



ADITYA ENGINEERING COLLEGE

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Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

Program Name : M.Tech. in Petroleum Engineering

Syllabus Revision for the Academic Year 2020-2021

S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	192PE1T01	Offshore Drilling.	0
2	I	192PE1T02	Fundamentals of Petroleum Geology and Reservoir Engineering. (NON-PE stream)	0
3	I	192PE1T03	Reservoir Stimulation (PE stream)	0
4	I	192PE1T04	Petroleum Well Drilling and Production Engineering. (NON-PE stream)	0
5	I	192PE1E01	Advanced Numerical Methods and Applied	0
6	I	192PE1E02	CBM and Shale Gas Engineering	0
7	I	192PE1E03	Transportation of Oil and Gas	0
8	I	192PE1E04	Advanced Well Logging Techniques and Well Testing Analysis	0
9	I	192HS1T01	Research Methodology and IPR	0
10	I	192PE1L01	Advanced Numerical Methods and	0
11	I	192PE1L02	Drilling Simulation Laboratory	0
12	II	192PE2T05	Artificial Lift Techniques	0
13	II	192PE2T06	Reservoir Modeling and Simulation	0
14	II	192PE2E05	Advanced EOR Techniques	0
15	II	192PE2E06	Advanced Well Completions	0
16	II	192PE2E07	Flow Assurance	0
17	II	192PE2E08	Advanced Horizontal Well Technology	0
18	II	192PE2L03	Reservoir Simulation Laboratory	0
19	II	192PE2L04	Flow Assurance Laboratory	0
20	II	192PE2P01	Mini Project with Seminar	0
21	I & II	192MC1A01/192MC2A01	English for Research Paper Writing	0
22	I & II	192MC1A02/192MC2A02	Disaster Management	0
23	I & II	192MC1A03/192MC2A03	Sanskrit for Technical Knowledge	0
24	I & II	192MC1A04/192MC2A04	Value Education	0
25	I & II	192MC1A05/192MC2A05	Constitution of India	0
26	I & II	192MC1A06/192MC2A06	Pedagogy Studies	0

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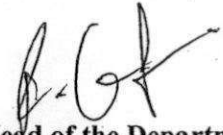
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
27	I & II	192MC1A07/192MC2A07	Stress Management by Yoga	0
28	I & II	192MC1A08/192MC2A08	Personality Development through Life Enlightenment Skills	0
29	I & II	192MC1A09/192MC2A09	Soft Skills	0
30	III	192ST3O01	Repair & Rehabilitation of Structures	100
31	III	192ST3O02	Green Building Systems	100
32	III	192ST3O03	Basic Concrete Technology	100
33	III	192ST3O04	Basic Foundation Engineering	100
34	III	192PD3O01	Renewable Energy Technologies	100
35	III	192PD3O02	Hybrid Electric Vehicles	100
36	III	192PD3O03	Energy Audit and conservation Management	100
37	III	192PD3O04	Neural Networks and Fuzzy Logic	100
38	III	192PD3O05	Industrial Safety	100
39	III	192PD3O06	Composite Materials	100
40	III	192TE3O01	Energy Systems	100
41	III	192TE3O02	Fuels and Combustion	100
42	III	192TE3O03	Green Engineering Technology	100
43	III	192TE3O04	IC Engines	100
44	III	192TE3O05	Automotive Technology	100
45	III	192ES3O01	Embedded System Design	100
46	III	192ES3O02	Digital System Design	100
47	III	192ES3O03	Programming Languages for	100
48	III	192ES3O04	Sensors & Actuators	100
49	III	192VD3O01	Physical Design Automation	100
50	III	192VD3O02	VLSI Technology	100
51	III	192VD3O03	Nano-electronics	100
52	III	192CS3O01	Python Programming (CSE)	100
53	III	192CS3O02	Principles of Cyber Security	100
54	III	192CS3O03	Internet of Things	100
55	III	192CS3O04	Machine Learning	100
56	III	192CS3O05	Artificial Intelligence	100
57	III	192CS3O06	Deep Learning	100
58	III	192PE3O01	Introduction to Petroleum Engineering	100
59	III	192PE3O02	Process Intensification	100

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
60	III	192PE3O03	Fundamentals of Liquefied Natural Gas	100
61	III	192PE3O04	Subsea Engineering	100
62	III	192PE3O05	Geology	100
63	III	192PE3O06	HSE in Petroleum Industry	100
64	III	192PE3P02	Dissertation-I/ Industrial Project	0
65	IV	192PE4P03	Dissertation-II	0

Total number of courses in the academic year 2020-2021	= 65
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2020-2021	= 34
Percentage of syllabus revision carried out in the academic year 2020-2021 = $(34/65)*100$	= 52.30%


Program Coordinator


Head of the Department

Head of the Department
Department of Petroleum Technology
Aditya Engineering College (A)
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Department of Petroleum Technology

Date: 13-10-2020

Minutes of the VI meeting of BOS scheduled on 10-10-2020

The VI meeting of the BOS of PT was held virtually on 10-10-2020 at 9.30 AM through Microsoft Teams. Prof R. Giri Prasad, Chairperson presided over the meeting.

Agenda 6.1: Welcome address by Chair Person.

Dr. R. Giri Prasad, BOS Chairperson invited the distinguished members of BOS to the VI BOS Meeting.

Agenda 6.2: Ratification of minutes of the previous Board of Studies meeting

The BOS members have ratified the points discussed in the previous Board of Studies meeting held on 07-12-2019

Agenda 6.3: Discussion and ratification of the Vision and Mission of the department and Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs) of the Programs under the Department.

The BOS members have ratified the Vision and Mission of the department and Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs) of the Programs under the Department.

Agenda 6.4: Discussion on proposed AR19 B. Tech (PT) IV & V semesters syllabus and finalization of the same.

The BOS members approved the following changes to the proposed AR19 B. Tech (PT) IV & V Semester after incorporating the following suggestions:

- Added a topic on Heat transfer in Porous media under Unit – III to Process Heat Transfer
- Reference text book is added in Process Heat Transfer that is Principles of Heat Transfer in Porous media by M. Kaviany Springer Publication, 1991.
- Interchanged the Unit – III to Unit – I & Unit – I to Unit – III in Petroleum Geology.
- Added a topic on frequency response controllers in Instrumentation and Process control in Unit – V.
- Changed the reference book as a main text book in Instrumentation and Process Control is Chemical Process Control by G. Stephanopoulos.
- Included Well Logging and Mud Logging differences in Unit – I


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- Interchanged the Unit – IV as a Unit – I and named as a Mud logging basics.
- Added Unit – I the topic GTO in Drilling Technology.
- Added Drilling Fluid manuals as a reference book in Drilling Technology.
- Added topic virial equation of state application to Petroleum Fluids in Unit – V in Thermodynamics for Petroleum Engineers
- Text book was added equation of state and PVT analysis by Tarak Ahmed in Thermodynamics for Petroleum Engineers.
- Removed Mud logging methods from Unit – I in Well Engineering.
- Modified to route selection for onshore & offshore in Unit –I and in Unit – V safety and maintenance considerations added in Pipeline Engineering.
- Added text book in Natural Gas Engineering & Processing entitled as Gas Production Engineering by Sanjay Kumar, Gulf Publication, 1987.
- Added and elaborated the units of III, IV & V with Sub topics in Process Intensification.

Agenda 6.5: Discussion on proposed AR20 B. Tech (PT) First Year Program structure and ratification of the same.

The BOS members have ratified the AR20 B. Tech (PT) First Year Program structure.

Agenda 6.6: Discussion on proposed AR20 B. Tech (PT) Program – I & II semesters syllabus and ratification of the same.

The BOS members have ratified the AR20 B. Tech (PT) I & II semesters syllabus.

Agenda 6.7: Discussion on proposed AR19 M. Tech (PE) Program – III & IV semesters Program Structure and Finalization of the same.

The BOS members approved the AR19 M. Tech (PE) Program – III & IV semesters Program Structure.

Agenda 6.8 : Discussion on the courses having focus on employability/entrepreneurship/skill development in the programs of B. Tech (PT) and M. Tech (PE) ratification of the same.


The BOS members have ratified the courses having focus on employability/entrepreneurship/skill development in the programs of B. Tech (PT) and M. Tech (PE).

Agenda 6.9: Discussion on the new courses offered in the B. Tech (PT) and M. Tech (PE) programs and ratification of the same.

The BOS members have ratified the new courses offered in the B. Tech (PT) and M. Tech (PE) programs. The percentage of new courses introduced in the academic year 2020-2021 for B. Tech (PT) is 9.09 % and M. Tech (PE) is 9.23 %. The list of new courses is enclosed as Annexure-I.

Agenda 6.10: Discussion on the B. Tech (PT) and M. Tech (PE) programs in which Choice Based Credit System (CBCS)/elective course system is being implemented and ratification of the same.

The BOS members have ratified the B. Tech (PT) and M. Tech (PE) in which Choice Based Credit System (CBCS)/ elective course system.


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Agenda 6.11: Discussion on the value-added courses offered for students and ratification of the same.

The BOS members approved the list of value added courses offered to students.

Agenda 6.12: Discussion on the percentage of syllabus revision has done in the B. Tech (PT) and M. Tech (PE) program and ratification of the same

The BOS members approved the syllabus revision in B. Tech (PT) and M. Tech (PE) program based on the attainment and the feedback of the course exist survey. The percentage of courses revised in this academic year 2020-2021 for B. Tech (PT) is 13.63% and M. Tech (PE) is 52.3 %. The list of courses revised is enclosed as Annexure-II

Agenda 6.13: Analysis of Results

The BOS Chairperson presented the even and the odd semesters pass percentage for the A.Y.2020-2021 .The BOS members noted the same.

Agenda 6.14: Analysis of Students Feedback & Action Taken Report.

The BOS Chairperson expressed that the student feedback and action taken report process was initiated at end of each semester. The BOS members appreciated the faculty.

Agenda 6.15: Analysis of Stakeholder's Feedback on Curriculum.

The BOS chairperson presented the feedback on curriculum from stake holders. The BOS members noted the same and approved the feedback on curriculum. The Action Taken Report on Stakeholders Feedback is enclosed as Annexure-III.

Agenda 6.16: Any other item with the approval of Chair Person.

BOS members expressed that in VII semester of AR20 B. Tech (PT), the number of courses can be reduced so that, the student can prepare for the competitive exams and placement related activities. As per AR20 two courses maximum of 6 credits of VII semester can be completed by opting them as MOOCs in the earlier semesters in order to reduce the burden on the student in VII.

BOS members expressed that the web links provided at the end of every course must include the content of that particular link so that if the course link changes also people can identify by searching that content.

Agenda 6.17: Scheduling of next Board of Studies meeting.

The next BOS meeting is tentatively scheduled in the month of October 2021.

Agenda 6.18: Vote of Thanks

Dr. R. Giri Prasad, BOS Chairperson presented the Vote of thanks.


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BOS Chairperson
Head of the Department
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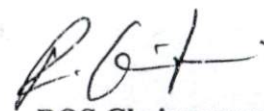
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Annexure-I

List of New Courses in the Academic Year 2020-2021

S. No	Program	Semester	Course Code	Course Name
1.	B. Tech (PT)	II	201ES2L12	Computer Aided Drafting Lab
2.	B. Tech (PT)	III	191MC3A04	Essence of Indian Traditional Knowledge
3.	B. Tech (PT)	IV	191MC4A06	Biology for Engineers
4.	B. Tech (PT)	III	191PT3L02	Geology Lab
5.	B. Tech (PT)	VII	171PT7E12	Petroleum Corrosion Technology
6.	B. Tech (PT)	VIII	171PT8E17	Reliability & Risk Management in Petroleum Operations
7.	B. Tech (PT)	VIII	171PT8E18	Deep Sea Production Systems
8.	B. Tech (PT)	VIII	171PT8O06	Process Intensification in Petroleum Industry
9.	M. Tech (PE)	III	192PE3O01	Introduction to Petroleum Engineering
10.	M. Tech (PE)	III	192PE3O02	Process Intensification
11.	M. Tech (PE)	III	192PE3O03	Fundamentals of Liquefied Natural Gas
12.	M. Tech (PE)	III	192PE3O04	Subsea Engineering
13.	M. Tech (PE)	III	192PE3O05	Geology
14.	M. Tech (PE)	III	192PE3O06	HSE in Petroleum Industry


BOS Chairperson


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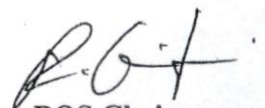
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Annexure-II

List of Courses Revised in the Academic Year 2020-2021

S. No	Program	Semester	Course Code	Course Name
1.	B. Tech (PT)	I	201ES1T05	Engineering Graphics
2.	B. Tech (PT)	III	191PT3T04	Mechanical and Materials Science and Engineering
3.	B. Tech (PT)	IV	191BS4T19	Complex Variables and Statistical Methods
4.	B. Tech (PT)	VII	171PT7T15	Integrated Asset Management and Petroleum Economics


BOS Chairperson

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Annexure III

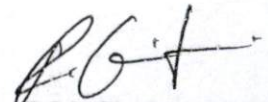
Action Taken Report on Stakeholders Feedback in the Academic Year 2020-2021

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1.	6.14	Institution and Industry interaction is needed for the students.	As per discussions we have signed MoU's with Reliance industries to cater the students to aware of real time applications and recent trends in Industries.
2.	6.4	Include Emerging technologies in the syllabus.	As per discussions we have revised Syllabus, introduced all the emerging technologies are included in syllabus.
3.	6.8	Suggested that students are strong enough in employability skills	Employability skills-I, II, III, IV courses were restructured in the AR 20 Curriculum and simultaneously practicing.
4.	6.14	Suggested to Increase industrial training practically.	Internship is made mandatory and thereby the students should take the industry training and to implement a project as part of Internship.
5.	6.5	Suggested that if coding or programming related course is introduced in the early semesters so that by the end of the graduation the student will be industry ready.	Skill oriented courses, Python Programming are introduced in semesters.
6.	6.4	students need to have an insight in solving real world problems	As per discussions Environmental science and Biology for engineers is included in semesters which gives an introduction and insight to real world problems related to biomedical engineering, environmental sustainability.
7.	6.12	Revise mechanics and material science engineering	As per discussions both subjects revised and consider as one.
8.	6.6	Better to have computer drafting practically.	As per discussions lab was introduced
9.	6.8	Employer Incorporation of more industry oriented courses to improve the student employability and	As per suggestions and discussions introduction of new courses like


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		knowledge of current industrial trends	advanced well logging techniques implemented
10.	6.10	Better to keep Interdisciplinary elective courses in syllabus	Dean academics has noted and kept in syllabus
11.	6.14	It is better to Increase industrial training practically	Internship is made mandatory and thereby the students should take the industry training and to implement a project.
12.	6.10	It is better to introduce more advanced courses	As per suggestions and discussions with dean academics some courses implemented in elective courses.
13.	6.10	It is better to add additional skill oriented programmes to get core jobs.	As per suggestions received CBM and shale gas courses will be initiated


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