Department of Electronics and Communication Engineering

MINUTES 16th Meeting of the Board of studies held on
27th November, 2021 at 10.30 AM

Venue: Conference Hall, National Engineering College
K.R.Nagar, Kovilpatti – 628503 (Through Google Meet:
https://meet.google.com/zav-defq-jtq)

National Engineering College, K.R.Nagar, Kovilpatti – 628 503
(An Autonomous Institution - Affiliated to Anna University, Chennai)
www.nec.edu.in

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F. No. 1-1/NEC/Branch/ECE

29th November, 2021

Dear Sir/Madam,

Sub: *Minutes of the 16th Meeting of the Board of studies in Electronics and Communication Engineering - Reg.*

The 16hMeeting of Board of studies of the Electronics and Communication Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 was conducted on 27th November, 2021 at 10.30 AM in the conference hall of National Engineering college through google meet. Thanks for the presents and valuable suggestions. The minutes of the meeting is attached herewith.

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

Thanking You,

Yours Sincerely

(Dr.A.Shenbagavalli)

Department of Electronics and Communication Engineering

National Engineering College, K.R.Nagar, Kovilpatti– 628503

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

www.nec.edu.in

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

Venue: Conference Hall, National Engineering College
K.R.Nagar, Kovilpatti – 628503 (Through Google Meet:
https://meet.google.com/zav-defq-jtq)

Date & Time: 27.11.2021 & 10.30 AM

AGENDA

ECE/BoS16.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Electronics and Communication Engineering
ECE/BoS16.2	:	Confirmation of the Minutes and action taken report of the 15th meeting of Board of studies in the Department of Electronics and Communication Engineering held on 26th June 2021.
ECE/BoS16.3	:	Business brought forward by the Chairman, Board of studies 16.3.1. Additional Elective courses for UG degree programme under R-2019. 16.3.2. Additional Elective courses for PG degree programme under R-2019. 16.3.3. Curriculum, Syllabus, and regulation requirements of Specialization course to be introduced under R-2019. 16.3.4. Product Development Lab (Updated Syllabus) for UG degree programme under R-2019. 16.3.5. Credit transfer for other online courses like Udemy, Coursera etc., and norms for credit transfer. 16.3.6. Conduction of End semester examinations in hybrid mode.
ECE /BoS16.4	:	Any other items
ECE /BoS16.5	:	Suggestions given by the BoS Members

Department of Electronics and Communication Engineering

MINUTES OF THE MEETING

The 16th Meeting of the Board of studies of the Electronics and Communication Engineering was held on 27th November, 2021 at 10.30 AM in the Conference Hall of the National Engineering College, K.R.Nagar, Kovilpatti– 628503.

1.   The following members were present:

1.	Dr.A.Shenbagavalli Professor & Head	Chairman
2.	Dr.S.Shanmugavel, Senior Prof, Director	Internal Members
3.	Dr. S.Tamilselvi, Professor	
4.	Dr.V.Vijayarangan, Professor	
5.	Dr. V.R.S.Mani, Asso. Prof (SG)	
6.	Mr.N.Arumugam, Asso Prof	
7.	Dr.V.Suresh, Asso. Prof	
8.	Dr. T.S.Arun Samuel, Asso. Prof	
9.	Dr. T.Vijayanandh, Asst. Prof (SG)	
10.	Dr. K.J.Prasanna Venkatesan, Asst. Prof (SG)	
11.	Mr. A.Saravana Selvan, Asst. Prof (SG)	
12.	Mr. S.Cammillus, Asst. Prof (SG)	
13.	Mrs. R.Manjula Devi, Asst. Prof (SG)	
14.	Mr. C.Balamurugan, Asst. Prof (SG)	
15.	Mr. K.Subramanian, Asst. Prof (SG)	
16.	Mr. M.Satheesh Kumar, Asst. Prof (SG)	
17.	Mr. M.Sathish Kumar, Asst. Prof	
18.	Mr. B.Ganapathyram, Asst. Prof	
19.	Dr.I.Paulkani, Asst. Prof	
20.	Mr.M.Vignesh, Asst. Prof	
21.	Dr. M. Meenakshi, Professor, Department of ECE, College of Engineering, Guindy Campus, Chennai.	Academic Experts
22.	Dr.M.Ganesh Madhan, Professor,	

	Department of ECE Madras Institute of Technology, Anna University, Chennai.	
23.	Dr.R.Pandeeswari Associate Professor Department of ECE NIT, Trichy.	Meritorious Alumnus
24.	Mr.Raja Subramanian Senior Architect, Mistral Solutions Pvt Ltd Bangalore.	Industrial Experts
25.	Mr.K.A.Irshadh Abdul Rasheed Associate Partner Cyber Security Ernst And Young LLP Chennai	
26.	Mr. A. Gowrisankar Senior Manager- SI CALIBER INTERCONNECT SOLUTIONS Coimbatore.	Special Invitee
27.	Mr.Srivatsan Srinivasan, Chief Data Scientist Cognizant, USA.	
28.	Mr.Vivek.A, Vice President, Schnell Energy Equipments Pvt Ltd., Coimbatore.	
29.	Dr.T.G.Venkatesh, Associate Professor, Department of Electrical Engineering, IIT Madras.	
30.	Ms.A. Subitsha, III Year ECE	Student Members
31.	Ms.M. Subashini, III Year ECE	
32.	Mr.K. Athiguru, III Year ECE	

Mr.Srivatsan Srinivasan, Chief Architect, Cognizant Technologies, USA,
Mr.Vivek.A, Vice President, Schnell Energy Equipments Pvt Ltd., Coimbatore,
Mr. A. Gowrisankar, Senior Manager- SI, Caliber Interconnect Solutions,

Coimbatore and Dr.T.G.Venkatesh, Associate Professor, Department of Electrical Engineering, IIT Madras could not attend the meeting due to his prior commitments and unavoidable reasons and was granted leave of absence.

BoS/ECE16.1 : WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN, BOARD OF STUDIES IN THE DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The Chairman, BoS of the Electronics and Communication Engineering welcomed and introduced the members of 16th Board of Studies.

BoS/ECE 16.2 : TO CONFIRM THE MINUTES OF FOURTEENTH BOS MEETING HELD ON 26TH JUNE 2021.

The minutes of the fifteenth Board of Studies meeting held on 26th June 2021 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 15th Academic council.

➤ Action Taken Report

(Enclosed in *Annexure I*)

BoS/ECE16.3.1 : Approval for additional Elective Courses for UG Degree Programme Under R-2019

Resolved to approve the additional elective courses for UG Degree Programme Under R-2019.

BoS/ECE16.3.2 : Approval for additional Elective Courses for PG Degree Programme Under R-2019

Resolved to approve the additional elective Courses for PG Degree Programme Under R-2019.

BoS/ECE16.3.3 : Approval for Curriculum, Syllabus, and regulation requirements of Specialization course to be introduced under R-2019.

Resolved to approve the Curriculum, Syllabus, and regulation

requirements of Specialization course to be introduced under R-2019.

(Enclosed in *Annexure II*)

BoS/ECE16.3.4 : Approval for **Product Development Lab (Updated Syllabus) for UG degree programme under R-2019.**

Resolved to approve the Product Development Lab (Updated Syllabus) for UG degree programme under R-2019.

(Enclosed in *Annexure III*)

BoS/ECE16.3.5 : Approval for **Credit transfer for other online courses like Udemy, Coursera etc., and norms for credit transfer.**

Resolved to approve Credit transfer for other online courses like Udemy, Coursera etc., and norms for credit transfer

BoS/ECE 16.4 : SUGGESTIONS GIVEN BY THE BOS MEMBERS

16.4.1 : In the "PCB Design and Fabrication" elective course under R2019 regulation, design and fabrication part can be included as practical section in 5th unit and this course may be defined as an Integrated course (Theory + Lab). It is also suggested that CPW topic may be introduced in Unit-I and the course content of the Unit 1, 3 & 4, may be reduced.

16.4.2 : In the elective course "PLC and SCADA" under R-2019 it is recommended to modify the title of Unit-5.

16.4.3 : In "Computer Networks: Practical Approach" elective course under Cyber Security Specialization in R2019 regulation, it is suggested to include the practical modules separately in Unit-5.

16.5.4 : In "Cyber Threat Intelligence and SOC", elective course under Cyber Security Specialization in R2019 regulation, it is suggested to reframe the flow of content like SOC, Security Monitoring, Incident Response, Cyber Threat Intelligence and Threat Hunting.

16.5.5 : In "Vulnerability Assessment and Penetration Testing Laboratory" elective course under Cyber Security Specialization in R2019 regulation, it is recommended to divide the practical experiments in the following order of Infrastructure & Network Penetration testing (35%), Application Security (35%) and Cloud Security (30%).

16.5.6 : In "Introduction to Internet of Things" elective course under Internet of

Things Specialization in R2019 regulation, it is recommended to incorporate the topic MQTT in Unit-1.
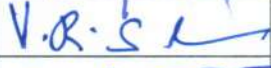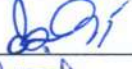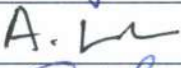
16.5.7 : In "Database Management System for IoT" elective course under Internet of Things Specialization in R2019 regulation, it is recommended to incorporate the topic SQLite database and time series database in the course content.

16.5.8 : In "IoT: Architecture, Standards and Protocols" elective course under Internet of Things Specialization in R2019 regulation, it is recommended to incorporate cloud aspect of MQTT, and AWS may be introduced in the course content.

16.5.9 : In "Wireless Technologies for IoT" elective course under Internet of Things Specialization in R2019 regulation, it is recommended to incorporate the topic Ultra-Wide Band may be introduced in the course content.

16.5.10 : For transferring the credit through other online courses like Udemy, Coursera, Pluralsight, Cybrary, etc., it is necessary to review the standards of Pluralsight and Cybrary platforms.

16.5.11 : The conduction of MCQs using gadgets can be integrated in other assessments and it is not recommended to be incorporated in the End semester offline exams.

The members had a brainstorming discussion and interaction among themselves. Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

1. Additional Elective courses for UG degree programme under R-2019

2. Additional Elective courses for PG degree programme under R-2019

3. Curriculum, Syllabus, and regulation requirements of Specialization course to be introduced under R-2019.

4. Product Development Lab (Updated Syllabus) for UG degree programme under R-2019.

5. Credit transfer for other online courses like Udemy, Coursera etc., and norms for credit transfer.

Dr.K.J.Prasanna Venkatesan, Assistant Professor (Sr.Grade)/ECE thanked all the members for their kind cooperation and the meeting came to an end.

Members Present:

S.No	BoS Members	Signature
1.	**Dr. A. Shenbagavalli** Professor & Head, Department of Electronics and Communication Engg	
2.	**Dr. M.Ganesh Madhan** Professor, Dept. of ECE, Madras Institute of Technology campus, Anna University, Chennai – 600044.	
3.	**Dr.M.Meenakshi** Professor, Dept. of ECE, College of Engineering, Guindy Campus, Chennai - 600025	
4.	**Dr.R.Pandeeswari** Associate Professor Department of ECE NIT, Trichy.	
5.	**Mr.Raja Subramanian** Senior Architect, Mistral Solutions Pvt Ltd Bangalore	
6.	**Mr.K.A.Irshadh Abdul Rasheed** Associate Partner Cyber Security Ernst And Young LLP, Chennai	
7.	Dr.S.Shanmugavel, Senior Prof, Director	
8.	Dr. S.Tamilselvi, Professor	
9.	Dr.V.Vijayarangan, Professor	
10.	Dr. V.R.S.Mani, Asso. Prof (SG)	
11.	Mr.N.Arumugam, Asso Prof	
12.	Dr.V.Suresh, Asso. Prof	
13.	Dr. T.S.Arun Samuel, Asso. Prof	
14.	Dr. T.Vijayanandh, Asst. Prof (SG)	
15.	Dr. K.J. Prasanna Venkatesan, Asst. Prof (SG)	
16.	Mr. A.Saravana Selvan, Asst. Prof (SG)	
17.	Mr. S.Cammillus, Asst. Prof (SG)	

18.	Mrs. R.Manjula Devi, Asst. Prof (SG)	
19.	Mr. C.Balamurugan, Asst. Prof (SG)	
20.	Mr. K.Subramanian, Asst. Prof (SG)	
21.	Mr. M.Satheesh Kumar, Asst. Prof (SG)	
22.	Mr. M.Sathish Kumar, Asst. Prof	
23.	Mr. B.Ganapathy Ram, Asst. Prof	
24.	Dr.I.Paulkani, Asst. Prof	
25.	Mr.M.Vignesh, Asst. Prof	
26.	Ms.A. Subitsha, III Year ECE	
27.	Ms.M. Subashini, III Year ECE	
28.	Mr.K. Athiguru, III Year ECE	

CHAIRMAN
BOARD OF STUDIES

Annexure – I

Minutes of 15th BoS Meeting - Action Taken Report

S. No	Suggestion given by expert members	Action taken
1.	In the course 19EC35E Nano electronics, it is recommended to change the title of unit 5 (FET based Biosensors) to "Nano Electronic Sensors and Applications"	Implemented
2.	In the course 19EC36EAdvanced Microprocessors under R-2019 it is recommended to modify the distribution of handling hours to be even. It is also suggested to include recent processors in addition to ARM CORTEX. Unit 5 may be reduced, and multicore processor may be included.	Implemented
3.	It is recommended to add more content related to ATE, types of ATE testers in the elective course 19EC37E Fundamentals of Chip testing under R-2019. Also, it is suggested to add revised books in reference.	Implemented
4.	It is suggested to compare the elective course 19EC38E-ARM Processor architecture and Program under R-2019 with Advanced Microprocessor 19EC36E under R-2019 and the redundant/overlapping topics may be removed.	Implemented
5.	The word "Component" may be removed from the title of the course 19EC39E - Embedded Linux System components.	Implemented
6.	Title of the Unit 4 in the course 19EC45EBio-Medical Electronics may be modified with respective to the content included.	Implemented
7.	In elective course 19EC46E - Power electronics under R-2019, unit 3 and unit 4 may be combined. It is also recommended to include heat sink design and	Implemented

		power supply design in the course content.	
8.		It is recommended to change the title of the course 19EC47E- High Speed Electronics under R-2019 as High Frequency Electronics. Applications with examples may be included in unit 1.	Implemented
9.		In the course 19EC63E Machine Learning Techniques, applications may be included in the course content.	Implemented
10.		Syllabus contents of the course 19EC01N Basics of Communication Systems has to be reduced. Basics of wireless communication may be included in unit 4 and 5. It is suggested to include this course as Professional Elective in EEE department.	Implemented
11.		The topics on EMI/EMC, radar sensing may be introduced in the course 19EC06NAutomotiveElectronics under R-2019.	Implemented
12.		In the course 19EC08N ARM Processor and Programming, title of the units may be modified properly.	Implemented
13.		In the course 19EC09N Fundamental of DSP, it is suggested to include applications of DSP and unit 5 may be replaced with DSP multi rate/ Digital signal processors.	Implemented
14.		It is recommended to change the unit titles of the course 19OE08Embedded and Real Time Systems as follows Unit 1 - Introduction to embedded system. (Introduction to Embedded Computing) Unit 2 – Real time peripherals (Peripheral Interfacing) Unit 5 – UCOS-III Architecture (Task Management and Memory Management with UCOS - III)	Implemented
15.		It is suggested to check the sequence of experiments and include isolator and circulator in the course	Implemented

		19EC17L Computational Electromagnetics Lab under R2019	
	16.	It is recommended to include Log Analytics, attacks, Security incidents in the course 19EC09L Network Traffic Analysis using Wireshark under R2019	Implemented

16th BOARD OF STUDIES MEETING – DEPARTMENT OF ECE ON 27.11.2021