

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 Power Electronics and Drives

Syllabus Revision for the Academic Year 2020-2021

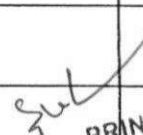
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	I	192PD1T01	Electrical Machine Modeling and Analysis	0
2	I	192PD1T02	Analysis of Power Electronic Converters	0
3	I	192PD1E01	Modern Control Theory	0
4	I	192PD1E02	Power Quality and Custom Power Devices	0
5	I	192PD1E03	Programmable Logic Controllers & Applications	0
6	I	192PD1E04	Artificial Intelligence Techniques	0
7	I	192PD1E05	Renewable Energy Technologies	0
8	I	192PD1E06	HVDC Transmission and Flexible AC Transmission System	0
9	I	192HS1T01	Research Methodology and IPR	0
10	I	192PD1L01	Power Electronics Simulation Laboratory	0
11	I	192PD1L02	Power Converters Laboratory	0
12	I / II	19MC1A01 19MC2A01	English for Research Paper Writing	0
13	I / II	19MC1A02 19MC2A02	Disaster Management	0
14	I / II	19MC1A03 19MC2A03	Sanskrit for Technical Knowledge	0
15	I / II	19MC1A04 19MC2A04	Value Education	0
16	I / II	19MC1A05 19MC2A05	Constitution of India	0
17	I / II	19MC1A06 19MC2A06	Pedagogy Studies	0
18	I / II	19MC1A07 19MC2A07	Stress Management by Yoga	0

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
19	I / II	19MC1A08 19MC2A08	Personality Development through Life Enlightenment Skills	0
20	I / II	19MC1A09 19MC2A09	Soft Skills	0
21	II	192PD2T03	Switched Mode Power Conversion	0
22	II	192PD2T04	Power Electronic Control of Electrical Drives	0
23	II	192PD2E07	Control & Integration of Renewable Energy Systems	0
24	II	192PD2E08	Hybrid Electric Vehicles	0
25	II	192PD2E09	Digital Control Systems	0
26	II	192PD2E10	Advanced Digital Signal Processing	0
27	II	192PD2E11	Applications of Power Converters	0
28	II	192PD2E12	Microcontrollers	0
29	II	192PD2L03	Electric Drives Simulation Laboratory	0
30	II	192PD2L04	Electric Drives Laboratory	0
31	II	192PD2P01	Mini Project with Seminar	0
32	III	192PD3P02	Dissertation I/Industrial Project	0
33	III	192PD3E13	Digital Signal Processing Controlled Drives	100
34	III	192PD3E14	Smart Grid Technologies	0
35	III	192PD3E15	Modeling & Simulation of Power Electronic Systems	100
36	III	19ST3O01	Repair and Rehabilitation of Structures	100
37	III	19ST3O02	Green Building Systems	100
38	III	19ST3O03	Basic Concrete Technology	100
39	III	19ST3O04	Basic Foundation Engineering	100
40	III	19STE3O01	Fuels and Combustion	100
41	III	19STE3O02	IC Engines	100

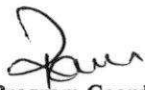
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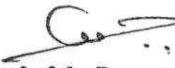
S.No	Semester	Course Code	Course Name	% of content revised for the existing year
42	III	19STE3O03	Automotive Technology	100
43	III	19STE3O04	Embedded System Design	100
44	III	19STE3O05	Digital System Design	100
45	III	19ES3O01	Embedded System Design	100
46	III	19ES3O02	Digital System Design	100
47	III	19ES3O03	Programming Languages for Embedded Systems	100
48	III	19ES3O04	Sensors and Actuators	100
49	III	19VD3O01	Physical Design Automation	100
50	III	19VD3O02	VLSI Technology	100
51	III	19VD3O03	Nano-electronics	100
52	III	19CS3O01	Python Programming (CSE)	100
53	III	19CS3O02	Principles of Cyber Security	100
54	III	19CS3O03	Internet of Things	100
55	III	19CS3O04	Machine Learning	100
56	III	19CS3O05	Artificial Intelligence	100
57	III	19CS3O06	Deep Learning	100
58	III	19PE3O01	Introduction to Petroleum Engineering	100
59	III	19PE3O02	Process Intensification	100
60	III	19PE3O03	Fundamentals of Liquefied Natural Gas	100
61	III	19PE3O04	Subsea Engineering	100
62	III	19PE3O05	Geology	100
63	III	19PE3O06	HSE in Petroleum Industry	100


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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
64	IV	192PD4P03	Dissertation II	0

Total number of courses in the academic year 2020-2021	= 64
Number of courses having revision in syllabus content $\geq 20\%$ in the academic year 2020-2021	= 30
Percentage of syllabus revision carried out in the academic year 2020-2021 = $(30/64) \times 100$	= 46.87%


Program Coordinator


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


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Department of Electrical and Electronics Engineering

Date: 15-10-2020

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

The VI meeting of the BOS of EEE was held virtually on 10th October 2020 at 10.00 AM through Microsoft Teams. Dr. V. Srinivasa Rao, Chairperson presided over the meeting.

Agenda 6.1: Welcome address by Chairperson

Dr. V. Srinivasa Rao, 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 19/11/2019.

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.

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

Agenda 6.4: Discussion on proposed AR19 B.Tech (EEE) program IV & V Semesters syllabus and ratification of the same.

The members of BOS ratified the AR 19 IV & V Semesters B.Tech syllabus after incorporating the following changes:

- BOS members suggested that in the Power Systems-I course the first course related to Power Systems, power generation principles and types of power generation can be add in Unit-I. The thermal and nuclear content may be reduced if time not sufficient to cover the syllabus.
- BOS members suggested that in the Electrical Machines-I Lab, the in augmented experiments, the transient analysis, step voltage change simulation experiments can be performed rather than the conventional experiments in simulation.
- BOS members suggested that in the Renewable energy resources course, the BOS members suggested changing the Maximum Power Point Techniques as Maximum Power Point tracing techniques/ methods.

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

The members of BOS ratified the AR20 B. Tech (EEE) First Year Program structure.

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

- The members of BOS ratified the AR20 B. Tech (EEE) Program – I & II semesters syllabus
- BOS members have discussed the syllabus of Constitution of India course to be offered in II semester.

Agenda 6.7: Discussion on proposed AR19 M. Tech (PED) Program – III & IV semesters syllabus and ratification of the same.

The members of BOS ratified the AR19 M. Tech (PED) Program – III & IV semesters syllabus.

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

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

Agenda 6.9: 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 20-21 in the B. Tech (EEE) is 12.9% and M. Tech (PED) is 3.12% programs and ratified the same. The list of new courses during the academic year 2020-21 enclosed as Annexure-I.

Agenda 6.10: 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 6.11: 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.

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Agenda 6.12: Discussion on the percentage of syllabus revision done in the B. Tech (EEE) and M. Tech (PED) programs and ratification of the same.

The syllabus revision were done in B. Tech (EEE) and M. Tech (PED) based on the stakeholders feedback on curriculum. The BOS members have approved all the syllabus revisions for the academic year 2020-2021 in B. Tech (EEE) is 17.2% and M. Tech (PED) is 46.87%. The list of courses revised is enclosed as Annexure-II.

Agenda 6.13: Discussion on 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.

Agenda 6.14: 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 6.15: 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 6.16: Any other item/s.

BOS members expressed that in the next course structure revision, keep one more power electronics course as the power electronics gained as major research in electrical engineering.

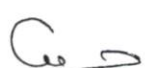
Agenda 6.17: Scheduling of next Board of Studies meeting.

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

Agenda 6.18: 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 2020-2021

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	II	201ES2L06	Data Structures through C Lab
2	B. Tech (EEE)	III	191ES3T11	Python programming
3	B. Tech (EEE)	III	191ES3L15	Python programming Lab
4	B. Tech (EEE)	III	191MC3A04	Essence of Indian Traditional Knowledge
5	B. Tech (EEE)	IV	191BS4T17	Numerical methods & Complex Variables
6	B. Tech (EEE)	IV	191MC4A06	Biology for Engineers
7	B. Tech (EEE)	VII	171EE7E12	Digital Signal Processing
8	B. Tech (EEE)	VII	171EE7E16	EHVAC Transmission
9	B. Tech (EEE)	VIII	171EE8O01	Energy Audit, Conservation and Management
10	B. Tech (EEE)	VIII	171EE8O06	Vehicular Electric Power Systems
11	B. Tech (EEE)	VIII	171EE8O07	Internet of Things
12	B. Tech (EEE)	VIII	171EE8O08	Cyber Security
13	M. Tech (PED)	III	192PD3E13	Digital Signal Processing Controlled Drives
14	M. Tech (PED)	III	192PD3E15	Modeling & Simulation of Power Electronic Systems

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BOS Chairperson

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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 (EEE)	I	201ES1I01	Engineering Graphics and Design
2	B. Tech (EEE)	III	191BS3T12	Transform Techniques
3	B. Tech (EEE)	III	191MC3A03	Employability Skills-I
4	B. Tech (EEE)	IV	191MC4A05	Employability Skills –II


BOS Chairperson

Head of the Dept.,
Dept. Of Electrical & Electronics Engg.,
Aditya Engineering College, Surampalem



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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.	6.8	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 20 B.Tech (EEE)
2.	6.9	Application of electrical subjects with software programming is required for the students to get better placement opportunities in core and software domain.	As per the employer feedback, application oriented courses like "IoT Applications of Electrical Engineering and Design of Circuits using Matlab Software" are included in curriculum. Also, value added courses like "Arduino programming and PCB design" are provided to the students.
3.	6.4	Keeping the future in mind, the course "Renewable Energy Sources" is to be modified.	The "Renewable Energy Sources" will be modified by keeping the future energy sources in mind
4.	6.16	Students are encouraged to know the practical appliance of power electronic devices in industry side, so that they can get the jobs easily.	Considering employer feedback, students will be encouraged for the industrial visits, so that they can gain practical knowledge and importance of the power electronic appliances.
5.	6.10	More open elective courses are to be included in the curriculum so that the students can have the vast information exchange	Taking Alumni feedback into consideration, the open electives number has increased from 3 to 4 in AR20 curriculum.
6.	6.4	The experiments of Electrical Machine Lab-1 are to be modified and those are to be made useful for real life applications.	Considering the alumni feedback, necessary arrangements will be made and the experiments of Electrical Machine Lab-1 will be modified.
7.	6.14	Student-centred guest presentations should be encouraged	The department will host guest lectures from renowned institutions and industry sectors in response to input from alumni.

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8.	6.11	Value added courses are to be planned for M.Tech Students in such a way that the concepts of EEE can be designed and developed using software technologies.	Courses like "Electrical Circuits and control block design using MATLAB" will be included in curriculum.
9.	6.4	The course "Power System-I" is vast and the time is not sufficient to complete the whole syllabus in prescribed interval.	Considering Teacher Feedback, the contents such as thermal and nuclear content will be removed from unit-I in "Power System-I".
10.	6.4	Maximum power generation techniques like maximum power point techniques are to be included in the Renewable energy sources.	The course structure "Renewable Energy Sources" will be modified and the suggestions will be implemented.
11.	6.3	The vision and mission of the department are to be revised based on the changes made in the AR 17, AR19 and AR 20 curriculum.	Based on the modifications in the syllabus of AR 17, AR19 and AR 20 curriculum, the vision and mission of the department will be modified and steps are to be taken for ratification.
12.	6.4	Semester III & IV 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 for semester III & IV respectively.
13.	6.15	Various teaching and learning methods need to follow to give more insights about each and every course like role play, seminars etc.	In all the possible courses all the types of teaching and learning techniques are introduced, department encourages to teach the students in effective manner via PPT, video demonstrations.
14.	6.12	New courses are to be added in the AR20 B.Tech programme	Necessary plans and steps will be taken for adding the new courses in the AR20 B.Tech programme
15.	6.11	Value added courses with software back ground are to be introduced.	Value added courses like "Electrical Circuits and control block design using MATLAB and Arduino programming" will be planned for AR 19 students.
16.	6.15	Students are motivated for higher education and research backgrounds.	A new subject named "Research Methodology and IPR" will be designed and included in the curriculum in such a way that students can get an idea of carrying research.


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