

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 Thermal Engineering

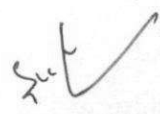
Syllabus Revision for the Academic Year 2018-2019


S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	172TE1T01	Optimization Techniques & Applications	0
2	I	172TE1T02	Advanced Thermodynamics	0
3	I	172TE1T03	Advanced Heat & Mass Transfer	0
4	I	172TE1T04	Advanced Fluid Mechanics	0
5	I	172TE1E01	Gas Dynamics	0
6	I	172TE1E02	Refrigeration & Cryogenics	0
7	I	172TE1E03	Renewable Energy Technologies	0
8	I	172TE1E04	Theory and Technologies of Fuel Cells	0
9	I	172TE1E05	Advanced IC Engines	0
10	I	172TE1E06	Solar Energy Technology	0
11	I	172TE1E07	Turbo Machines	0
12	I	172TE1E08	Alternative Fuels Technologies	0
13	I	172TE1L01	Thermal Engineering Lab	0
14	II	172TE2T05	Fuels, Combustion & Environment	0
15	II	172TE2T06	Energy Management	0
16	II	172TE2T08	Finite Element Method	0
17	II	172TE2T07	Computational Fluid Dynamics	0

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
18	II	172TE2E09	Materials Technology	0
19	II	172TE2E10	Convective Heat Transfer	0
20	II	172TE2E11	Thermal and Nuclear Power Plants	0
21	II	172TE2E12	Advanced Automobile Engineering	20
22	II	172TE2E13	Thermal Measurements and Process Controls	0
23	II	172TE2E14	Cryogenic Engineering	0
24	II	172TE2E15	Jet Propulsion and Rocketry	0
25	II	172TE2E16	Equipment Design for Thermal Systems	20
26	II	172TE2L02	Thermal Systems Design Lab	0
27	III	172TE3C01	Comprehensive Viva-Voce	0
28	III	172TE3R01	Seminar – I	0
29	III		Project Work Part - I	0
30	IV	172TE4C02	Seminar – II	0
31	IV	172TE4P01	Project Work Part - II	0
Total number of courses in the academic year 2018-2019				31
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2018-2019				2
Percentage of syllabus revision carried out in the academic year 2018-2019 = $(2/31)*100$				= 6


Program Coordinator


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Head of the Department
Head of the Department
Department of Mechanical Engineering
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Department of Mechanical Engineering

Date: 14-11-2018

Minutes of the III meeting of BOS scheduled on 12-11-2018

The III meeting of the BOS (Board of Studies) of ME was held on 12-11-2018 at 10:00 AM in the Ajivika Conference Hall, Bill Gates Bhavan, AEC. Prof. A. Saravanan, chairperson presided over the meeting.

Agenda 3.1: Welcome address by Chairperson-BOS

Prof A.Saravanan, BOS chairperson invited the distinguished members of BOS to the III BOS Meeting.

Agenda 3.2: Ratification of minutes of the previous Board of Studies meeting

The members of BOS have ratified the points discussed in the previous Board of Studies meeting held on 30/11/2017.

Agenda 3.3: Discussion on proposed AR17 B.Tech(ME) Program- VI, VII & VIII semesters syllabus and ratification of the same

BOS members approved the syllabus of VI, VII & VIII Semester Syllabus and ratified the same.

After long discussion with the BOS members on the syllabus, the following suggestions are made:

VI Semester

- Suggested to keep a note in Refrigeration & Air conditioning for allowing psychometric charts in external examinations
- Suggested to keep Dynamometers in Metrology & Instrumentation and control systems in any elective of the curriculum.
- Suggested to include grippers in unit -II and proximity sensors in unit -IV of Robotics
- Suggested to include welding symbols in Design for Manufacturing
- Suggested to introduce types of testing and introduction to destructive testing in Non-Destructive Testing
- Suggested to replace Beam Machining in unit V of unconventional machining process by Radiant Energy Machining.

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- Suggested to verify size of the accumulators and intensifiers in unit-III of Industrial Hydraulics & Pneumatics.
- Suggested to include boring and internal threading operations in drilling on lathe experiment and delete gear cutting on slotter in augmented experiments
- Suggested to replace Composite slab by Composite material in second experiment of Heat Transfer Lab.

VII Semester

- Suggested to remove Fluid flow problems, 2D Heat and Structural problems in Finite Element Methods.
- Suggested to replace heading of unit-II by Diesel Power Plants & Gas Power Plants.
- Suggested to remove Jet Propulsion in Gas dynamics and Jet Propulsion
- Suggested to remove induction motors in fault diagnostics, thermal images in thermography of condition monitoring
- Suggested to keep material handling in FMS in place of material transportation.
- Suggested to replace NC Lathe by CNC Lathe.

VIII Semester

- Suggested to remove Basic Design Methods of Heat Exchangers in Unit-I, shell and tube heat exchangers in Unit-II of Thermal Equipment Design
- The members of BOS discussed and ratified the list of new courses. The percentage of courses introduced in the academic year 2018-19 for B.Tech (ME) Program is 6.09%. The List of courses introduced is enclosed as Annexure-I.
- The members of BOS discussed and ratified the revision of syllabus. The percentage of courses revised in the academic year 2018-19 for B.Tech (ME) Program is 16.25% and for M.Tech (TE) Program is 6%. The List of courses revised is enclosed as Annexure-II.

Open Electives offered by Mechanical Engineering:

1. Computer Science Engineering and Information Technology
 - I. Robotics
 - II. Nano technology and its applications
 - III. Operations Research
- Suggested to add robot programming in Unit-II and remove programming languages and software packages in Unit-V of Robotics.
2. Electronics and Communications Engineering
 - I. Green Fuel Technologies
 - II. Robotics
 - III. Alternative Energy Sources


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- Suggested to add robot programming in Unit-II and remove programming languages and software packages in Unit-V of Robotics.
3. Civil Engineering
 - I. Green Fuel Technologies
 - II. Green Energy Systems
 - No suggestions are made for above subjects.
 4. Agricultural Engineering
 - I. Computational Fluid Dynamics
 - II. Industrial Engineering and Management
 - III. Operation Research
 - IV. Production technology for Agricultural Machinery
 - Suggested to remove equations governing Fluid Flow and heat transfer of Unit-II, Finite difference applications in Conduction and Convection of CFD.
 - Suggested to remove Total Quality Management in Industrial Engineering and management
 - Suggested to remove Mechatronics System in Unit-I and add some sub topics in PLCs in Unit -IV of Mechatronics
 - Suggested to follow JNTU Syllabus of Production Technology for Agricultural Machinery
 5. Petroleum Technology
 1. Alternate Energy Source for Automobiles
 2. Computational Fluid Dynamics
 - Suggested to remove equations governing Fluid Flow and heat transfer of Unit-II, Finite difference applications in Conduction and Convection of CFD.
 6. Electrical and Electronics Engineering:
 1. Robotics
 2. Optimization Techniques
 - Suggested to add robot programming in Unit-II and remove programming languages and software packages in Unit-V of Robotics.
 7. Mining Engineering
 1. Robotics
 2. Mechanical Engineering Lab
 - Suggested to add robot programming in Unit-II and remove programming languages and software packages in Unit-V of Robotics which helps the student to get more placement opportunities.
 - Suggested to remove Study of Boilers and Moment of Inertia of Fly Wheel Experiments in Mechanical Engineering Lab.

Agenda 3.4: Discussion on the proposed AR19 B.Tech (ME) Program&AR19 M.Tech (TE) Program as per the guidelines of APSCHE&AICTE

- The BOS members approved the proposed AR19 B.Tech (ME) Program&AR19 M.Tech Program as per the guidelines of APSCHE&AICTE

Agenda 3.5: Discussion on MOOCS Courses in the curriculum and ratification of the same.

- BOS members ratified the courses MOOCS-I in V Semester and MOOCS-II in VI Semester in the curriculum.

Agenda 3.6: Discussion on AICTE Approved Model Curriculum on 2018-2019 Academic year and ratification of the same.

BOS members suggested to discuss the Model Curriculum of AICTE in the next schedule BOS meeting.

Agenda 3.7: Analysis of student's feedback & Action taken Report

BOS Chairperson expressed that the student feedback & action taken report process was initiated at end of each semester.

Agenda 3.8: Analysis of stakeholder's feedback on Curriculum

BOS Chairperson presented the analysis report of stakeholder's feedback on Curriculum. The BOS members noted the same and the action taken report is enclosed in Annexure III.

Agenda 3.9: Discussion on Analysis of results

The BOS chairperson presented odd semester pass percentage for the A.Y.2018-2019. The BOS members noted the same.

Agenda 3.10: Any other item with the approval of Chairman.

NIL


Agenda 3.11: Scheduling of next Board of Studies meeting.

The next BOS meeting is tentatively scheduled in the month of July 2019.

Agenda 3.12: Vote of Thanks

Prof A. Saravanan, BOS Chairperson presented the Vote of thanks.


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Annexure-I

List of New Courses in the Academic Year 2018-19

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (ME)	III	171HS3A10	Employability Skills – I
2	B. Tech (ME)	IV	171HS4A11	Employability Skills – II
3	B. Tech (ME)	V	R1631036	Theory of Machines Lab
4	B. Tech (ME)	VI	R163203A	Entrepreneurship
5	B. Tech (ME)	VI	R1632038	Computational Fluid Dynamics Lab


BOS Chairperson

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Annexure-II

List of Courses Revised in the Academic Year 2018-19

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (ME)	III	171ES3T11	Mechanics of Solids
2	B. Tech (ME)	III	171ES3L05	Basic Electrical and Electronics Engineering Lab
3	B. Tech (ME)	III	171ES3L06	Mechanics of Solids and Metallurgy Lab
4	B. Tech (ME)	IV	171ME4T05	Design of Machine Members – I
5	B. Tech (ME)	IV	171ME4T06	Industrial Engineering and Management
6	B. Tech (ME)	IV	171ME4T07	Machine Drawing
7	B. Tech (ME)	IV	171ME4L01	Production Technology Lab
8	B. Tech (ME)	IV	171ES4L07	Fluid Mechanics & Hydraulic Machinery Lab
9	M. Tech (TE)	II	172TE2E12	Advanced Automobile Engineering
10	M. Tech (TE)	II	172TE2E16	Equipment Design for Thermal Systems

BOS Chairperson

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Annexure III

Action Taken Report on Stakeholders Feedback in the Academic Year 2018-19

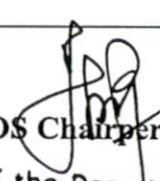
S. No.	Agenda Item No.	Stakeholders Recommended	Action Taken
1	3.13	Introduce employability skills as a part of curriculum so that students can be industry ready.	As suggested from the employer, employability skills has be implemented in the upcoming semesters.
2	3.8	Better to add GD & T related to Machine Drawing so that student may have knowledge on production symbols.	Introduced limits, fits, tolerances to Machine Drawing subject.
3	3.3	Better to introduce advanced material testing experiments so that student may have good knowledge on materials and its properties.	As per suggestions and discussions made with the professionals and dean academics, fatigue testing has be added to the material science lab.
4	3.3	It has be an added advantage if student had knowledge on advanced testing and materials.	As per the suggestions received, Non – Destructive Evaluation and Nano Technology has be introduced.
5	3.8	It is better to know how the operations are managed in the industries.	As per the suggestions received, Industry Engineering & Management has be introduced to the curriculum.
6	3.8	Please reduce the DMM syllabus.	As per suggestions and discussions made with dean academics, necessary action has be implemented.

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7	3.8	Should be aware of the latest drafting and engineering techniques.	According to the suggestions, and changes from time to time, Engineering drawing subject name can be revised.
8	3.3	Students must have knowledge on the fuels and its types.	According to the suggestions, experiment on the fuels has be added to the lab when discussion made with the experts and professors.
9	3.8	Better to introduce additional industry oriented courses to enhance the student skill.	As per the suggestions, value added courses has be introduced to have skill oriented training.
10	3.3	As more topics included in the design of machine members – 1, it is better to reduce the topics	As per the feedback received and discussions made, revision of the subject has be initiated.
11	3.7	Please remove dress code to the last semester students.	As per the suggestion received, necessary action has be implemented.
12	3.7	Better to provide additional training on subjects to beat the competitive exams.	As per suggestion received and discussions made with dean academics, GATE classes has be introduced.
13	3.8	Student participation is required for the project to be completed successfully.	As per suggestions, projects are encouraged for students and various industry visits will be planned.
14		Better to provide more electives.	As per the suggestions, more PE's and OE's will be introduced.
15		It is better to change the question paper pattern in the semester examination.	As suggested and discussion with experts, to overcome the deficiency new question paper will be formulated for the final semester examination.
16	3.7	Better to provide more technical sessions, webinars on advanced topics.	As suggested, industrial orientation sessions from industry experts and global engineers will be initiated.


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