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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 2021-2022				
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	20
6	I	192PD1E04	Artificial Intelligence Techniques	80
7	I	192PD1E05	Renewable Energy Technologies	0
8	I	192PD1E06	HVDC Transmission and Flexible AC Transmission Syst	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 Ski	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	20
26	II	192PD2E10	Advanced Digital Signal Processing	20
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	0
34	III	192PD3E14	Smart Grid Technologies	0
35	III	192PD3E15	Modeling & Simulation of Power Electronic Systems	0
36	III	19ST3O01	Repair and Rehabilitation of Structures	0
37	III	19ST3O02	Green Building Systems	0
38	III	19ST3O03	Basic Concrete Technology	0
39	III	19ST3O04	Basic Foundation Engineering	0
40	III	19STE3O01	Fuels and Combustion	0
41	III	19STE3O02	IC Engines	0

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
42	III	19STE3O03	Automotive Technology	0
43	III	19STE3O04	Embedded System Design	0
44	III	19STE3O05	Digital System Design	0
45	III	19ES3O01	Embedded System Design	0
46	III	19ES3O02	Digital System Design	0
47	III	19ES3O03	Programming Languages for Embedded Systems	0
48	III	19ES3O04	Sensors and Actuators	0
49	III	19VD3O01	Physical Design Automation	0
50	III	19VD3O02	VLSI Technology	0
51	III	19VD3O03	Nano-electronics	0
52	III	19CS3O01	Python Programming (CSE)	0
53	III	19CS3O02	Principles of Cyber Security	0
54	III	19CS3O03	Internet of Things	0
55	III	19CS3O04	Machine Learning	0
56	III	19CS3O05	Artificial Intelligence	0
57	III	19CS3O06	Deep Learning	0
58	III	19PE3O01	Introduction to Petroleum Engineering	0
59	III	19PE3O02	Process Intensification	0
60	III	19PE3O03	Fundamentals of Liquefied Natural Gas	0
61	III	19PE3O04	Subsea Engineering	0

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S.No	Semester	Course Code	Course Name	% of content revised for the existing year
62	III	19PE3O05	Geology	0
63	III	19PE3O06	HSE in Petroleum Industry	0
64	IV	192PD4P03	Dissertation II	0

Total number of courses in the academic year 2021-2022	= 64
Number of courses having revision in syllabus content >/= 20% in the academic year 2021-2022	= 4
Percentage of syllabus revision carried out in the academic year 2021-22 = (4/64)*100	= 6.12%

Program Coordinator

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

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Department of Electrical and Electronics Engineering

Date: 20-04-2022

Minutes of the VIII meeting of BOS scheduled on 20-04-2022

The VIII meeting of the BOS of EEE was held on 20/04/2022 at 9.30 AM, Ajivika Conference Hall. Dr. V. Srinivasa Rao, Chairperson presided over the meeting.

Agenda 8.1: Welcome address by Chairperson.

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

Agenda 8.2: 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 28/09/2021.

Agenda 8.3.: Discussion on proposed AR20B.Tech (EEE) V, VI, VII and VIII semesters syllabus and ratification of the same.

The BOS members approved the AR20B.Tech (EEE) V, VI, VII and VIII semesters syllabus after incorporating the following changes in the proposed syllabi.

- Suggested that in Power Electronics course the Unit-IV: Basics of choppers can be removed. Dual converter to be added.
- Suggested that in Electrical Measurements and Instrumentation lab 10th experiment in the compulsory experiments is swapped with 5th experiment in the augmented list of experiments.
- Suggested that in Industrial Electrical systems in Unit V PLC is replaced by max DNA.
- Suggested that in Neural Networks and Fuzzy Logic in Unit IV Kolmogorov Theorem Learning Difficulties and Improvements and Associative memories is replaced with Bidirectional associative memory, architecture of discrete Hopfield network and In Unit V Neural network applications is removed.
- Suggested to remove fuel cell and ocean energy from non-conventional energy resources.
- Suggested to include PMSM drives basic operation in power converters and drives.
- Suggested to include k-factors and non-three phase transmission lines in electrical distribution systems.
- Suggested to remove power system stabilizers and calculation of damping torque from power system analysis.
- Suggested to include these four experiments in power system and simulation lab:
    i. Performance of long transmission line without compensation
    ii. Performance of long transmission line with shunt compensation

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iii. Analyze the Ferranti effect on long transmission line
iv. Transient Stability analysis of single machine connected to an infinite bus (SMIB) using equal area criterion.

- Suggested to include the experiment Determination of the characteristics of a LVDT in electrical measurements and instrumentation lab.

Agenda 8.4: Discussion on proposed AR20 Honors and Minor Degree Courses syllabus and ratification of the same.

The BOS Members ratified the syllabus of Honors and Minor Degree courses of AR20 V, VI and VII semesters.

Agenda 8.5: Discussion on value added courses offered for the students and ratification of the same.

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

Agenda 8.6: Discussion on the new courses offered in the B. Tech (EEE) program and ratification of the same.

Members of BOS noted the percentage of new courses offered for the academic year 2021-2022 in the B. Tech (EEE) is 12.63% and ratified the same. The list of new courses is enclosed as Annexure-I.

Agenda 8.7: Discussion on the percentage of the syllabus revision has done in the B. Tech (EEE) & M. Tech (PED) programs and ratification of the same.

The syllabus revisions done in B. Tech (EEE) & M. Tech (PED) programs based on the Stakeholders feedback on curriculum. The BOS members have approved all the percentage of syllabus revision for the academic year 2021-2022 in B. Tech (EEE) is 38.28% and M. Tech (PED) is 6.12%. The list of courses revised during is enclosed as Annexure-II.

Agenda 8.8: Discussion on the courses having focus on employability/ entrepreneurship/ skill development in the program of B. Tech (EEE) & 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 8.9: Discussion on the B. Tech (EEE) & 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) & M. Tech (PED) programs.

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Agenda 8.10: 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 8.11: Analysis of Results of the odd semester of the academic year 2021-22.

The BOS Chairperson presented the odd semesters pass percentage for the

A. Y. 2021-2022. The BOS members noted the same.

Agenda 8.12: Analysis of students feedback in the odd semester of the academic year 2021-22

BOS Chairperson expressed that the student feedback in academic year 2021-2022for odd semester. The BOS members noted the same

Agenda 8.13: Any other items with the approval of Chairperson.

- Dr. M. Nageswara Rao suggested to prescribe relevant books for the new courses.
- Mr. M. Veera Suresh suggested to have relevant weblinks for all the courses.
- Dr. K Siva Kumar suggested to have remedial classes for the poor performers.
- Mr. N Siva Prasad suggested to frame syllabus with more emphasis on present practical requirement in the industry.
- Mr. N Siva Prasad suggested to use MAX DNA in place of PLC as per the present requirement of the industry.

Agenda 8.14: Scheduling of next Board of Studies meeting.

- The next BOS meeting is tentatively scheduled in the month of December 2022.

Agenda 8.15: Vote of Thanks

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

BOS Chairperson
Head of the Department
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Annexure-I

List of New Courses in the Academic Year 2021-2022

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	III	201SO3L02	Design of Electrical Circuits using Engineering Software Tools
2	B. Tech (EEE)	IV	201SC4L14	IoT Applications of Electrical Engineering
3	B. Tech (EEE)	V	191EE5T12	Electrical Measurements and Instrumentation
4	B. Tech (EEE)	V	191EE5O02	Electrical Materials
5	B. Tech (EEE)	V	191EE5O03	Basic Electrical Measurements
6	B. Tech (EEE)	V	191PR5P02	Socially Relevant Project
7	B. Tech (EEE)	VI	191EE6E05	Advanced Power Electronics Converters
8	B. Tech (EEE)	VI	191EE6E11	High Voltage Transmission
9	B. Tech (EEE)	VI	191EE6E12	Switched mode power Converters
10	B. Tech (EEE)	VI	191EE6E09	Control Systems Design
11	B. Tech (EEE)	VI	191EE6E10	Electrical Safety
12	B. Tech (EEE)	VI	191EE6L06	Electrical Measurements & Instrumentation Lab

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Annexure-II

List of Courses Revised in the Academic Year 2021-2022

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (EEE)	III	201EE3T01	Analog Electronic Circuits
2	B. Tech (EEE)	III	201EE3L01	DC Machines and transformers
3	B. Tech (EEE)	VI	191EE6T13	Microprocessor & Interfacing
4	M. Tech (PED)	I	192PD1E03	Programmable Logic Controllers & Applications
5	M. Tech (PED)	I	192PD1E04	Artificial Intelligence Techniques
6	M. Tech (PED)	II	192PD2E09	Digital Control Systems
7	M. Tech (PED)	II	192PD2E10	Advanced Digital Signal Processing

BOS Chairperson

Head of The Department

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Annexure-III

Action Taken Report on Stakeholders Feedback in the Academic Year 2021-22

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1.	8.10	As electrical vehicles are a trendy topic in the coming years. Students are encouraged to know about the Electric Vehicles.	Considering Employer Feedback, a value added course named "Electric Vehicles design-simulation" is included in the curriculum.
2.	7.6	The importance is step up and step down of voltage and current is gaining importance in industry sector. The concept of instrumentation transformers (CT, PT) are to be included in the power systems of AR20	The concept of instrumentation transformers will be added in power systems subject.
3.	8.13	The course "MAX DNA" should be considered in the place id "PLC" for the industry oriented jobs	Based on the suggestions given by the employer, steps will be taken to replace the "PLC" course with "MAX DNA".
4.	8.3	For students to work in core sectors, they must have practical knowledge of electrical programming ideas.	Power electronic programming topics will be thoroughly analysed and efficiently demonstrated through PPTs, online/offline classes, and video presentation.
5.	7.4	Course structure of some subjects are to be modified in such a way student can gain more knowledge.	Taking Alumni feedback the courses named "Microprocessor and interfacing, Power system-II, Power Electronics and Energy Audit Conversation and Management" are modified.
6.	7.4	The course content of "Power quality and FACTS" in AR19 is vast and is to be reduced.	Necessary arrangement are to be taken in order to reduce the course content of "Power quality and FACTS" in AR19
7.	8.5	The courses of "Applications of Artificial intelligence to Electrical Engineering and Python Programming" are to be offered to the students that shares the knowledge of coding in electrical applications	the following courses "Applications of Artificial intelligence to Electrical Engineering and Python Programming" will be considered as a value added courses for the students.

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8.	7.13	The software and hardware knowledge must be balanced by introducing more courses related to simulation and demo oriented expert talks.	New courses will be introduced as open electives that balances the software and hardware
9.	7.15	Web links are to be included in the course syllabus	Considering Teacher Feedback, web links are provided at the end of every course in the AR19 and AR20 curriculum.
10.	7.4	As stabilizing power system is an important topic, it is recommended that the concept of "power system stabilizer" should be included in the power system course	Based on the suggestions given by the faculty, necessary arrangements will be made to include the concepts of power system stabilizers in the power systems course
11.	8.13	Remedial classes should be conducted for poor performers	Steps are to be taken to conduct remedial classes for poor performers
12.	8.3	Students should know the basics of all the fundamentals of power electrical devices.	Effective demonstration of fundamentals and basics are thought using PPT, placards, animations and video demonstrations.
13.	8.10	Increase industrial training practically	Since internships are now required, students must complete industry training and complete a project as part of their internship.
14.	7.12	Value added courses are to be conducted.	Necessary arrangements will be taken to conduct the value added courses like "battery management system and machine learning".
15.	8.3	As it is difficult to understand the concepts of "Neural Networks and Fuzzy logic" it is suggested to remove it from the curriculum	The idea of Neural networks and fuzzy logic and its applications will be removed from the curriculum.
16.	7.10	The addition of a new lab course can enhance students communication skills and their command of the English language.	Considering student/parent feedback, necessary measures will be taken to enhance the communication skills among the students.

BOS Chairperson
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