

# ADITYA ENGINEERING COLLEGE

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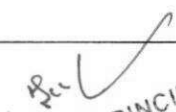
Program Name : B.Tech. in Electrical and Electronics Engineering

## Syllabus Revision for the Academic Year 2019-2020

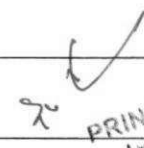
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	191HS1T01	Communicative English	90
2	I	191BS1T01	Differential Equations and Linear Algebra	20
3	I	191BS1T04	Engineering Chemistry	80
4	I	191ES1T01	Programming for Problem Solving Using C	10
5	I	191HS1L01	Communicative English Lab-I	5
6	I	191BS1L02	Engineering Chemistry Lab	60
7	I	191ES1L01	Programming for Problem Solving Using C Lab	10
8	I	191ES1L02	Basic Engineering workshop	50
9	I	191MC1A01	Environmental Science	25
10	I	191MC1A02	Constitution of India	100
11	II	191BS2T05	Partial Differential Equations and Vector Calculus	40
12	II	191BS2T07	Applied Physics	40
13	II	191ES2T05	Data Structures Through C	100
14	II	191EE2T01	Electrical Circuits Analysis -I	15
15	II	191ES2T06	Basic Civil and Mechanical Engineering	100
16	II	191HS2L02	Communicative English Lab-II	0
17	II	191BS2L05	Applied Physics Lab	40
18	II	191ES2L05	Basic Civil and Mechanical Engineering Lab	100

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
19	II	19IES2L06	Electrical Engineering Workshop	100
20	II	19IPR2P01	Engineering Exploration Project	100
21	III	171EE3T02	Electrical Circuit Analysis - II	0
22	III	171EE3T03	Electrical Machines – I	0
23	III	171EE3T04	Basic Electronics Devices and Circuits	0
24	III	171EE3T05	Electromagnetic Fields	0
25	III	171ES3T10	Thermal and Hydro Prime Movers	0
26	III	171HS3T04	Managerial Economics and Financial Analysis	0
27	III	171ES3L04	Thermal and Hydro Prime Movers Lab	0
28	III	171EE3L01	Electrical Circuits Lab	0
29	III	171HS3A09	Professional Ethics and Human Values	0
30	III	171HS3A10	Employability Skills - I	0
31	IV	171EE4T06	Electrical Measurements	0
32	IV	171EE4T07	Electrical Machines - II	0
33	IV	171ES4T24	Digital Circuits and Logic Design	0
34	IV	171EE4T08	Control Systems	0
35	IV	171EE4T09	Power Systems – I	0
36	IV	171HS4T05	Management Science	0
37	IV	171EE4L02	Electronic Devices and Circuits Lab	0
38	IV	171EE4L03	Electrical Machines - I Lab	0
39	IV	171HS4A11	Employability Skills - II	0
40	V	171EE5T10	Power Systems – II	10

  
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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
41	V	171EE5T11	Power Electronics	15
42	V	171EE5T12	Pulse and Digital Circuits	15
43	V	171EE5T13	Signals and Systems	25
44	V	171EE5E01	Renewable Energy Sources	10
45	V	171EE5E02	Modeling and Analysis of Electrical Machines	0
46	V	171EE5E03	Electrical Safety	100
47	V	171HS5T08	Intellectual Property Rights and Patents	5
48	V	171HS5T06	Employability Skills - III	100
49	V	171EE5L04	Electrical Measurements Lab	0
50	V	171EE5L05	Electrical Machines - II Lab	10
51	V	171EE5L06	Control Systems Lab	20
52	V	171EE5S01	MOOCs - I	100
53	VI	171EE6T14	Power Electronic Controllers and Drives	5
54	VI	171EE6T15	Power System Analysis	10
55	VI	171EE6T16	Micro Processor and Micro Controllers	30
56	VI	171EE6T17	Data Structures	15
57	VI	171EE6E04	Computer Architecture	100
58	VI	171EE6E05	Electrical Distribution Systems	0
59	VI	171EE6E06	Distributed Generation and Microgrid	100
60	VI	171EE6E07	Advanced Control Systems	0
61	VI	171EE6E08	PLC and Applications	0
62	VI	171EE6E09	Instrumentation	0


  
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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
64	VI	171HS6T07	Employability Skills - IV	100
65	VI	171EE6L07	Data Structures Lab	0
66	VI	171EE6L08	Power Electronics Lab	20
67	VI	171EE6S02	MOOCs - II	100
68	VII	R1641021	Utilization of Electrical Energy	0
69	VII	R1641022	Linear IC Applications	0
70	VII	R1641023	Power System Operation & Control	15
71	VII	R1641024	Switchgear and Protection	0
72	VII	R164102A	Electrical Machine Modeling and Analysis	100
73	VII	R164102B	Advanced Control Systems	0
74	VII	R164102C	Programmable Logic Controllers and Applications	100
75	VII	R164102D	Instrumentation	0
76	VII	R164102E	Optimization Techniques	30
77	VII	R164102F	Electric Power Quality	0
78	VII	R164102G	Special Electrical Machines	0
79	VII	R1641027	Electrical Simulation Laboratory	0
80	VII	R1641028	Power Systems lab	0
81	VIII	R1642021	Digital Control Systems	0
82	VIII	R1642022	HVDC Transmission	100
83	VIII	R1642023	Electrical Distribution Systems	0
84	VIII	R164202A	High Voltage Engineering	0
85	VIII	R164202B	Flexible Alternating Current Transmission Systems	0

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
87	VIII	R1642025	Seminar	0
88	VIII	R1642026	Project	0
Total number of courses in the academic year 2019-2020				= 88
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2019-2020				= 30
Percentage of syllabus revision carried out in the academic year 2019-2020 = $(30/88)*100$				= 34.09%

  
Program Coordinator

  
Head of the Department  
Head of The Department  
Dept. Of Electrical & Electronics Engineering  
Aditya Engineering College (AG)

  
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## Department of Electrical and Electronics Engineering

Date: 22-07-2019

### Minutes of the IV meeting of BOS scheduled on 20-07-2019

The IV meeting of the BOS of EEE was held on 20-07-2019 at 10.00 AM, Ajivika Conference Hall, Bill Gates Bhavan. Dr. V. Srinivasa Rao, Chairperson presided over the meeting.

#### **Agenda 4.1: Welcome address by Chairperson**

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

#### **Agenda 4.2: 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 10/11/2018.

#### **Agenda 4.3: 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.**

Members of BOS ratified the Vision and Mission of the department, PEOs, POs and PSOs of the Programs under the Department.

#### **Agenda 4.4: Discussion on proposed AR19 B.Tech (EEE) program structure, I & II semesters syllabus and ratification of the same.**

The BOS members approved the AR19 B.Tech (EEE) course structure after incorporating the following changes:

- The BOS members have discussed the course structure and content of four year AR19 B. Tech (E.E.E) program. The committee has suggested few minor modifications in the course content and list of electives to be offered and has approved the same.
- As per suggestion from BOS members, Different MOOCs courses can be opted such that the total duration of all opted courses is minimum 12 weeks.
- BOS members suggested, the course "Socially Relevant Project" offered in V semester is to be supervised and evaluated by the NSS coordinator.
- BOS members have discussed various courses to be offered as electives in the four year program.
- BOS members have discussed the syllabus of Constitution of India course to be offered in I semester.

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**Agenda 4.5: Discussion on proposed AR19 M. Tech (PED) program structure, I & II semesters syllabus and ratification of the same.**

BOS members approved AR 19 M. Tech (PED) program structure, I & II semesters syllabus and ratified the same.

**Agenda 4.6: Discussion on the courses having focus on employability / entrepreneurship /skill development in B. Tech (EEE) and M. Tech (PED) programs and ratification of the same.**

The members of BOS ratified the courses having focus on employability/entrepreneurship/skill development in the B. Tech (EEE) & M. Tech (PED) programs.

**Agenda 4.7: Discussion on the new courses offered in the B. Tech (EEE) and M. Tech (PED) programs and ratification of the same**

Members of BOS noted the percentage of new courses offered for the academic year 2019-2020 in the B. Tech (EEE) is 18.18% & M. Tech (PED) is 47.22%. The list of new courses is enclosed as Annexure-I.

**Agenda 4.8: Discussion on the B. Tech (EEE) and M. Tech (PED) Programs in which Choice Based Credit System (CBCS)/elective course system is being implemented and ratification of the same.**

Members of BOS ratified the choice based credit systems (CBCS)/elective course system that is being implemented in B. Tech (EEE) and M. Tech (PED) programs.

**Agenda 4.9: Discussion on the percentage of syllabus revision done in the B. Tech (EEE) & M. Tech (PED) programs and ratification of the same.**

The syllabus revision was done in the B. Tech (EEE) & M. Tech (PED) programs based on the stakeholders feedback on curriculum. The BOS members have approved all the percentage of syllabus revisions for the academic year 2019-2020 in B. Tech (EEE) is 34.09% and M. Tech (PED) is 66.66%. The list of courses revised is enclosed as Annexure-II.

**Agenda 4.10: Discussion on the value-added courses offered for students and ratification of the same.**

Members of BOS ratified the value- added courses identified for the students to be offered and suggested to include topics related to thrust areas

**Agenda 4.11: Analysis of Results**

The BOS Chairperson presented the odd and even semesters pass percentage for the A.Y.2019-2020. The BOS members noted the same.

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#### **Agenda 4.12: 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 4.13: 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 4.14: Any other item/s**

1. In II semester engineering graphics & design course can be replaced by python/ data structures.
2. In third semester python programming and lab is proposed.
3. In DC machines reduce the syllabus to fundamentals and include the syllabus of induction motors In EM-I paper itself.
4. In Basic electrical and electronics engineering, the overall syllabus should be reduced, in transformers remove the topic voltage regulation.
5. In V semester Electrical machine modeling course is there for both B. Tech and M. Tech. Suggested to combine the student for having the same lecture.

#### **Agenda 4.15: Scheduling of the next BOS meeting.**


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

#### **Agenda 4.16: Vote of Thanks**

- Dr. V. Srinivasa Rao, BOS Chairperson presented the vote of thanks.

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**BOS Chairperson**  
Head of The Department  
Dept: Of Electrical & Electronics Engineering  
Aditya Engineering College (A9)





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## Department of Electrical and Electronics Engineering

### Annexure-I

### List of New Courses in the Academic Year 2019-2020

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	I	191MC1A02	Constitution of India
2	B. Tech (EEE)	II	191ES2T05	Data Structures Through C
3	B. Tech (EEE)	II	191ES2T06	Basic Civil and Mechanical Engineering
4	B. Tech (EEE)	II	191ES2L05	Basic Civil and Mechanical Engineering Lab
5	B. Tech (EEE)	II	191ES2L06	Electrical Engineering Workshop
6	B. Tech (EEE)	II	191PR2P01	Engineering Exploration Project
7	B. Tech (EEE)	V	171HS5T06	Employability Skills - III
8	B. Tech (EEE)	V	171EE5S01	MOOCs - I
9	B. Tech (EEE)	V	171EE5E03	Electrical Safety
10	B. Tech (EEE)	VI	171EE6E04	Computer Architecture
11	B. Tech (EEE)	VI	171EE6E06	Distributed Generation and Microgrid
12	B. Tech (EEE)	VI	171EE6S02	MOOCs - II
13	B. Tech (EEE)	VI	171HS6T07	Employability Skills - IV
14	B. Tech (EEE)	VII	R164102A	Electrical Machine Modeling and Analysis
15	B. Tech (EEE)	VII	R164102C	Programmable Logic Controllers and Applications
16	B. Tech (EEE)	VIII	R1642022	HVDC Transmission
17	M. Tech (PED)	I	192PD1L01	Power Electronics Simulation Laboratory
18	M. Tech (PED)	I	192HS1T01	Research methodology and IPR
19	M. Tech (PED)	I	192MC1A01	English for Research Paper Writing
20	M. Tech (PED)	I	192MC1A02	Disaster Management
21	M. Tech (PED)	I	192MC1A03	Sanskrit for Technical Knowledge
22	M. Tech (PED)	I	192MC1A04	Value Education
23	M. Tech (PED)	I	192MC1A05	Constitution of India
24	M. Tech (PED)	I	192MC1A06	Pedagogy Studies
25	M. Tech (PED)	I	192MC1A07	Stress Management by Yoga
26	M. Tech (PED)	I	192MC1A08	Personality Development through Life Enlightenment Skills
27	M. Tech (PED)	I	192MC1A09	Soft Skills
28	M. Tech (PED)	II	192PD2L03	Electric Drives Simulation Laboratory
29	M. Tech (PED)	II	192PD2E07	Control & Integration of Renewable Energy Systems
30	M. Tech (PED)	II	192PD2E08	Hybrid Electric Vehicles

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31	M. Tech (PED)	II	192PD2E09	Digital Control Systems
32	M. Tech (PED)	II	192PD2E10	Advanced Digital Signal Processing
33	M. Tech (PED)	II	192PD2E11	Applications of Power Converters

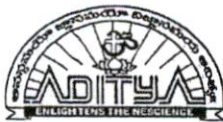
  
**BOS Chairperson**

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

### Annexure-II

#### List of Courses Revised in the Academic Year 2019-2020

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	I	191HS1T01	Communicative English
2	B. Tech (EEE)	I	191BS1T01	Differential Equations and Linear Algebra
3	B. Tech (EEE)	I	191BS1T04	Engineering Chemistry
4	B. Tech (EEE)	I	191BS1L02	Engineering Chemistry Lab
5	B. Tech (EEE)	I	191MC1A01	Environmental Science
6	B. Tech (EEE)	I	191ES1L02	Basic Engineering workshop
7	B. Tech (EEE)	II	191BS2T05	Partial Differential Equations and Vector Calculus
8	B. Tech (EEE)	II	191BS2T07	Applied Physics
9	B. Tech (EEE)	II	191BS2L05	Applied Physics Lab
10	B. Tech (EEE)	V	171EE5T13	Signals and Systems
11	B. Tech (EEE)	V	171EE5L06	Control Systems Lab
12	B. Tech (EEE)	VI	171EE6T16	Micro Processor and Micro Controllers
13	B. Tech (EEE)	VI	171EE6L08	Power Electronics Lab
14	B. Tech (EEE)	VII	R164102E	Optimization Techniques
15	M. Tech (PED)	I	192PD1T02	Analysis of Power Electronic Converters
16	M. Tech (PED)	I	192PD1L02	Power Converters Laboratory
17	M. Tech (PED)	I	192PD1E04	Artificial Intelligence Techniques
18	M. Tech (PED)	I	192PD1E05	Renewable Energy Technologies
19	M. Tech (PED)	I	192PD1E06	HVDC Transmission and Flexible AC Transmission Systems
20	M. Tech (PED)	II	192PD2T04	Power Electronic Control of Electrical Drives
21	M. Tech (PED)	II	192PD2L04	Electric Drives Laboratory

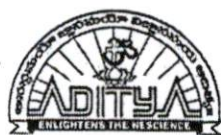
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BOS Chairperson

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## Department of Electrical and Electronics Engineering

### Annexure-III

## Action Taken Report on Stakeholders Feedback in the Academic Year 2019-2020

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1.	4.14	Basic knowledge of software programming should be taught to students before the III semester	As per the employer feedback, software courses like "python programming and python programming lab" will be introduced in II and III semesters respectively in AR19 regulation.
2.	4.4	Online courses are to be added in the curriculum	Considering teachers feedback, EEE department is planning to introduce a Massive Open Online Courses (MOOCs) with a duration of minimum 12 weeks.
3.	4.2	More focus is to be given for "employability/entrepreneurship/skill development" programmes and ratification of the same.	Necessary measures will be taken for ratifying the courses having focus on Employability/entrepreneurship/skill development in the AR 19 B.Tech (EEE).
4.	4.4	Interactions are to be made for the students with Industry experts so that students will get the exposure to the industry	Considering employer feedback, a new course named "MOOCs" will be designed where students will get the opportunity to attend the online courses and be able to meet the experts from the industry.
5.	4.12	English Language and the communications of students can be improved by introducing a new lab course.	Considering alumni feedback, a course will be designed and named as "Professional Communications Skills Lab" and will be added in the II semester of AR20 regulation.
6.	4.14	It's better to introduce software courses from 1 <sup>st</sup> year	Necessary measures will be taken to replace the subject "Engineering Graphics & design" with Python/Data Structures.
7.	5.3	The DC machines course structure is vast and it's better to reduce the course contents	The course "DC machines" will be reduced and it will be modified.

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8.	4.4	Online course are to be included in the curriculum, so that the students may gain the knowledge and can interact directly with professors from NIT/IIT and other reputed colleges	MOOCs will be introduced in the semester III and will be made as compulsory for the students.
9.	5.6	Students are showing interest to learn the artificial intelligence techniques.	In AR19, "Neural Networks for Signal Processing" is added as an elective for the VIII semester students.
10.	5.6	Students need to learn the basics of electric materials for insulation and measurements at the B.Tech level .	New courses named "Electrical Materials and Basic Electrical Measurements" are introduced for EEE students to gain more knowledge about the insulations and will be included in AR19 regulation.
11.	4.4	Students should possess a minimum idea of Constitution of INDIA	"Constitution of INDIA" is going to be added as a course in Semester I.
12.	4.4	Semester I & II syllabus has to be approved and is to be ratified	Necessary arrangements will be made for the approval and ratification of AR19 M.Tech syllabus.
13.	5.6	More knowledge on industrial systems can included in the curriculum.	In AR19, a course named "Industrial Electrical Systems" is added as an open elective course.
14.	4.4	Projects are to be developed and designed by the students that serves the social needs.	A course named "Socially Relevant Project" will be included in the curriculum of AR17 for semester V students.
15.	4.14	The course structure of "Basic Electrical And Electronics Engineering" is vast and is taking more hours to complete the syllabus	Considering students feedback, the course structure of "Basic Electrical And Electronics Engineering" will be reduced and will be modified.
16.	4.6	More focus is to be concentrated on employability / entrepreneurship / skill development courses	New courses like "Programmable Logic Controllers & Applications, Artificial Intelligence Techniques" will be included by considering Employability.

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