots, Nano Wires Enabling Them To Be Employed In The Field Of Vlsi
52	192CS3O01	Python Programming (CSE)	✓			Students Are Able To Acquire Skills Related To Python Programming, Enabling Them To Be Employed As Software Developers.
53	192CS3O02	Principles of Cyber Security	✓			Students Are Able To Acquire Skills Related To Design, Develop And Evaluate The Performance Of Secure Systems Enabling Them To Be Employed For Designing And Manufacturing Of Secure Communication Equipment.
54	192CS3O03	Internet of Things	✓			Students Are Able To Acquire Skills Related To Internet Of Things And Enabling Them To Be Employed For Iot Sector.
55	192CS3O04	Machine Learning	✓			Students Are Able To Acquire Skills Related To Data Science Algorithms, Enabling Them To Be Employed As Data Scientists.
56	192CS3O05	Artificial Intelligence	✓			Students Are Able To Acquire Skills Related To Design, Synthesize And Evaluate The Performance Of Ann Enabling Them To Be Employed For Designing Artificial Intelligence Systems
57	192CS3O06	Deep Learning	✓			Students Are Able To Acquire Skills Related To Deep Learning, To Analysis Of Different Deep Learning Algorithms And Solving Process In Creative Way.
58	192PE3O01	Introduction to Petroleum Engineering		✓		Students Are Able To Demonstrate Technical Skill Of Characterizing Different Streams , Modelling And Analysis Of Process In Petroleum Industry.
59	192PE3O02	Process Intensification		✓		Students Are Able To Demonstrate Technical Skill Of Characterizing Different Intensifications , Modelling And Analysis Of Process In Petroleum Industry.

60	192PE3O03	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.
61	192PE3O04	Subsea Engineering		✓		Students Are Able To Demonstrate Technical Skill Of Characterizing Different Subsea Structures , Modelling And Analysis Of Production.
62	192PE3O05	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.
63	192PE3O06	HSE 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.
64	192PE3P02	Dissertation-I/ Industrial Project	✓			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.

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
65	192PE4P03	Dissertation-II	✓			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.
	Total		25	23	4	

Program Coordinator

Head of the Department

Head of the Department
Department of Petroleum Technology
Aditya Engineering College (A)
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192ES3O01	Embedded System Design	✓			Students Are Able To Acquire Skills Related To Design, Synthesize And Evaluate The Performance Of Embedded Systems Enabling Them To Be Employed For Designing And Manufacturing Of Electronic Systems
192ES3O02	Digital System Design	✓			Students Are Able To Acquire Skills Related To Design, Synthesize And Evaluate The Performance Of Digital Systems Enabling Them To Be Employed For Designing And Manufacturing Of Electronic Systems
192ES3O03	Programming Languages for	✓			Students Are Able To Acquire Skills Related To Various Programming Languages Enabling Them To Be Employed For Designing And Manufacturing Of Embedded Systems
192ES3O04	Sensors & Actuators	✓			Students Are Able To Acquire Skills Related To Design, Synthesize And Evaluate The Performance Of Sensors And Actuators Enabling Them To Be Employed For Designing And Manufacturing Of Electrical/ Electronic Systems