

Department of Electrical and Electronics Engineering

MINUTES 22nd Meeting of the Board of studies held on
07th December 2024 at 10.00 AM

Venue: EEE Department Computer Centre,
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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22nd Board of studies Meeting in the Department of Electrical and Electronics Engineering

Venue: EEE Department Computer Centre,
National Engineering College

Date & Time: 07.12.2024 & 10.00 AM

AGENDA

BoS / EEE 22.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering	
BoS / EEE 22.2	:	Confirmation of the Minutes of the 21 st meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 08.06.2024 and Action Taken report of 21 st meeting of Board of studies.	
BoS / EEE 22.3	:	Business brought forward by the Chairman, Board of studies	
		22.3.1	Amendments in Curriculum under R-2023
		22.3.2	Core Courses for the V sem UG degree programmes under R-2023.
		22.3.3	Proposed Verticals in UG degree programmes under R-2023, along with the syllabus.
		22.3.4	One Credit Courses in UG degree programmes under R-2023.
		22.3.5	Elective Courses for PG degree programmes under R-2023.
BoS / EEE 22.4		Any other Agenda brought forward by the Chairperson.	
BoS / EEE 22.5	:	Suggestions given by the BoS Members	

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

07th Dec, 2024

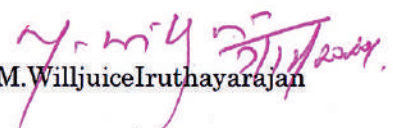
Dear Sir/Madam,

Sub: Minutes of the 22nd Meeting of the Board of studies in the EEE-Reg.

Kindly find attached herewith the Minutes of the 22nd Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 07th Dec, 2024 at 10.00 AM in EEE Department Computer Centre of National Engineering College, Kovilpatti.

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.

Yours Sincerely


Dr. M. Willjuice Iruthayarajan

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 22nd Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 07th Dec, 2024 at 10.00 AM in EEE Department Computer Centre, 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.N.B.Prakash, Professor/ EEE	
5.	Dr.S.Sankarakumar Assistant Professor(S.G) / 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.P.S.Manoharan, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai,	Academic Expert
9.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Valiamala P.O., Thiruvananthapuram, Kerala.	
10.	Dr.Gopinath Selvaraj, Practice Head, ADAS & Autonomous Driving Practice, Automotive Center of Excellence (Co E), UST Global Pvt. Ltd., Bengaluru.	Industrial Expert
11.	Mr.Vijay Karthik, Senior Manager-ERDC, L&T Construction, Chennai.	

12.	Mr.V.Karthikeyan, Co-Founder, Rapid Semiconductor Technology, Chennai.	
13.	Shri. C. Chandrasekharan, Deputy Director, AISE, ISRO Propulsion Complex (IPRC), Mahendragiri.	Scientists from R&D Laboratories
14.	Mr.Ragupathy Ramachandran, Senior product Manager, ESAB India Limited, Chennai.	Meritorious Alumnus
15.	V.K.Sasi Bharathi, Final Year/EEE	Student Members
16.	A. Reginold, Third Year/EEE	

The Academic Experts Dr. M.P.Selvan, Professor & Head, Department of EEE, National Institute of Tech, Tiruchirappalli, Dr.Siva Rama Krishna Vanjari, Professor / EE, Indian Institute of Technology, Hyderabad, Industrial experts Mr.Muthu Senthilkumar, Sr.Lead Engineer, Mahindra & Mahindra Limited, Chennai, Dr.T.Bavisha, EMT Analyst, Insulation Coordination(IC) Team, KNR Engineers (India) Pvt. Ltd. (A JEF Group Company), Chennai and Mr.K. Shanmugam, Architect, Robert Bosch Engineering Solutions Ltd., Coimbatore could not attend the meeting due to their prior commitments and unavoidable reasons and granted leave of absence.

BoS / EEE 22.1	:	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 22 nd Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / EEE 22.2	:	TO CONFIRM THE MINUTES OF TWENTY FIRST BOS MEETING HELD ON 08 th JUNE 2024.
		The minutes of the Twenty first Board of Studies meeting held on 08 th June 2024 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 08.06.2024 The comments received have been incorporated and placed for confirmation. The same was approved by the 21 st Academic council. <u>Action Taken Report</u> (Enclosed in Annexure I)

BoS / EEE 22.3.1		TO CONFIRM AND APPROVE AMENDMENTS IN CURRICULUM UNDER R-2023
		RESOLVED TO Approve Amendments in Curriculum Under R-2023
BoS/EEE 22.3.2	:	TO CONFIRM AND APPROVE COURSES AND SYLLABUS FOR THE V SEMESTER UG (B.E-EEE), DEGREE PROGRAMME UNDER R-2023
		RESOLVED TO approve the Courses and syllabus for the V semester UG (B.E-EEE), Degree Programme under R-2023
BoS/EEE 22.3.3	:	TO CONFIRM AND APPROVE THE VERTICALS FOR, UG (B.E-EEE), DEGREE PROGRAMME ELECTIVE LIST UNDER R-2023
		RESOLVED TO approve the the verticals for, UG (B.E-EEE), Degree Programme Elective List under R-2023
BoS/EEE 22.3.4	:	TO CONFIRM AND APPROVE THE ONE CREDIT COURSES IN UG DEGREE PROGRAMMES UNDER R-2023.
		RESOLVED TO approve the One Credit Courses in UG degree programmes under R-2023.
BoS/EEE 22.3.5		TO CONFIRM AND APPROVE THE ELECTIVE COURSES FOR PG DEGREE PROGRAMMES UNDER R-2023.
		RESOLVED TO approve approve elective courses for PG Degree Programmes under R-2023.
BoS/EEE 22.4	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS
		The BOS members asked to compare the Core syllabus with GATE syllabus. Also the mebers suggested the faculty mebers to give simulation based assignments as one of the assessment tools.


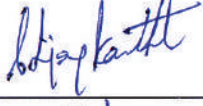
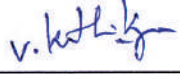
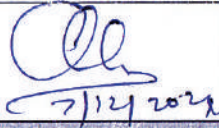
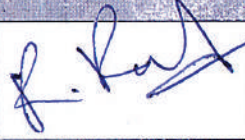
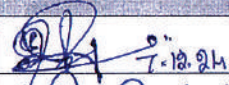

BoS/EEE 22.5	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
B.E – EEE		
BoS/EEE 22.5.1		In the course “Digital Electronics”, real-world application oriented problems related to the design of combinational circuits may be included for practice. SRAM, DRAM, and future trends in transistors can be incorporated in the syllabus."
BoS/EEE 22.5.2		In the course “Control System”, Control Systems Engineering, by Norman S. Nise can be given as text book.
BoS/EEE 22.5.3		In the course, “Power System-II”, Grid Integration studies of wind and solar energy may be included in CO2. Auto recloser content may be removed from CO5 and added in Power System Protection and Switchgear course.
BoS/EEE 22.5.4		In the course, “ Micro Processor and Micro Controller”, the syllabus content can be compared with GATE syllabus and revised.
BoS/EEE 22.5.5		In the course “Power Electronics”, more focus should be given to IGBT selection, ratings and peripheral devices.
BoS/EEE 22.5.6		In diversified verticals, the course “ Substation Automation”, can be given as 3 credit course.
BoS/EEE 22.5.7		In the elective course, “ Wind and Solar Energy System”, reflective solar cells can be included in the syllabus.
BoS/EEE 22.5.8		In the elective course, “Power Electronics Applications to Power Systems” STATCOM devices can be included in CO5.
BoS/EEE 22.5.9		In the elective course, “Electrical Safety, Operations and Regulations”, Standards on electrical safety can be included.
BoS/EEE 22.5.10		Recent reference books 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.

Dr.N.B.Prakash, 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>M. Willjuice</i> 7/12/24
INTERNAL MEMBERS		
2.	Dr.L.Kalaivani, Professor/ EEE	<i>L. Kalaivani</i> 7/12/24
3.	Dr.R.V.Maheswari, Professor/ EEE	<i>R.V. Maheswari</i> 7/12/24
4.	Dr.N.B.Prakash, Professor/ EEE	<i>N.B. Prakash</i>
5.	Dr.S.Sankarakumar Assistant Professor(S.G) / EEE	<i>S. Sankarakumar</i> 7/12/24
6.	Mr.J.Thangaraj Assistant Professor / EEE	<i>J. Thangaraj</i> 7/12/24
UNIVERSITY NOMINEE		
7.	Dr.D.Kavitha, Associate Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai.	<i>D. Kavitha</i> 07/12/24
ACADEMIC EXPERTS		
8.	Dr.P.S.Manoharan, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamilnadu.	<i>P.S. Manoharan</i> 07/12/24
9.	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> 07/12/2024

INDUSTRIAL EXPERTS		
10.	Dr.Gopinath Selvaraj, Practice Head, ADAS & Autonomous Driving Practice, Automotive Center of Excellence (Co E), UST Global Pvt. Ltd., Bengaluru.	
11.	Mr.Vijay Karthik, Senior Manager-ERDC, L&T Construction, Chennai.	
12.	Mr.V.Karthikeyan, Co-Founder, Rapid Semiconductor Technology, Chennai.	
SCIENTISTS FROM R&D LABORATORIES		
13.	Shri. C. Chandrasekharan, Deputy Director, AISE, ISRO Propulsion Complex (IPRC), Mahendragiri.	
MERITORIOUS ALUMNUS		
14.	Mr.Ragupathy Ramachandran, Senior product Manager, ESAB India Limited, Chennai.	
STUDENT MEMBER		
15.	V.K.Sasi Bharathi, Final Year/EEE	
16.	A. Reginold, Third 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

Annexure-I

Action taken on suggestions from 21st BoS Meeting

B.E-EEE	
<ul style="list-style-type: none"> In the course, "Signals and Systems" the content realisability may be added. In CO2 Block diagram representation may be given before state space representation. Power Spectral density may be added in CO5. Simulation on types of signals, CT and DT signals in complex frequency domain may be added in syllabus. 	
<ul style="list-style-type: none"> In the course, "Power System – I", Recent Trends in Power System can be included in CO1. In CO3 statement action verb can be changed and introduction to FACTS devices can be included. In CO4 Methods of laying cables can be included. In CO5 110kV/11kV may be replaced with 220kV/11kV Substation, and Substation Automation can be included. 	The mentioned suggestions has been incorporated in the syllabus and approved through academic council meeting held on 22.06.2024
<ul style="list-style-type: none"> In the Course, "Linear Integrated Circuits", recent trends in IC packaging may be included in CO1. In CO3 Bistable multivibrator and in CO5 Bistable 555 timer may be included. 	
The Course Digital Electronics in Semester V can be moved to semester IV in the Curriculum.	The suggestion has been carried out in the curriculum.
<p>The following courses can be included as elective courses.</p> <ul style="list-style-type: none"> RISC architecture, Design for Testability , VLSI design lifecycle can be added. 	The following courses have been included in the diversified vertical.
The course, "MEMS and NEMS" , in the Embedded System Technology vertical may be moved to diversified vertical.	The courses have been moved to diversified vertical.
<p>In the vertical, "Electric Vehicle Technology", the following 1 credit courses may be added.</p> <ul style="list-style-type: none"> Autonomous Vehicle sensors. 	The suggested courses have been included in the vertical, Electric Vehicle Technology.

<ul style="list-style-type: none"> • Electric-Vehicle dynamics. • Electric-Vehicle safety 	
In the course title, "Battery Management systems and Modeling" , Charging can be given as separate unit.	The suggestions will be incorporated in upcoming BOS meeting.
In the verticals, "High Voltage Engineering" , Insulation Coordination 1 credit course can be added.	The suggested courses have been included in the vertical, High Voltage Engineering
M.E-HVE	
In the course, "Application of AI Techniques to High Voltage Engineering" , books related to high voltage transformers and Deep Neural Network may be included.	The suggestion has been incorporated in the syllabus.

EEE Board Chairman

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

22nd BOARD OF STUDIES MEETING - DEPARTMENT OF EEE ON 07.12.2024

