

Department of Electrical and Electronics Engineering

**MINUTES 25th Meeting of the Board of studies held on
13th June 2026 at 10.00 AM**

**Venue: Conference Hall, Autonomous Block
National Engineering College.**

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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25th Board of studies Meeting in the Department of **Electrical and Electronics Engineering**

Venue: Conference Hall, Autonomous Block
National Engineering College

Date & Time: 13.06.2026 & 10.00 AM

AGENDA

BoS / EEE 25.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering
BoS / EEE 25.2	:	Confirmation of the Minutes of the 24 th meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 08.12.2025 and Action Taken report of 24 th meeting of Board of studies.
BoS / EEE 25.3	:	Business brought forward by the Chairman, Board of studies
	25.3.1	Syllabus for final year courses of B.E-EEE programme under R-2023
	25.3.2	Syllabus for Programme Elective Courses of B.E-EEE programme under R-2023
	25.3.3	Syllabus for Open Elective Courses of B.E-EEE programme under R-2023
	25.3.4	Course design document for 7 th & 8 th semester courses under R-2023
	25.3.5	Feedback Analysis for R-2023 Curriculum & Syllabus
BoS / EEE 25.4	:	Any other Agenda brought forward by the Chairperson.
BoS / EEE 25.5	:	Suggestions given by the BoS Members

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F. No. 1-1/NEC/EEE.

13th June, 2026

Dear Sir/Madam,

Sub: Minutes of the 25th Meeting of the Board of studies in the EEE-Reg.

Kindly find attached herewith the Minutes of the 25th Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 13th June 2026 at 10.00 AM in Conference Hall, Autonomous Block of National Engineering College, Kovilpatti.

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

Yours Sincerely


Dr.M.Willjuice Iruthayarajan

Dr. M. WILLJUICE IRUTHAYARAJAN M.E., Ph.D.,
PROFESSOR AND HEAD
DEPT. OF ELECTRICAL AND ELECTRONICS ENGINEERING
NATIONAL ENGINEERING COLLEGE
K.R. NAGAR, KOVILPATTI - 628 503.

Department of Electrical and Electronics Engineering

MINUTES OF THE MEETING

The 25th Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 13th June, 2026 at 10.00 AM in Conference Hall, Autonomous Block, National Engineering College, Kovilpatti.

Venue: EEE Department Computer Centre, National Engineering College.

The following members were present:

1.	Dr.M.WilljuiceIruthayarajan, Professor and Head/ EEE	Chairman
2.	Dr.L.Kalaivani, Professor/ EEE	Internal Members
3.	Dr.R.V.Maheswari, Professor/ EEE	
4.	Dr.B.Vigneshwaran, Associate Professor/ EEE	
5.	Dr.S.Sankarakumar Associate Professor/ EEE	
6.	Mr.J.Thangaraj Assistant Professor / EEE	
7.	Dr.D.Kavitha, Associate Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai.	University Nominee
8.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Thiruvananthapuram.	Academic Expert
9.	Dr. M.P.Selvan, Professor & Head, Department of EEE, National Institute of Tech, Tiruchirappalli	
10.	Dr.P.S.Manoharan, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai,	
11.	Mr.Muthu Senthilkumar Deputy General Manager, Mahindra & Mahindra Limited, Chennai.	Industrial Expert
12.	Dr.Gopinath Selvaraj, Practice Head, ADAS & Autonomous Driving Practice,	

	Automotive Center of Excellence (Co E), UST Global Pvt. Ltd., Bengaluru.	
13.	Shri. C. Chandrasekharan, Deputy Director (Retd.), AISE, ISRO Propulsion Complex (IPRC), Mahendragiri.	Scientists from R&D Laboratories
14.	Mr.Ragupathy Ramachandran, Assistant General Manager, ESAB India Limited, Chennai.	Meritorious Alumnus
15.	M.Subha, Third Year/EEE	Student Member

The Academic Experts Dr.Siva Rama Krishna Vanjari, Professor / EE, Indian Institute of Technology, Hyderabad, Industrial experts Mr.Vijay Karthik, Lead Services Specialist, Technical Support, REN GS-GA-Field Engineering, GE T&D India Limited, Chennai and Mr.V.Karthikeyan, Co-Founder, Rapid Semiconductor Technology, Chennai, Dr.T.Bavisha, Project Technical Engineer Senior Professional, Hitachi Energy Porur, Chennai, M.Esakkimuthu, IV/EEE , student member could not attend the meeting due to their prior commitments and unavoidable reasons and granted leave of absence.

BoS / EEE 25.1	:	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 23 rd Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / EEE 25.2	:	TO CONFIRM THE MINUTES OF TWENTY FOURTH BOS MEETING HELD ON 08 th DECEMBER 2025
		The minutes of the Twenty Fourth Board of Studies meeting held on 08 th December 2025 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 08.12.2025 The comments received have been incorporated and placed for confirmation. The same was approved by the 24 th Academic council.

		<u>Action Taken Report</u> (Enclosed in Annexure I)
BoS / EEE 25.3.1		TO CONFIRM AND APPROVE SYLLABUS FOR FINAL YEAR COURSES OF B.E-EEE PROGRAMME UNDER R-2023
		RESOLVED TO APPROVE Syllabus for final year courses of B.E-EEE programme under R-2023
BoS/EEE 25.3.2	:	TO CONFIRM AND APPROVE SYLLABUS FOR PROGRAMME ELECTIVE COURSES OF B.E-EEE PROGRAMME UNDER R-2023
		RESOLVED TO APPROVE Syllabus for Programme Elective Courses of B.E-EEE programme under R-2023
BoS/EEE 25.3.3		TO CONFIRM AND APPROVE SYLLABUS FOR OPEN ELECTIVE COURSES OF B.E-EEE PROGRAMME UNDER R-2023
		RESOLVED TO APPROVE Syllabus for Open Elective Courses of B.E-EEE programme under R-2023
BoS/EEE 25.3.4		TO CONFIRM AND APPROVE THE COURSE DESIGN DOCUMENT FOR 7TH & 8TH SEMESTER COURSES UNDER R-2023.
		RESOLVED TO APPROVE the Course Design Document for 7 th & 8 th Semester courses under R-2023.
BoS/EEE 25.3.5	:	TO CONFIRM AND APPROVE THE FEEDBACK ANALYSIS FOR R-2023 CURRICULUM & SYLLABUS
		RESOLVED TO APPROVE the Feedback Analysis for R-2023 Curriculum & Syllabus
BoS/EEE 25.4	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS

	• The Board members appreciated the efforts taken in facilitating Internship/Inplant Training opportunities for students. The members discussed about the assessment and evaluation procedures followed for the internship and in-plant training programmes. They also emphasized the need to strengthen industry engagement by expanding collaborations with new companies in both the Electrical and Electronics domains, thereby providing students with diverse industrial exposure and learning opportunities in the future. • The external experts sought information on the industries/organizations where students undergo internships and industrial training, the duration of the training, and its relevance to the programme outcomes. • The experts suggested that the knowledge of modern communication systems and Networking protocols would benefit students working in areas such as smart grids, industrial automation, IoT-enabled power systems, SCADA, and intelligent energy management systems. The members suggested that these courses may be included in the upcoming curriculum either as Programme Electives or Open Electives. • The members suggested incorporating SDG-based case studies, assignments, and project activities into relevant courses to enhance students' awareness of sustainability and their contribution to societal and environmental challenges. • The members reviewed the student feedback analysis report of R-2023 and suggested that the relevant recommendations be considered and incorporated during future curriculum revisions to enhance industry exposure, practical learning, emerging technology coverage, and employability skills.
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BoS/EEE 25.5	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
B.E – EEE		
BoS/EEE 25.5.1	:	The members suggested that, for the course “Internship/Inplant Training”, students should submit an internship report and deliver a presentation upon the successful completion of the Internship/Inplant Training.
BoS/EEE 25.5.2	:	- For the course “LT & HT Distribution System”, the members suggested revising the course title. - The members recommended removing the existing CO5 and restructuring the Course Outcomes by splitting the contents of CO1 to CO4 appropriately to formulate a new CO5. - The members recommended the inclusion of simulation-based content and cybersecurity topics in the syllabus.
BoS/EEE 25.5.3	:	- For the course “Electricity markets”, the inclusion of emerging topics such as Blockchain-based Energy Trading and Artificial Intelligence/Machine Learning techniques for electricity price forecasting. - The members suggested to include https://www.powergrid.in in reference. - Case studies can be given in CO2 and CO4.
BoS/EEE 25.5.4	:	- For the course “Virtual Instrumentation”, bus-based interfacing and virtual twin technologies can be included in the course content. - The members recommended incorporating case studies on open source based VI software.
BoS/EEE 25.5.5	:	For the course “Electrical Drives and Control”, case study can be included in CO3 and drive cycle analysis can be included in the syllabus.

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 following to the Academic Council for further approval.

Mr.K.Kumar, Assistant Professor(SG)/ EEE thanked all the members for their kind cooperation and the meeting came to an end.

Members Present

CHAIRMAN		
1.	Dr.M.WilljuiceIruthayarajan Professor and Head/ EEE	<i>M. Willjuice</i> 13/6/26
INTERNAL MEMBERS		
2.	Dr.L.Kalaivani, Professor/ EEE	<i>L. Kalaivani</i> 13/6/26
3.	Dr.R.V.Maheswari, Professor/ EEE	<i>R.V. Maheswari</i> 13/6/26
4.	Dr.B.Vigneshwaran, Associate Professor/ EEE	<i>B. Vigneshwaran</i> 13/6/26
5.	Dr.S.Sankarakumar Associate Professor/ EEE	<i>S. Sankarakumar</i> 13/6/26
6.	Mr.J.Thangaraj Assistant Professor / EEE	<i>J. Thangaraj</i>
UNIVERSITY NOMINEE		
7.	Dr.D.Kavitha, Associate Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai.	<i>D. Kavitha</i>
ACADEMIC EXPERTS		
8.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Thiruvananthapuram.	<i>Rajesh Joseph Abraham</i>
9.	Dr. M.P.Selvan, Professor & Head, Department of EEE, National Institute of Tech, Tiruchirappalli	<i>M.P. Selvan</i> 13/6/26
10.	Dr.P.S.Manoharan, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai.	<i>P.S. Manoharan</i>

INDUSTRIAL EXPERTS

11.	Dr.Gopinath Selvaraj, Practice Head, ADAS & Autonomous Driving Practice, Automotive Center of Excellence (Co E), UST Global Pvt. Ltd., Bengaluru.	
12.	Mr.Muthu Senthilkumar Deputy General Manager, Mahindra & Mahindra Limited, Chennai	

SCIENTISTS FROM R&D LABORATORIES

13.	Shri. C. Chandrasekharan, Deputy Director (Retd.), AISE, ISRO Propulsion Complex (IPRC), Mahendragiri.	
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MERITORIOUS ALUMNUS

14.	Mr.Ragupathy Ramachandran, Assistant General Manager, ESAB India Limited, Chennai.	
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STUDENT MEMBER

15.	M.Subha, Third Year/EEE	M. Subha.
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EEE Board Chairman

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Action taken on suggestions from 24th BoS Meeting Held on 08.12.2025

B.E-EEE	
- In the course, "Electric Vehicle Dynamics", IC Engines comparison can be added in CO1. - Case studies on two/three and four-wheelers can be given in CO5. Include MATLAB reference for modeling	The corrections has been carried out and reference has been included in the syllabus
- In the course, "Control of Hybrid Electric Vehicle", the CO1 statement can be revised. - In CO1, the order of content HEV, BEV, and FCEV may be swapped to BEV, HEV, and FCEV.	The CO1 statement has been revised and the sequence of topics has been reordered
- In the course, "Grid Integration of Electric Vehicles", other concepts related to V2G can be removed in CO1. - Regulatory and Legal Challenges may be given in separate COs. - CO3, CO4 statements need to be revised.	- Mentioned contents removed from CO1. - Regulatory and legal aspects have been shifted and framed as separate COs. - CO3 and CO4 have been modified for clarity and relevance.
In the course, "High Voltage Switchgear", Autonomous Switchgear can be included.	Content on Autonomous Switchgear has been added to the syllabus
In the course, "Switched Mode Power Conversions", an SMPS design for the EV charging case study can be given in CO5.	A SMPS design case study for EV charging has been incorporated into CO5.
In the course "Logic and Distributed Control System", a communication protocol for SCADA and case studies can be included.	A communication protocol for SCADA along with appropriate case studies has been introduced in the syllabus.
In the course, "POWER QUALITY", CO4 and CO5 can be swapped	CO4 and CO5 have been interchanged
- In the course, "Electrical Energy Conservation and Auditing", the title can be renamed as "Energy Auditing and Conservation". - COs order can be swapped.	- The course title has been updated to "Energy Auditing and Conservation." - The COs has been rearranged to improve conceptual continuity.
In the course, "Utilization and Electric	The course title has been changed to

Traction”, the title can be renamed as “Utilization of Electrical Energy”. Utilization content needs to be added in CO1. Laser welding and types of Arc welding can be added in CO3.	“Utilization of Electrical Energy.” - Utilization-related concepts have been added in CO1 - Laser welding and types of arc welding have been incorporated into CO3.
In the course “Embedded Systems”, CO4 and CO5 can be swapped. Mention Processors in case studies.	CO4 and CO5 have been swapped. Processors mentioned in case studies.
In the course, “Energy Storage Systems and Application”, battery recycling can be included in CO3.	Battery recycling has been included under CO3
- In the course, “Thermal Management for Electrical and Electronics Engineering” thermal impedance and Thermal analysis comparison of silicon and silicon carbide devices can be added in CO1. - The heat sink loss model can be added in CO3.	- Thermal impedance and Si vs SiC thermal performance comparison have been added to CO1. - A heat-sink loss model has been incorporated under CO3.
In the course. “Digital Signal Processing”, Selection of Processors needs to be addressed.	Selection of Processors included in syllabus


EEE Board Chairman



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25th BOARD OF STUDIES MEETING - DEPARTMENT OF EEE ON 13.06.2026

