



# ADITYA ENGINEERING COLLEGE

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Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956

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

Program Name : M.Tech. in Power Electronics and Drives

## Syllabus Revision for the Academic Year 2018-2019

S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	172PD1T01	Electrical Machine Modeling & Analysis	0
2	I	172PD1T02	Analysis of Power Electronic Converters	0
3	I	172PD1T03	Power Electronic Control of DC Drives	0
4	I	172PD1T04	Flexible AC Transmission Systems	0
5	I	172PD1E01	Modern Control Theory	0
6	I	172PD1E02	Power Quality	0
7	I	172PD1E03	Optimization Techniques	0
8	I	172PD1E04	Energy Auditing, Conservation & Management	0
9	I	172PD1E05	Artificial Intelligence Techniques	0
10	I	172PD1E06	HVDC Transmission	0
11	I	172PD1L01	Simulation Lab	0
12	II	172PD2T05	Switched Mode Power Conversion	0
13	II	172PD2T06	Power Electronics Control of AC Drives	0
14	II	172PD2T07	Digital Controllers	0
15	II	172PD2T08	Custom Power Devices	0
16	II	172PD2E07	Renewable Energy Systems	0
17	II	172PD2E08	Reactive Power Compensation & Management	25
18	II	172PD2E09	Electrical Distribution System	20


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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
19	II	172PD2E10	Smart Grid Technologies	20
20	II	172PD2E11	Special Machines	0
21	II	172PD2E12	Programmable Logic Controllers & Applications	20
22	II	172PD2L02	Power Converters & Drives Lab	0
23	III	172PD3C01	Comprehensive Viva-Voce	0
24	III	172PD3R01	Seminar – I	0
25	III	---	Project Work Part - I	0
26	IV	172PD4R02	Seminar – II	0
27	IV	172PD4P01	Project Work Part - II	0

Total number of courses in the academic year 2018-2019	= 27
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2018-2019	= 4
Percentage of syllabus revision carried out in the academic year 2018-2019 = $(4/27)*100$	= 14.81%

  
Program Coordinator

  
Head of the Department  
Head of The Department  
Dept. Of Electrical & Electronics Engineering  
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## Department of Electrical and Electronics Engineering

Date: 12-11-2018

### Minutes of the III meeting of BOS scheduled on 10-11-2018

The III meeting of the BOS of EEE was held on 10-11-2018 at 10.00 AM, Ajivika Conference Hall, Bill Gates Bhavan. Dr. V. Srinivasa Rao, Chairperson presided over the meeting.

#### **Agenda 3.1: Welcome address by Chairperson**

Dr. V. Srinivasa Rao, BOS Chairperson invited the distinguished members of BOS to the VI BOS Meeting.

#### **Agenda 3.2: 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 12/11/2017.

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

The BOS members have discussed about course content in VI, VII & VIII semesters Electrical and Electronics Engineering Department subjects, suggested some minor modifications and Ratified

The following is the approved list

##### **VI Semester**

1. Power Electronics Controllers & Drives (171EE6T14)
2. Power System Analysis (171EE6T15)
3. Electrical Distribution System (171EE6E05)
4. Distributed Generation & Microgrid (171EE6E06)
5. Advanced Control Systems (171EE6E07)
6. PLC & Applications (171EE6E08)
7. Instrumentation (171EE6E09)
8. Power Electronics Lab (171EE6L08)

##### **VII Semester**

1. Utilisation of Electrical Energy (171EE7T18)
2. Power Systems Operation & Control (171EE7T20)
3. Switch Gear & Protection (171EE7T21)
4. Special Electrical Machines (171EE7E13)
5. High Voltage Engineering (171EE7E14)

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6. Electric Power Quality (171EE7E15)
7. EHVAC Transmission (171EE7E16)
8. Power Systems Simulation Lab (171EE7L09)

#### VIII Semester

1. HVDC Transmission (171EE8E17)
  2. Flexible AC Transmission System (171EE8E18)
  3. Power System Reforms (171EE8E19)
  4. Digital Control Systems (171EE8E20)
  5. Energy Audit, Conservation & Management (171EE8O02)
  6. Vehicular Electric Power Systems (171EE8O06)
- Course content for Non Conventional Energy Sources (171PT8O02) for Petroleum Technology Engineering Department and finalized as per the BOS members suggestion.
  - Course content for Electrical Safety Management (171ME8O02) for Mechanical Engineering Department and finalized as per BOS members suggestion.
  - Course content for Renewable Energy Sources (17CS8O09) for Computer Science Engineering Department and finalized as per BOS members suggestion.
  - Course content for Digital Control Systems (171EE8E20) for Agriculture Engineering Department and finalized as per BOS members suggestion.
  - The committee has recommended the department to explore possibility of offering a minor degree students may be awarded a minor degree in another discipline if they successfully complete 15 additional credits in the discipline they would like to get a minor degree subject to university approval.
  - The BOS members noted the actions that are initiated by the department to enrich the student skills.
  - The BOS members discussed about the new courses introduced, the percentage of new courses during the academic year 2018-19 for B. Tech (EEE) is 8.13%. The list of new courses enclosed below as Annexure-I.
  - The BOS members discussed about the revised courses, the percentage of courses revised in this academic year 2018-2019 for B. Tech (EEE) is 17.44% and M. Tech (PED) is 14.81%. The list of courses revised is enclosed as Annexure-II.



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

The BOS members have discussed the proposed course structure AR19 of B. Tech (EEE) and AR19 M. Tech (PED) based on the AICTE modal curriculum, suggested some minor modifications and ratified.

**Agenda 3.5: Analysis of Students Feedback & Action Taken Report**

BOS Chairperson expressed that the student feedback & action taken report process initiated at the end of each semester. The BOS members noted the same.

**Agenda 3.6: Analysis of Stakeholder's Feedback on Curriculum.**

The 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 as Annexure-III.

**Agenda 3.7: Analysis of Results**

The BOS Chairperson presented the odd and even semesters pass percentage for the A.Y.2018-2019. The BOS members noted the same.

**Agenda 3.8: Any other item/s.**

The following points were discussed.

- Dr. D. Suryanarayana expressed to include Energy Auditor certificate by Bureau of Energy Efficiency (BEE) as equivalent to Energy Audit, Conservation & Management course.
- BOS Members discussed about the elective courses, Dr. R. Srinivasa Rao suggested to include more numerical in the professional courses and elective courses based on the feasibility.
- Dr. Sivakumar K suggested to form list of elective courses as per specialization tracks which will enhance the knowledge of the student on a specific specialisation.
- Sri Sunny John Vergheese expressed that the students should be encouraged to go for industrial training.
- Mr. P. S. M. K. Reddy suggested to have guest lectures on recent technologies.


**Agenda 3.9: Scheduling of next Board of Studies meeting.**

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

**Agenda 3.10: Vote of Thanks**

Dr. V. Srinivasa Rao, BOS Chairperson presented the Vote of Thanks.

  
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**BOS Chairperson**  
Head of The Department  
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## Department of Electrical and Electronics Engineering

### Annexure-I

### List of New Courses in the Academic Year 2018-2019

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	III	171HS3A10	Employability Skills - I
2	B. Tech (EEE)	IV	171HS4A11	Employability Skills - II
3	B. Tech (EEE)	VI	R1632024	Data Structures
4	B. Tech (EEE)	VI	R163202D	Robotics
5	B. Tech (EEE)	VI	R163202E	Neural Networks & Fuzzy Logic
6	B. Tech (EEE)	VI	R1632028	Data Structures Laboratory
7	B. Tech (EEE)	VI	R1632029	Professional Ethics & Human Values

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## Department of Electrical and Electronics Engineering

### Annexure-II

### List of Courses Revised in the Academic Year 2018-2019

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	III	171EE3T02	Electrical Circuit Analysis - II
2	B. Tech (EEE)	III	171ES3T10	Thermal and Hydro Prime Movers
3	B. Tech (EEE)	IV	171EE4L03	Electrical Machines - I Lab
4	B. Tech (EEE)	V	R1631024	Pulse & Digital Circuits
5	B. Tech (EEE)	V	R1631025	Power Electronics
6	B. Tech (EEE)	V	R1631026	Electrical Machines-II Laboratory
7	B. Tech (EEE)	VI	R1632023	Micro Processors and Micro controllers
8	B. Tech (EEE)	VI	R1632026	Power Electronics Laboratory
9	M. Tech (PED)	II	172PD2E08	Reactive Power Compensation & Management
10	M. Tech (PED)	II	172PD2E09	Electrical Distribution System
11	M. Tech (PED)	II	172PD2E10	Smart Grid Technologies
12	M. Tech (PED)	II	172PD2E12	Programmable Logic Controllers & Applications

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## Department of Electrical and Electronics Engineering

### Annexure-III

## Action Taken Report on Stakeholders Feedback in the Academic Year 2018-2019

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1.	3.3	Software programme based courses are to be introduced before VI semester. Hence, increases the opportunities of EEE students in software industry	As per the employer feedback, new software programming courses like Internet of Things, Cyber security and industry oriented courses like Internship, and programing oriented major projects will be included in the AR17 and AR19 regulations.
2.	3.4	Inclusion and coverage of GATE oriented syllabus for the EEE students that helps in attaining PSUs.	The major portion of GATE questions will be from core subjects like Power Systems and Electrical Machines. GATE oriented classes will be conducted in the above mentioned subjects.
3.	3.3	Courses on conservation of management of energy will be added to the curriculum and students should have the basic idea about energy management.	A new course named "Energy Audit, Conservation & Management" will be included in the curriculum.
4.	3.3	Application oriented software courses and skill oriented courses are to be conducted among the students.	Considering the employer feedback, necessary actions are to be taken for the students to conduct the application and skill oriented software courses
5.	3.3	The need for technical and social initiatives is necessary and enormous. If a pertinent course is added to the curriculum, students will be beneficial.	According to Alumni Feedback, a new course named "Socially Relevant Project" will be offered for the V semester students.
6.	3.8	Students are to be encouraged for industrial training, that shares the knowledge of industry in real life.	Necessary measures will be made among the students and they will be encouraged to take active part in it.
7.	3.8	Guest lectures are to be conducted among the students	Based on alumni feedback, the department is going to conduct guest

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			lectures from the reputed institutions and industry sector.
8.	3.3	The need for technical and social initiatives is necessary and enormous.	Taking alumni feedback into consideration, students are encouraged to do the projects that are useful in solving real life problems.
9.	3.3	The software and hardware knowledge must be balanced by introducing more courses related to simulation and demo oriented expert talks.	A skill oriented course named "Design of Electrical Circuits using Engineering Software Tools" will be presented in AR17, AR19 curriculum.
10.	3.4	Advanced discipline courses need to be introduced in the curriculum for fast learners.	Honors programs are introduced for the fast learners in AR19 curriculum.
11.	3.3	Modifications in the course structure of V, VI, VII and VIII semesters is suggested.	Considering Teacher feedback, the modifications of semester V, VI, VII and VIII semesters will be made.
12.	3.3	Faculties have suggested some minor changes in the proposed course structure of AR19 M.Tech	Based on the suggestions given by the faculty, changes in the course structure of AR19 M.Tech will be modified.
13.	3.8	Include the new courses that shares information and generates the power in a eco-friendly manner.	As per the students suggestions, new courses such as Non-Conventional energy sources, Renewable energy sources, will be included in the AR17 curriculum
14.	3.4	Coding courses are to be included in the curriculum so that students can gain the knowledge of coding.	New value added courses like "Simulation of Electrical Circuits using MATLAB, PCB Design Using ORCAD Capture" will be added in the curriculum.
15.	3.8	Students are requested to from the list of elective courses as per specialization tracks.	Considering student's suggestion, the list of elective courses as per specialization tracks will be added in the curriculum.
16.	3.8	Students are encouraged to know the coding that helps in gaining jobs	As per the students/parents suggestions, EEE related software course like MATLAB will be thought to the students in Lab sessions.

  
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