



# FRANCIS XAVIER ENGINEERING COLLEGE AN AUTONOMOUS INSTITUTION

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Department of Electrical and Electronics Engineering

## 10<sup>th</sup> Board of Studies Meeting in the Department of Electrical and Electronics Engineering

Mode: Hybrid

Google Meet Link: <https://meet.google.com/vgy-ryxh-ghy>

Date & Time: 5.1.2024 & 10.30 am

### AGENDA

BoS / EEE 10.1: Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering.

BoS / EEE 10.2: Confirmation of the Minutes of meeting of 9<sup>th</sup> Board of studies in the department of Electrical and Electronics Engineering held on 10<sup>th</sup> June 2023 and Action taken report of 9<sup>th</sup> meeting of Board of studies.

BoS / EEE 10.3: Business brought forward by the Chairman, Board of Studies

- 10.3.1 Review of 9<sup>th</sup> BoS meeting minutes
- 10.3.2 Industrial Supported Course for 2021 R UG Students
- 10.3.3 Value added Courses for 2021 R UG students
- 10.3.4 Skill based Value Added Courses in R2021
- 10.3.5 Minor/Specialization Honor Degree Courses in R2021
- 10.3.6 NPTEL Courses for Credit Transfer in R2021
- 10.3.7 Project Work in Industry Details in R2021
- 10.3.8 Planning for UG/PG 2024 regulation

BoS / EEE10.4: Suggestions given by the BOS Members

BoS / EEE10.5: Any other items for discussion



**Department of Electrical and Electronics Engineering**  
**MINUTES OF THE MEETING OF BOARD OF STUDIES**

The 10<sup>th</sup> Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 5<sup>th</sup> January 2024 at 10.30am through Hybrid Mode.

The following members were present:

1. Dr.A.Ravi Prof & Head Chairman, BoS.
2. Dr.C.Ponmani, Professor, EEE,  
GCE, Bodinayakanur-University Nominee.
3. Dr.Monica Subashini Professor & Assistant Director (Ranking & IoE), Vellore Institute of Technology, Vellore.
4. Dr.A.Ramkumar, Asso.Prof, KARE, Krishnankovil
5. Dr.L.Padmavathi, Principal Scientist, CSIR-CEERI Pilani, Rajasthan.
6. Mr.Ramesh S, Senior lead engineer, Audio and acoustics, Mahindra research valley, Chennai.
7. Mr.D Devine Davidson, MIET (UK) Principal Engineer - T & D AECOM India Global Services Pvt. Ltd.
8. Dr.P.Annapandi .Professor/EEE-InternalMember
9. Dr.A.Gnanasarvanan Professor/EEE -Internal Member
10. Dr.N.Hemalatha, Asst. Professor/EEE-Internal Member
11. Mr.J.DanielSathyaraj Asst.Professor -Internal Member
12. Mr.J.Antony Robinson Asst.Professor -Internal Member
13. Dr.R.Rajagopal- Asso Prof./EEE Internal Member
14. Dr.U.Muthuraman- Asst.Prof./EEEInternal Member
15. Mr.S.Selvakumar- Asst.Prof./EEEInternal Member
16. Mr.N.V.Selvam- Asst.Prof./EEEInternal Member
17. Mrs.R.Aandal-Asst.Prof./EEE Internal Member
18. Mrs.A.Amala Manuela- Asst.Prof./EEE Internal Member
19. Mrs.M.Subashini- Asst.Prof./EEE Internal Member
20. Mrs.S.Laxmi- Asst.Prof./EEE Internal Member
21. Mr.A.Ananth- Asst.Prof./EEE Internal Member
22. Mrs.M.Mary Sumitha- Asst.Prof./EEE Internal Member

**BoS / EEE10.1: Welcome Address and Opening Remarks by Chairman, Board of Studies in the Department of Electrical and Electronics Engineering**

Dr.A.Ravi, Board Chairman initiated the 10<sup>th</sup> BoS meeting with Greetings; Mrs.A.Amala Manuela AP/EEE welcomed all the members for the 10<sup>th</sup> Board of studies meeting.



The minutes of the 9<sup>th</sup> BoS held on 10<sup>th</sup> June 2023 was communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 9<sup>th</sup> Academic Council Meeting.

Annexure I: Action Taken Report

**BoS / EEE10.3.1: Review of 9<sup>th</sup>BoS meeting minutes**

The Board Chairman Dr.A.Ravi presented the changes carried out in Regulation 2021 Syllabus based on the recommendations given in 9<sup>th</sup>BoS meeting. All the Suggestions given by BoS Members were taken into account and incorporated in the Regulation 2021 syllabus.

Sl. No.	Semester	Course Code	Course Name	Recommendations given by BOS Members
1	VII	21EE7601	Renewable Energy Systems	Suggested to change the Unit III title as SOLAR PV SYSTEMS instead of SOLAR PV AND THERMAL SYSTEMS. The Biomass energy can be added in Unit V and Unit IV may be of Energy Storage Devices.
2	VII	21EE7611	Power System Simulation Laboratory	Suggested to check the case study project which deals with E Vehicle.
3	VII	21EE7612	Industrial Automation and Renewable Energy Systems Laboratory	Experiment 3 should be renamed as partial shading of solar PV Systems. Experiments on intelligent controllers should be added.  The study experiments on Biogas and fuel cell may be added.
4	VII	21EE7710	Modern Power Converters	Suggested to divide resonant converters into 2 units and asked to add some industrial converters. Unit V SOURCE CURRENT SHAPING OF RECTIFIERS should be removed and embedded control of Power Electronic Converter can be taken as Unit V.
5	VII	21EE7711	Power Quality	Unit III Title should be renamed as Harmonic Analysis. Unit IV Title should be renamed as Power Factor Improvement. Unit V Title should be renamed as CPD for Power Quality Problems. Active filters topic can be



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				added in Unit V instead of Unit III.
6	VII	21EE7712	Advanced Power Semiconductor Devices and Protection	Suggested to revise the syllabus according to modern needs. The case studies have to be added in each unit.
7	VII	21EE7713	Microcontroller Based System Design	Suggested to include more system design applications in Unit V.
8	VII	21EE7714	Wind Energy Conversion Systems	Suggested to include off shore wind analysis in both fixed and variable speed systems.
9	VII	21EE7715	Power Electronics for Renewable Energy Systems	The BoS members told the detailed analysis of reference frame theory is not need at UG level. Energy storage applications can be added in Unit II.
10	VII	21EE8701	Generation, Utilization and conservation of electrical Energy	Electric Vehicle concept can be added in Unit V.
11	VII	21EE8702	Power System Operation and Control	Optimization Techniques must be added in Unit V
12	VII	21EE8704	Industrial Automation and Control	The case studies should be added in Unit V.
13	VII	21EE8706	Electrical and Hybrid Vehicles	The topic Vehicle mechanism should be added in Unit I.
14	VII	21EE7801	Operation and Maintenance of Electrical Equipment	The course title should be modified as Electrical Equipment Safety.
15	VII	21EE7803	Control Engineering	Suggested to remove the topic state space analysis.
16	VII	21EE7804	Electrical Machines	Basics of Driving circuits should be added in Unit V.
17	VII	21EE8805	Micro grid and Control	This course should be removed from Open Elective List.



**BoS / EEE10.3.2: Industrial Supported course for 2021 R students.**

The Board Chairman presented the list of industrial supported courses which are taught by L&T Edutech included in VII semester Professional Elective courses which can be taken by the students.

S.no	Class/Sem	Industrial Supported Courses
1	III EEE/V	Advanced Electrical system design for buildings
2	III EEE/V	AI and Edge Computing
3	III EEE/V	Integrated Engineering of MV Substation
4	IV EEE/VII	A Practitioner's approach to power system protection and switchgear

**BoS / EEE 10.3.3: Value added courses for 2019 R /2021 R UG Students.**

The Board chairman presented the list of Value Added Courses offered by EEE Department.

S.No	Course Code	Course Name	Category	L	T	P	C
1	21EE0V01	Embedded Systems Design using Arduino	VAC	0	0	4	2
2	21EE0V02	Raspberry Pi	VAC	0	0	4	2
3	21EE0V03	Solar Photo Voltaic System	VAC	0	0	4	2
4	21EE0V04	Lab VIEW	VAC	0	0	4	2
5	21EE0V05	Electronic testing	VAC	0	0	4	2
6	21EE0V06	Energy Auditing	VAC	0	0	4	2
7	21EE0V07	Electrical and Hybrid Vehicles	VAC	0	0	4	2



**BoS / EEE 10.3.4 Minor/Specialization Honor Degree courses.**

The Board chairman presented the list of Minor/Specialization offered by EEE Department. The BoS members accepted all the courses.

Semester	Course Code	Course Name
IV	21EES401	Industry 4.0
V	21EES501	Sensors and Actuators
VI	21EES601	Artificial Intelligence for Robotics (Practical cum Theory)
VII	21EES701	Digital Image Processing and Machine Vision (Practical cum Theory)
VIII	21EES801	Project

**BoS / EEE 10.4 : Suggestions Given by the Members**

Sl. No.	Semester	Course Code	Course Name	Recommendations given by BOS Members
1	VII	21EE7710	Modern Power Converters	The case study must be specific.
2	VII	21EE7712	Advanced Power Semiconductor Devices and Protection	In Unit I Switching loss measurement can be added as case study. There is no case study in Unit V.
3	VII	21EE7711	Power Quality	Simulation of Harmonic analysis can be added in Unit III.
4	VII	21EE7611	Power System Simulation Laboratory	Suggested to add some experiments based on Industry needs.
5	VII	21EE8701	Generation, Utilization and conservation of electrical Energy	Suggested to add traction substation sizing in Unit IV.
6	VII	21EE8704	Industrial Automation and Control	Suggested to modify the Unit II title as process controllers and Unit III Title as Sequence Controllers.  Add Latest Text and Reference Books.

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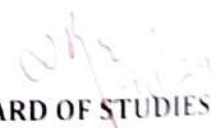
7	VII	21EE8706	Electrical and Hybrid Vehicles	The term Hybrid Electric vehicle should be used instead of Electrical and Hybrid Vehicles
				Essential components of Driver circuits should be added in Unit V.
8	VII	21EE7804	Electrical Machines	The topic PMDC Motor is added in Unit IV and the Universal motor and shaded pole motor are removed.

The BoS members appreciated the effort taken by the FXEC/EEE Department for framing the syllabus in excellent manner. The members had a brainstorming discussion, deliberation and interaction among themselves. After discussion, productive suggestions were incorporated appropriately in the UG and PG Curriculum and Syllabi.

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

- 10.3.1 Review of 9th BoS meeting minutes
- 10.3.2 Industrial Supported Course for 2021 R UG Students
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The meeting ended with the vote of thanks by Mrs.R.Aandal AP/EEE, Finally the Board Chairman Dr.A.Ravi thanked all the members for their valuable suggestions and sparing their precious time with us.

**CHAIRMAN**  
  
**BOARD OF STUDIES**