



Department of Electrical and Electronics Engineering

Date: 22.07.2020

Minutes of the Board of Studies (BoS) Meeting held on 18/07/20 at 10.00 A.M. in HoD Chamber (M.Tech- Power Electronics and Drives)

All the internal members of VFSTR attended the meeting in person while the external members participated the meeting virtually.

External Members:

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| 1) Dr.V.Nagesh | - CTO, Chirra Engineering Pvt. Ltd. Bangalore |
| 2) Dr.M.V.Rayudu | - CEO, Chirra Engineering Pvt. Ltd. Bangalore |
| 3) Dr.K.Vinay Kumar | - Assistant Professor,
Dept. of Electrical Engineering, NIT Warangal. |

Internal Members:

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|--------------------------|-----------------------------|
| 1) Dr. G. Srinivasa Rao | - Head, Dept. of EEE, VFSTR |
| 2) Mr. P. V. S. Sobhan | - Assoc. Prof., EEE, VFSTR |
| 3) Dr. K. Mercy Rosalina | - Assoc. Prof., EEE, VFSTR |
| 4) Dr. M. Subba Rao | - Assoc. Prof., EEE, VFSTR |
| 5) Dr. Y. Srinivasa Rao | - Asst. Prof., EEE, VFSTR |

The following are the views expressed by the external members




- 1) Dr. G. Srinivasa Rao briefed the changes from R17 to R20 to the external members.
- 2) External BoS members appreciated credited based Mini and Societal-Centric projects in Sem-I and Sem-II respectively.
- 3) Dr. K. Vinay Kumar appreciated the reduction of credits.
- 4) Dr. M.V. Rayudu suggested to include different types of diodes and Sic and GaN devices concepts in Emerging Power Electronic Devices and Converters course.
- 5) Dr. V. Nagesh suggested to include control schemes and practice power converters concepts in Switched Mode Power Supplies and UPS course.
- 6) Dr. K. Vinay Kumar suggested to Introduction of MATRIX converter topic is to be included in course Emerging Power Electronic Devices and Converters.

- 7) Dr. K. Vinay Kumar suggested to add modeling and analysis of PMSM, BLDC and SRM these topics are to be introduced in UNIT –V of course Modeling and Analysis of Electrical Machines.
- 8) External members suggested that, encourage the students to implementation real time problems in mini and Societal-Centric projects.
- 9) Credits for the MOOCS courses are appreciable, but faculty has to advise the students to choose advanced courses which are relevant to industry.

Outcomes of the BoS Meeting:

1. BoS members approved the revised curriculum (Structure, Syllabus and regulations) of M. Tech, Power Electronics and Drives and it follows Choice Based Credit System. Structure is provided in Appendix A.
2. Major restructuring has taken place in the curriculum which is oriented towards Project based learning with inclusion of Mini, Societal-Centric projects and industry related projects.
3. All the Courses in the Curriculum are designed to fall under either of the domains of employability or skill development. The mapping of the courses with employability or skill development is provided in Appendix B.
4. In all the courses of the revised curriculum (R20) substantial changes are made in the content. The percentage of change in the curriculum from R17 to R20 is 45%. The list of new courses provided in Appendix C.
5. Stakeholders feedback analyzed in CDMC is placed before the BoS and given utmost priority while designing the curriculum and their suggestions are implemented.

The following are the members present for the Board of studies meeting held at department of Electrical and Electronics Engineering on 18-07-2020.

Sl.	Name of the Member	Designation	Signature
1	Dr. G. SrinivasaRao	Professor and HoD	
2	Mr.P.V.S.Sobhan	Associate Professor	
3	Dr.K.Mercy Rosalina	Associate Professor	
4	Dr.M.SubbaRao	Associate Professor	
5	Dr.Y.SrinivasaRao	Assistant Professor	

APPENDIX A
M.Tech-Power Electronics and Drives
Course Structure-2020 Regulation

I Year - I Semester

Sl.	Course Title	L	T	P	C
1	Emerging Power Electronic Devices and Converters	3	-	2	4
2	Electric Drives	3	-	2	4
3	Modeling And Analysis Of Electrical Machines	3	-	-	3
4	Artificial Intelligent Systems	3	-	-	3
5	Elective Course - I	3			3
6	Audit Course- 1	1	-	-	-
7	Mini Project	-	-	4	2
Total Semester Credits					19

I Year - II Semester

Sl.	Course Title	L	T	P	C
1	Switched Mode Power Supplies And Ups	3	-	2	4
2	Digital Control Of Power Electronics And Drive Systems	3	-	3	4
3	Elective Course - II	3			3
4	Elective Course - III	3			3
5	Research Methodology & IPR	2	-	-	2
6	Audit Course- 2	1	-	-	-
7	Employment Orientation Program	2	-	-	2
8	Societal-centric/Industry-oriented project	-	-	4	2
Total Semester Credits					20

II Year- I Semesters

Sl.	Course Title	L	T	P	C
1	MOOCs Course- 1(Inter disciplinary Nature)	3	-	-	3
2	MOOCs Course- 2(Inter disciplinary Nature)	3	-	-	3
Total Semester Credits					6

II Year- II Semesters

Sl.	Course Title	L	T	P	C
1	Project / Internship Phase-1	-	-	20	10
2	Project / Internship Phase-2	-	-	32	16
Total Semester Credits					26

The courses that are highlighted denote implementation of 'Choice Based Credit System (CBCS)'

Electives Courses

Sl.	Course Title
1	Processor Applications in Electrical Engineering
2	Energy Storage Technologies
3	Modern Control Theory
4	Optimization Techniques
5	Energy Conservation Systems
6	Programmable Logic Controllers and their Applications
7	High Voltage DC Transmission
8	Analysis of Inverters
9	Power Semiconductor Devices and Passive Components
10	Smart Power Grids
11	Solar Energy Conversion
12	Energy Audit, Conservation and Management
13	Electric Vehicles
14	Green Energy Technologies
15	Flexible of AC Transmission Systems


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APPENDIX – B

List of courses that enable employability or entrepreneurship or skill development in the R-20 M. Tech – Power Electronics and Drives

Sl.	Course Name	Employability / Skill Development/Entrepreneurship
1.	Emerging Power Electronic Devices and Converters	Skill Development
2.	Electric Drives	Skill Development
3.	Modeling And Analysis Of Electrical Machines	Skill Development
4.	Artificial Intelligent Systems	Employability
5.	Mini Project	Skill Development
6.	Switched Mode Power Supplies And Ups	Employability
7.	Digital Control Of Power Electronics And Drive Systems	Employability
8.	Societal-centric/Industry-oriented project	Skill Development
9.	Project Phase-1	Employability
10.	Project Phase -2	Employability
11.	Internship Phase-1	Skill Development
12.	Internship Phase-2	Skill Development
13.	Processor Applications in Electrical Engineering	Skill Development
14.	Energy Storage Technologies	Employability
15.	Modern Control Theory	Skill Development
16.	Optimization Techniques	Skill Development
17.	Energy Conservation Systems	Skill Development
18.	Programmable Logic Controllers and their Applications	Employability
19.	High Voltage DC Transmission	Skill Development
20.	Analysis of Inverters	Skill Development
21.	Power Semiconductor Devices and Passive Components	Skill Development
22.	Smart Power Grids	Employability
23.	Solar Energy Conversion	Skill Development
24.	Energy Audit, Conservation and Management	Skill Development
25.	Electric Vehicles	Entrepreneurship
26.	Green Energy Technologies	Entrepreneurship
27.	Flexible of AC Transmission Systems	Skill Development



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APPENDIX – C
List of new courses in the R-17 Regulations
M.Tech – Power Electronics and Drives

Sl.	Course Name
1	Emerging Power Electronic Devices and Converters
2	Electric Drives
3	Modeling And Analysis Of Electrical Machines
4	Artificial Intelligent Systems
5	Mini Project
6	Switched Mode Power Supplies And Ups
7	Digital Control Of Power Electronics And Drive Systems
8	Societal-centric/Industry-oriented project
9	Project Phase-1
10	Project Phase -2
11	Internship Phase-1
12	Internship Phase-2
13	Processor Applications in Electrical Engineering
14	Energy Storage Technologies
15	Modern Control Theory
16	Optimization Techniques
17	Energy Conservation Systems
18	Programmable Logic Controllers and their Applications
19	High Voltage DC Transmission
20	Analysis of Inverters
21	Power Semiconductor Devices and Passive Components
22	Smart Power Grids
23	Solar Energy Conversion
24	Energy Audit, Conservation and Management
25	Electric Vehicles
26	Green Energy Technologies
27	Flexible of AC Transmission Systems


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