

Department of Electrical and Electronics Engineering

MINUTES 23rd Meeting of the Board of studies held on
14th June 2025 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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23rd Board of studies Meeting in the Department of **Electrical and Electronics Engineering**

Venue: Conference Hall, Autonomous Block
National Engineering College

Date & Time: 14.06.2025 & 10.00 AM

AGENDA

BoS / EEE 23.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering
BoS / EEE 23.2	:	Confirmation of the Minutes of the 22 nd meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 07.12.2024 and Action Taken report of 22 nd meeting of Board of studies.
BoS / EEE 23.3	:	Business brought forward by the Chairman, Board of studies
	23.3.1	Syllabus for 6 th Semester Core Courses of UG degree programme under R-2023.
	23.3.2	Syllabus for Programme Elective Courses of UG degree programme under R-2023.
	23.3.3	Syllabus for One Credit Courses of UG degree programme under R-2023.
	23.3.4	Course Design Document for 5 th Semester courses under R-2023.
BoS / EEE 23.4		Any other Agenda brought forward by the Chairperson.
BoS / EEE 23.5	:	Suggestions given by the BoS Members

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

14th June, 2025

Dear Sir/Madam,

Sub: Minutes of the 23rd Meeting of the Board of studies in the EEE-Reg.

Kindly find attached herewith the Minutes of the 23rd Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 14th June 2025 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.WilljuiceIruthayarajan

Dr. M. WILLJUICE IRUTHAYARAJAN, ME., Ph.D.
Professor & Head
Department of Electrical & Electronics Engg.
National Engineering College
Kovilpatti - 628 503

Department of Electrical and Electronics Engineering

MINUTES OF THE MEETING

The 23rd Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 14th June, 2025 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, Valiamala P.O., Thiruvananthapuram, Kerala.	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 Sr.Lead Engineer, Mahindra & Mahindra Limited, Chennai.	
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, 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.	A. Reginold, Third Year/EEE	Student Members
16.	M.Esakkimuthu, Second Year/EEE	

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, could not attend the meeting due to their prior commitments and unavoidable reasons and granted leave of absence.

BoS / EEE 23.1	:	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 23.2	:	TO CONFIRM THE MINUTES OF TWENTY SECOND BOS MEETING HELD ON 07 th DEC 2024.
		The minutes of the Twenty Second Board of Studies meeting held on 07 th Dec 2024 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 07.12.2024 The comments received have been incorporated and placed for confirmation. The same was approved by the 22 nd Academic council.

		<u>Action Taken Report</u> (Enclosed in Annexure I)
BoS / EEE 23.3.1		TO CONFIRM AND APPROVE SYLLABUS FOR 6TH SEMESTER COURSES OF UG DEGREE PROGRAMME UNDER R-2023.
		RESOLVED TO APPROVE Syllabus for 6 th Semester Courses of UG degree programme under R-2023.
BoS/EEE 23.3.2	:	TO CONFIRM AND APPROVE SYLLABUS FOR PROGRAMME ELECTIVE COURSES OF UG DEGREE PROGRAMME UNDER R-2023.
		RESOLVED TO APPROVE the syllabus for Programme Elective Courses of UG Degree Programme under R 2023.
BoS/EEE 23.3.3	:	TO CONFIRM AND APPROVE SYLLABUS FOR ONE CREDIT COURSES OF UG DEGREE PROGRAMME UNDER R-2023.
		RESOLVED TO APPROVE the One Credit Courses of UG Degree Programme under R 2023.
BoS/EEE 23.3.4	:	TO CONFIRM AND APPROVE THE COURSE DESIGN DOCUMENT FOR 5TH SEMESTER COURSES UNDER R-2023.
		RESOLVED TO APPROVE the Course Design Document for 5 th Semester courses under R-2023.
BoS/EEE 23.4	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS
		✓ The BOS members insisted the Board Chairman to arrange an industrial visit for the courses to enhance the practical learning. In response, the Board Chairman informed that industrial visits had already been arranged and conducted for the relevant courses in the past semesters.

		<ul style="list-style-type: none"> ✓ They also suggested that faculty members to include GATE-related problems in their respective subjects to better prepare students for placements. ✓ Student member suggested to include ESP32 instead of ESP8266 in one credit syllabus “ARDUINO and ESP8266 Programming”
BoS/EEE 23.5	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
B.E – EEE		
BoS/EEE 23.5.1	:	In the course “Power System Protection and Switchgear” , overview of substation automation, applications of IED can be included in CO3.
BoS/EEE 23.5.2	:	In the course “High Voltage Engineering” , design of lightning arrester can be given as case study in CO1.
BoS/EEE 23.5.3	:	In the course “Electric Vehicle Safety” , need of Electric Vehicle Safety in CO1, introduction to charging standards, wireless charging and its safety implications in CO2, cyber security risk in EV and functional safety in CO5 can be added.
BoS/EEE 23.5.4	:	In the course “Battery Management Systems and Modeling” , flash charging, rate of charging in CO1, depth of discharge in CO2, wireless Battery Management Systems in CO3 can be included.
BoS/EEE 23.5.5	:	In the course “HVDC Transmission Systems” , Voltage Source Converter and multiterminal HVDC can be included in CO1.
BoS/EEE 23.5.6	:	In the course “Electrical Machine Design” estimation of performance and losses in CO2, design using modern tools as case study in CO5 can be included.
BoS/EEE 23.5.7	:	In the course “ Solid State Drives” , PWM techniques, vector



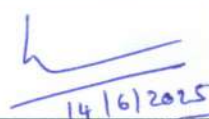

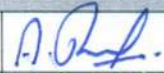
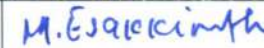
		control can be added in CO3
BoS/EEE 23.5.8	:	In the course “Mobile Robotics and Control” , Radar, laser scanner, LIDAR in CO1, workspace, frames in CO2, and Case studies in CO5 can be included.
BoS/EEE 23.5.9	:	In the course “MEMS and NEMS” Application specific integrated circuits (ASIC) can be included in CO1.
BoS/EEE 23.5.10	:	In the course “Electric Power Stations” , case study can be given in CO5.
BoS/EEE 23.5.11	:	In the course “Sustainable Power Generation System” , pumped storage in CO4 and MNRE renewable energy report can be included in references.
BoS/EEE 23.5.12		In the course “Quality Practices for Safety Critical Instrumentation System” , IP standards have to be included in course content.

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.

Dr.B.Vigneshwaran, Associate Professor/ 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>Y. Willjuice</i> 14/06/2025
INTERNAL MEMBERS		
2.	Dr.L.Kalaivani, Professor/ EEE	<i>L. Kalaivani</i> 14/06/25
3.	Dr.R.V.Maheswari, Professor/ EEE	<i>R.V. Maheswari</i>
4.	Dr.B.Vigneshwaran, Associate Professor/ EEE	<i>B. Vigneshwaran</i>
5.	Dr.S.Sankarakumar Associate Professor/ EEE	<i>S. Sankarakumar</i>
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, Valiamala P.O., Thiruvananthapuram, Kerala.	<i>Rajesh Joseph Abraham</i> 14/06/2025
9.	Dr. M.P.Selvan, Professor & Head, Department of EEE, National Institute of Tech, Tiruchirappalli	<i>M.P. Selvan</i> 14/06/25
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.	 14/6/25
12.	Mr.Muthu Senthilkumar Sr.Lead Engineer, Mahindra & Mahindra Limited, Chennai	 14/6/25
SCIENTISTS FROM R&D LABORATORIES		
13.	Shri. C. Chandrasekharan, Deputy Director, AISE, ISRO Propulsion Complex (IPRC), Mahendragiri.	 14/6/2025
MERITORIOUS ALUMNUS		
14.	Mr.Ragupathy Ramachandran, Assistant General Manager, ESAB India Limited, Chennai.	
STUDENT MEMBER		
15.	A. Reginold, Third Year/EEE	
16.	M.Esakkimuthu, Second Year/EEE	


EEE Board Chairman

Dr. M. WILLJUICE IRUTHAYARAJAN, ME., Ph.D.
Professor & Head
Department of Electrical & Electronics Engg.
National Engineering College
Kovilpatti - 628 503

23rd BOARD OF STUDIES MEETING - DEPARTMENT OF EEE ON 14.06.2025

