

Department of Electrical and Electronics Engineering

MINUTES 16th Meeting of the Board of studies held on
29th November 2021 at 10.00 AM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: <https://meet.google.com/nju-chox-yne>

National Engineering College, K.R.Nagar, Kovilpatti – 628 503

(An Autonomous Institution - Affiliated to Anna University, Chennai)

www.nec.edu.in

Department of Electrical and Electronics Engineering

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16th Board of studies Meeting in the Department of Electrical and Electronics Engineering

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Date & Time: 29.11.2021 & 10.00 AM

AGENDA

- BoS / EEE 16.1 : Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering
- BoS / EEE 16.2 : Confirmation of the Minutes of the 15th meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 25th June 2021, and Action Taken report of 15th meeting of Board of studies
- BoS / EEE 16.3 : Business brought forward by the Chairman, Board of studies
- 16.3.1 Programme elective courses for UG degree programmes under R-2019
 - 16.3.2 One credit elective course for UG degree programmes under R-2019
 - 16.3.3 Specialization elective courses for UG degree programmes under R-2019
 - 16.3.4 Syllabus for Product Development Laboratory in 6th Semester
 - 16.3.5 Credit transfer for other online courses like udemy, coursera etc., and norms for credit transfer
 - 16.3.6 End semester Examinations in hybrid mode
- BoS / EEE 16.4 : Any other items
- BoS / EEE 16.5 : Suggestions given by the BoS Members

Department of Electrical and Electronics Engineering
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F. No. 1-1/NEC/EEE.

29th November,2021

Dear Sir/Madam,

Sub: Minutes of the 16th Meeting of the Board of studies in the EEE-Reg.

Kindly find attached herewith the Minutes of the 16th Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 29th November, 2021 at 10.00 AM in National Engineering college, through GoogleMeet. Hard copy of the Minutes is also being sent to you by speed post.

It is requested that comments on the Minutes, if any, may please be sent by email at hodeee@nec.edu.in or by post, at the earliest. If no comments are received, within ten days, the Minutes shall be taken as confirmed. With Kind Regards,

Yours Sincerely


Dr.M.Willjuice Iruthayarajan

Department of Electrical and Electronics Engineering

MINUTES OF THE MEETING

The 16th Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 29th November, 2021 at 10.00 AM in National Engineering College, through GoogleMeet.

The following members were present:

1.	Dr.M.Willjuice Iruthayarajan Professor and Head/ EEE	Chairman
2.	Dr.L.Kalaivani Professor/ EEE	Internal Members
3.	Dr.R.V.Maheswari Professor/ EEE	
4.	Dr.M.Ravindran Associate Professor (S.G) / EEE	
5.	Dr.N.B.Prakash Associate Professor / EEE	
6.	Dr.G.Kannayeram Assistant Professor(S.G) / EEE	
7.	Dr.M.P.E.Rajamani Assistant Professor (S.G) / EEE	Academic Expert
8.	Dr. V. Suresh Kumar, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamilnadu.	
9.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Valiamala P.O., Thiruvananthapuram, Kerala.	University Nominee
10.	Dr. S. Usa, Professor, Department of Electrical and Electronics Engineering, CEG Campus, Anna University, Chennai.	

11.	Dr. S. Paramasivam, R&D Head, Electrical Drives, Danfoss Industries Ltd., Chennai	Industrial Expert
12.	Dr. Santosh Kumar Annadurai GE T&D Ltd., GIS R&D Centre, Unit R&D Head, Padappai, Chennai.	
13.	Mr. M. Ramesh Senior Technical Engineer, Hardware Design and Development, Data Patterns India Pvt. Ltd., Chennai.	
14.	R. Jayakumar, Assistant Vice President, Wipro Technology Ltd., Bangalore	Meritorious Alumnus
15.	Mr. J. S. Jekhan, Third Year / EEE	Student Members
16.	Ms. J. Joyslin Janet, Third Year / EEE	

The Industrial Experts Dr. Hariram Satheesh, Principal Scientist, ABB Global Industries and Services Ltd, Bangalore & Mr.S.Subramanian, Senior Maintenance Engineering (I), Kudankulam Nuclear Power Project, Kudankulam, could not attend the meeting due to his prior commitments and unavoidable reasons and were granted leave of absence.

BoS / EEE 16.1	:	WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN, BOARD OF STUDIES IN THE DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
		The Chairman, BOS of the Electrical and Electronics Engineering welcomed and introduced the members of 16 th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / EEE 16.2	:	TO CONFIRM THE MINUTES OF FIFTEENTH BOS MEETING HELD ON 25 th JUNE 2021
		The minutes of the Fifteenth Board of Studies meeting held on 25 th June 2021 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 25.06.2021. The comments received have been incorporated and placed for confirmation. The same was approved by the 15 th Academic council.

		<u>Action Taken Report</u> (Enclosed in Annexure I)
BoS / EEE 16.3.1	:	TO CONFIRM AND APPROVE THE SYLLABUS OF PROGRAMME ELECTIVE COURSES FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of programme elective courses for UG (B.E. – EEE) PROGRAMME under R–2019.
Bos/EEE 16.3.2	:	TO CONFIRM AND APPROVE THE SYLLABUS OF ONE CREDIT ELECTIVE COURSE FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of One Credit Elective course “Switchgear and Protection Laboratory” for UG (B.E. – EEE) PROGRAMME under R–2019.
Bos/EEE 16.3.3	:	TO CONFIRM AND APPROVE THE SYLLABUS OF SPECIALIZATION ELECTIVE COURSES FOR UG DEGREE PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of specialization elective courses for UG DEGREE PROGRAMME under R–2019.
Bos/EEE 16.3.4	:	TO CONFIRM AND APPROVE THE SYLLABUS OF PRODUCT DEVELOPMENT LABORATORY COURSES IN SIXTH SEMESTER FOR UG DEGREE PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of “Product Development Laboratory” courses in 6 th Semester for UG DEGREE PROGRAMME under R–2019.
Bos/EEE 16.3.5	:	TO CONFIRM AND APPROVE CREDIT TRANSFER FOR OTHER ONLINE COURSES LIKE UDEMY, COURSERA ETC., AND NORMS FOR CREDIT TRANSFER FOR UG DEGREE PROGRAMME UNDER R–2019

		The proper guidelines from UGC, AICTE and Anna University may be followed for the credit transfer for other online courses like Udemy, Coursera etc.
Bos/EEE 16.3.6	:	TO CONFIRM AND APPROVE CONDUCTION OF END SEMESTER EXAMINATIONS IN HYBRID MODE FOR UG AND PG DEGREE PROGRAMME
		Guidelines from Tamilnadu government and Anna university may be followed for conducting End semester examinations.
Bos/EEE 16.4	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS
16.4.1	:	The External Members have suggested that some new specialization Elective domains may be given in future along with "Vehicle Electronics and Control".
16.4.2	:	For taking specialization Elective courses, Guest lectures may be arranged with the help of industry persons.
16.4.3	:	For reviewing UG/PG students project, Industrial experts may be assigned as evaluator.
Bos/EEE 16.5	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
16.5.1	:	In the course "Electrical Drives", Unit-III Title may be modified as Design of Controllers for DC Drives and manual for drives may be given in reference.
16.5.2	:	In the course "Power Syatem Dynamics and Control", reference book may be updated.
16.5.3	:	In the course "Power Electronics for Renewable Energy Systems", the content related to generators may be reduced in the syllabus.
16.5.4	:	In the course "EHV Power Transmission", syllabus may be reframed to include FACTS, HVDC, Electromagnetic Fields, online condition Monitoring, etc.
16.5.5	:	In the course "HVDC Transmission Systems", Topologies related to advanced converters may be included in Unit – II.
16.5.6	:	In the courses "Soft Computing for Electrical Engineering" and

		“MEMS and NEMS, updated versions of books may be included in text and reference books.
16.5.7	:	In the course “Embedded Systems”, course content may be expanded with overview of latest smart storage memories, and industry related approaches in embedded systems
16.5.8	:	In the course “DSP Based System Design”, the contents such as Application related to signal processing, video and image processing.
16.5.9	:	In the course, “Electric Vehicle Machines and Drive Systems”, conventional vehicle drive system and its issues may be included in Unit I. In Unit II and III, content related with motors may be given as overview.
16.5.10	:	In the course, “Battery Management System and modeling”, basics of batteries may be given in Unit-I. content related with battery charging, discharging and its performance on EV applications may be added in Unit II. EV charging station, Battery disposal and recycling techniques may be included in Unit V.
16.5.11	:	In the Course, “ Control of Hybrid Electric Vehicles” analysis of Hybrid EV system may be given in detail. Case studies related to energy storage system modeling may be added.
16.5.12	:	In the Course, “Autonomous Intelligent Vehicle”, sensors related to state estimation of vehicle may be included. Radar tracking system may be added.
16.5.13		Based on the agenda Bos/EEE 16.3.5 the external BOS members suggested to follow AICTE and Anna University guidelines and get proper approval from academic council.
16.5.14		Based on the agenda Bos/EEE 16.3.6 regrading conduction of end semester examinations in hybrid mode has to be followed with respect to Tamilnadu Government and Anna University guidelines and get proper approval from academic council.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and Syllabi. Based on the suggestions given by the members, BOS resolved to recommend the Academic Council for further approval.

Dr.N.B.Prakash, Associate Professor/EEE thanked all the members for their kind cooperation and the meeting came to an end.


CHAIRMAN
BOARD OF STUDIES

Annexure – I

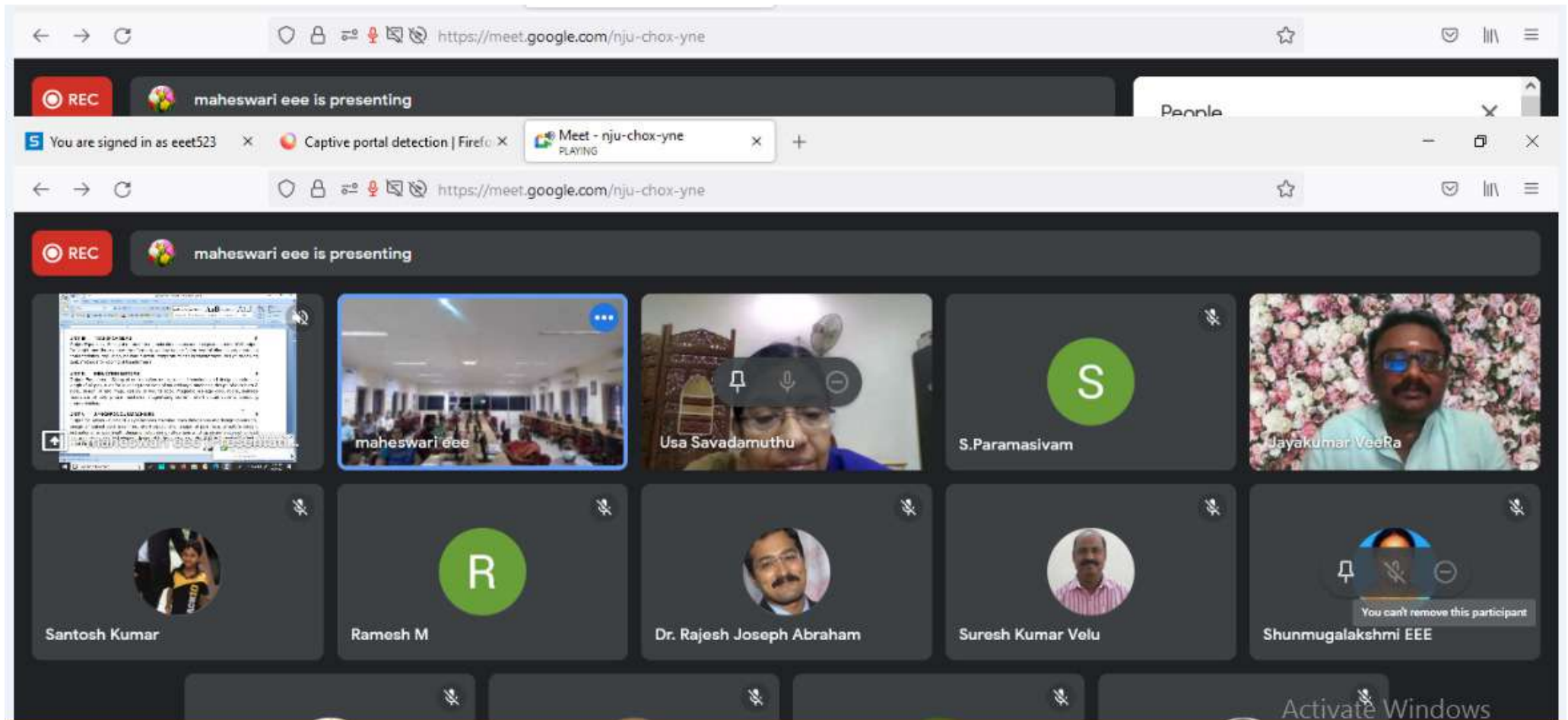
Action Taken on Suggestions from 15th BOS Meeting

Suggestions	Action Taken
The course “Switchgear and Protection Laboratory” is suggested to give as one credit elective laboratory course instead of core course in seventh semester.	Corrections are incorporated in the curriculum and Syllabus
In the course “Special Electrical Machines”, topics such as PCB motor and flux switch machine may be included in Unit – V.	Corrections are incorporated in the Syllabus
In the course “Power Electronics for Renewable Energy Systems”, the content of the syllabus may be framed with broad concepts of converters and inverters.	
In the course “Power Electronics for Renewable Energy Systems”, the content related to generators may be reduced in the syllabus.	
In the course “Power System Transients”, Unit – III may be included with the contents of Grounding and Earthing requirements, Earthing resistance, and Safety measures against lightning.	
In the course “Power System Transients”, Unit – IV may be completely changed to incorporate the contents such as protection and suppression of transients.	
In the course “Power System Transients”, Unit – V may be included with the contents of Modelling of Lightning and over-voltage scenario.	
For the course “CAD of Electrical Apparatus”, L T P C may be changed to convert the course for incorporating tutorial classes.	
In the course “CAD of Electrical Apparatus”, the title of Unit – II may be changed.	
In the course “CAD of Electrical Apparatus”, Unit – IV and Unit – V may be given equal weightage to include application related topics.	

In the course "CAD of Electrical Apparatus", some more reference books may be added.	Corrections are incorporated in the Syllabus
In the course "Insulation Technology", the additional content of moisture interaction with insulation may be added in Unit – II.	
In the course "Insulation Technology", the contents of effect of moisture and importance of purity may be added in Unit – IV.	
In the course "Insulation Technology", some contents may be added related to alternate insulation, and degradable and non degradable insulation.	
In the course "Logic and Distributed Control System", the content of Unit – I may be included with Scan time and Scan cycle, Case study of multiple parameters and logics and Inputs-Outputs.	
In the course "Logic and Distributed Control System", contents such as Time synchronization, Time stamping of events may be included in Unit – III.	
In the course "Logic and Distributed Control System", the content of Unit – IV may be included with the topics such as Watchdog controller for error detection, H/W or S/W defects, and Master slave concept.	
In the course "Logic and Distributed Control System", the contents such as Topology of lower and upper level controls and monitoring, GPS clock synchronizer in DCS may be included in Unit – V.	
In the course "Robotics and Automation", some more reference books may be included.	Corrections are incorporated in the Syllabus
In the course "Mobile Robots and Control", the contents related to remote control through wireless communication and connected robots may be added in Unit – V	


EEE Board Chairman

16th BOARD OF STUDIES MEETING – DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ON 29.11.2021



16th BOARD OF STUDIES MEETING – DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING ON 29.11.2021

The screenshot displays a Google Meet interface. At the top, a browser window shows the URL <https://meet.google.com/nju-chox-yne>. The main meeting area features a red 'REC' button and the text 'maheswari eee is presenting'. A presentation slide from Microsoft Word is visible, containing the following text:

Upon the successful completion of this course, the students will be able to

- CO1: discuss the concepts of multi quadrant dynamics of drives. (K2)
- CO2: explain the steady state analyze of fully controlled converter fed separately excited dc drives. (K2)
- CO3: design of controller for electrical drives. (K2)
- CO4: explain the various speed control strategies of induction motor. (K2)
- CO5: describe the various control techniques of synchronous motor. (K2)

UNIT I DRIVE CHARACTERISTICS 9
Electric drive – Equations governing motor steady state stability – multi quadrant Dynamics: acceleration, deceleration, starting & stopping – typical load torque characteristics – Selection of motor.

UNIT II CONVERTER / CHOPPER FED DC DRIVE 9
Steady state analysis of fully controlled converter fed separately excited DC drive – Continuous and discontinuous conduction – Time ratio and current limit control – Four quadrant operation of converter / chopper fed drive.

On the right side, a grid of nine participants is shown with their names and profile pictures:

- maheswari eee
- Usha Savadamuthu
- Jayakumar VeeRa
- S.Paramasivam
- Santosh Kumar
- Ramesh M
- Dr. Rajesh Josep...
- Suresh Kumar V...
- Shunmugalaksh...

At the bottom right, a watermark reads 'Activate Windows Go to PC settings to activate Windows.'