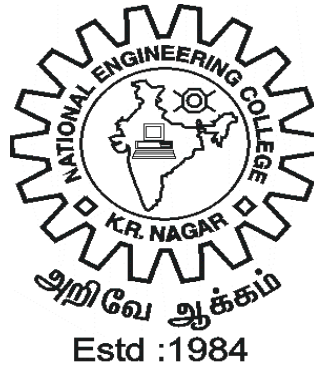


# NATIONAL ENGINEERING COLLEGE

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

**K.R.NAGAR, KOVILPATTI – 628 503**



**15<sup>th</sup> BOARD OF STUDIES MEETING – MINUTES**

*Google Online Meet*  
**PERIOD - JUNE 2021**

Department of Mechanical Engineering

MINUTES of 15<sup>th</sup> Meeting of the Board of Studies held on  
26<sup>th</sup> June, 2021 at 10.30 a.m. (through Online mode)  
Google meet Link: [meet.google.com/hgs-cguc-jfx](https://meet.google.com/hgs-cguc-jfx)

Venue: Seminar Hall, Department of Mechanical Engineering,  
National Engineering College

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

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

[www.nec.edu.in](http://www.nec.edu.in)

Department of Mechanical Engineering

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

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

[www.nec.edu.in](http://www.nec.edu.in)

**15<sup>th</sup> Board of Studies Meeting**  
Department of Mechanical Engineering

Venue: Seminar Hall, Department of Mechanical Engineering,  
National Engineering College

Date & Time: 26.06.2021 & 10.30 a.m.

Through Online Mode

Google Meet Link: [meet.google.com/hgs-cguc-jfx](https://meet.google.com/hgs-cguc-jfx)

**AGENDA**

BoS / MECH15.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Mechanical Engineering
BoS / MECH15.2	:	Confirmation of the Minutes of the 14 <sup>th</sup> meeting of Board of Studies in the department of Mechanical Engineering held on December 19, 2020 and Action taken report of 14 <sup>th</sup> meeting of Board of Studies
BoS / MECH15.3	:	Business brought forward by the Chairman, Board of studies
	15.3.1	Syllabus for Professional Elective Courses (Manufacturing Module) in B.E. Mechanical Engineering Programme under Regulation 2019.
	15.3.2	Syllabus for Professional Elective Courses (Industry Engineering Module) in B.E. Mechanical Engineering Programme under Regulation 2019.

	15.3.3	Syllabus for Open Elective Courses – IV (Management Skills) in III-year B.E Mechanical Engineering Programme under R2019. 1. Entrepreneurship 2. Human Resource Management 3. Industrial Psychology and Organizational Behavior 4. Principles of Management 5. Business Statistics 6. Financial Management
	15.3.4	7. Accounting for Engineers 8. Security Analysis and Portfolio Management
	15.3.5	Inclusion of 3 credit course on “Hybrid Electric Vehicles” as a programme elective under Thermal Module.
	15.3.6	Syllabus for One Credit Elective Courses in B.E. Mechanical Engineering Programme under Regulation 2019.
	15.3.7	Discussion of statement of Program Specific Outcomes (PSO) of Mechanical Engineering Department.
BoS / MECH15.4	:	Suggestions given by the BOS Members
BoS / MECH15.5	:	Any other items

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

F. No. 1-1/NEC/ MECH

26<sup>th</sup> June, 2021

Dear Sir/Madam,

**Sub: Minutes of the 15<sup>th</sup> Meeting of the Board of studies in the Mechanical Engineering - Reg.**

Kindly find attached herewith the Minutes of the 15<sup>th</sup> Meeting of Board of studies of the Mechanical Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 26<sup>th</sup> June 2021 at 10.30 a.m. (through Online mode) in Seminar Hall, Department of Mechanical Engineering, National Engineering college. 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 [hodmech@nec.edu.in](mailto:hodmech@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.K.Manisekar)

## Department of Mechanical Engineering

### MINUTES OF THE MEETING

The 15<sup>th</sup> Meeting of the Board of studies of the Mechanical Engineering was held on 26<sup>th</sup> June 2021 at 10.30a.m. through online mode (Google Meet Link: [meet.google.com/hgs-cguc-jfx](https://meet.google.com/hgs-cguc-jfx)) in the Seminar Hall, Department of Mechanical Engineering, National Engineering College, K.R.Nagar, Kovilpatti – 628 503

1. The following members were present

1.	Dr.K.Manisekar, Professor & Head	Chairman
2.	Dr.S.Iyah Raja, Asso. Professor	Internal Members
3.	Dr.D.Venkat Kumar, Asso. Professor	
4.	Dr. M.Kathiresan, Asso. Professor	
5.	Dr. R.Harichandran, Asso. Professor	
6.	Dr.I. Sankar, Asst.Professor (S.G)	
7.	Dr.D. Vignesh Kumar, Asst. Prof. (S.G)	
8.	Dr.P.Ramanan, Asst. Professor (S.G)	
9.	Dr.F.Michael Thomas Rex, Asst. Prof. (S.G)	
10.	Dr. P. Hariharasakthisudhan, Asst. Prof. (S.G)	
11.	Dr. T. Sakthi, AP/Humanities	
12.	Mr. A.Andrews, Asst. Professor	
13.	Mr. C.Suresh Kumar, Asst. Professor	
14.	Mr.S.S.Ananthan, Adjunct Faculty	
15.	Mr. M.Vivekanandan, Adjunct Faculty	
16.	Dr.D.Mohanlal, Professor, Department of Mechanical Engineering, CEG campus, Anna university, Chennai-600 025	University Nominee
17.	Dr. R. Velraj Professor / Institute for Energy Studies, CEG, Anna University, Chennai	Academic Experts
18.	Dr.-Ing. M. Duraiselvam Professor / Production Engineering, National Institute of Technology, Trichy	
19.	Dr.A.Arockiarajan Professor / Applied Mechanics, Indian Institute of Technology, Chennai	

20.	Mr. R. Kanda Subburaj Chief Engineer, Project Controls, AMEC Foster Wheeler India Pvt. Ltd, Chennai	Industrial Experts
21.	Mr. Vinoth Kumar. M Plant Head, Interplex Electronics India Pvt. Ltd., Chennai	
22.	Dr. K. Murugan Scientist –E, Centre for Engineered Coatings (CEC), ARCI, Hyderabad – 500 005, Telangana	Meritorious Alumnus Nominated by the Principal
23.	Mr. C. Surya, III Year Student	Student Members
24.	Mr. J. Sam Joebin, III Year Student	
25.	Mr. W.Robin, III Year Student	
26.	Mr. X.Cheselton, III Year Student	

2. The Industrial Expert Members Mr.P.Muniyandi, Principal Scientific Officer, Bharat Earth Movers Limited, New Thippasandra, Bengaluru and Mr.P.S.Sriram, Director (Industrial), Alstom Transport India Ltd., Chennai could not attend the meeting due to their prior commitments and unavoidable reasons and they were granted leave of absence.

BoS / MECH15.1 : WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN, BOARD OF STUDIES IN THE DEPARTMENT OF MECHANICAL ENGINEERING

The Chairman, BOS of the Mechanical Engineering welcomed and introduced the members of 15<sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / MECH 15.2 : TO CONFIRM THE MINUTES OF FOURTEENTH BOS MEETING HELD ON 19<sup>th</sup> December, 2020

The minutes of the Fourteenth Board of Studies meeting held on 19<sup>th</sup> December, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by

the 14<sup>th</sup> Academic council. (Enclosed in Annexure – I)

BoS / MECH 15.3.1 : **TO CONFIRM AND APPROVE** the syllabus of Professional Elective Courses (Manufacturing Module) in B.E. Mechanical Engineering Programme under R-2019.

(Enclosed in Annexure – II)

**RESOLVED TO APPROVE** the syllabus of Professional Elective Courses (Manufacturing Module) in B.E. Mechanical Engineering Programme under R-2019.

BoS / MECH 15.3.2 : **TO CONFIRM AND APPROVE** the syllabus of Professional Elective Courses (Industry Engineering Module) in B.E. Mechanical Engineering Programme under R-2019.

(Enclosed in Annexure – III)

**RESOLVED TO APPROVE** the syllabus of Professional Elective Courses (Industry Engineering Module) in B.E. Mechanical Engineering Programme under R-2019.

BoS / MECH 15.3.3 : **TO CONFIRM AND APPROVE** the syllabus of open elective courses Group – IV (Management Skills) in B.E. Mechanical Engineering Programme under R-2019.

(Enclosed in Annexure – IV)

**RESOLVED TO APPROVE** the syllabus of open elective courses Group – IV (Management Skills) in B.E. Mechanical Engineering Programme under R-2019.

BoS / MECH 15.3.4 : **TO CONFIRM AND APPROVE** a 3-credit course on “Hybrid Electric Vehicles” as a programme elective under Thermal Module.

(Enclosed in Annexure – V)

**RESOLVED TO APPROVE** a 3-credit course on “Hybrid Electric Vehicles” as a programme elective under Thermal Module.



BoS / MECH 15.3.5 : **TO CONFIRM AND APPROVE** the syllabus of One Credit Elective Courses in B.E. Mechanical Engineering programme under R-2019

(Enclosed in Annexure – VI)

**RESOLVED TO APPROVE** the syllabus of One Credit Elective Courses in B.E. Mechanical Engineering programme under R-2019

BoS / MECH 15.3.6 : **TO CONFIRM AND APPROVE** the statement of Program Specific Outcomes (PSO) of Mechanical Engineering Department.

(Enclosed in Annexure – VII)

**DISCUSSED AND RECOMMENDED** the statement of Program Specific Outcomes (PSO) of Mechanical Engineering Department.

BoS / MECH 15.4 : **Suggestions Given by the Members**

15.4.1 : Interchange the Unit 2 as Unit 3 and Unit 3 as Unit 2 in the syllabus of programme elective course, “Composite Materials”. Wire arc additive manufacturing topic may be included in the syllabus of programme elective course “Additive Manufacturing”.

15.4.2 : Advanced Testing may be incorporated in “Non-Destructive Evaluation” course as Unit 5. Also combine the Unit 2 and Unit 3 as a single unit. IS 814 and 7215 standards may be included in “Quality Control of Welded Structures”

15.4.3 : Automated Tools may be included in Unit 5 in the syllabus of “Operations and Production Management”. Objective of Value analysis may be added in the syllabus of “Value Analysis and Value Engineering” in Unit 1.

15.4.4 : Green supply chain topic may be included in Unit 1 and some Models/examples may be given in Unit 5 in the programme elective course, “Supply Chain and Logistic

Management”

- 15.4.5 : The syllabus of “Industrial Safety Engineering” may be revised. Data collection from sensors may be included in “Industry 4.0”.
- 15.4.6 : Skill matrix to evaluate performance topic may be included in Unit 2 in the syllabus of “Human Resource Management”.
- 15.4.7 : Uses and Standards of Tubular Exchanger Manufacturers Association may be added in the syllabus of 1 credit course “Shell and Tube Heat Exchanger Design”. Data sheet as per Bureau of Energy Efficiency (BEE) and Heat load estimation as per BEE to be followed and spray bonds topic may be removed from the one credit course “Energy Audit and Management”.
- 15.4.8 : “Heat Transfer Enhancement” one credit course may be removed from the curriculum, since it is only a research-oriented topic and it will not be much beneficial for the students. Specific properties/tools may be given in the syllabus of “Thermal Characterization of Materials”
- 15.4.9 : Storage devices for Microgrids topic may be added in “Micro Grid” and Forward osmosis topic may be included in “Desalination”
- 15.4.10 : Error analysis topic may be included in “Techniques for Vibration Monitoring and Controls”. Introduction and difference between plates and shells may be added in “Crashworthiness of Tubular Shells”. Surface texturing concept may be included in “Surface Engineering”
- 15.4.11 : Application of Management concept also may be added in the third statement of Program Specific Outcomes (PSO) of Mechanical Engineering Department.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the curriculum and syllabus of R2019.

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

- a) Syllabus for Professional Elective Courses (Manufacturing and Industry Engineering Module) in B.E. Mechanical Engineering Programme under Regulation 2019.
- b) Syllabus for Open Elective Course (Group – IV) in III-year B.E. Mechanical Engineering Programme under Regulation 2019.
- c) Inclusion of 3 credit course on “Hybrid Electric Vehicles” as a programme elective under Thermal Module.
- d) Syllabus for One Credit Elective Courses in B.E. Mechanical Engineering Programme under Regulation 2019.

Dr. S.Iyahraja, Associate Professor / Mechanical Engineering thanked all the members for their kind cooperation and the meeting came to an end.

#### Members Present Online

<b>Dr.D.Mohanlal,</b> Professor, Department of Mechanical Engineering, CEG campus, Anna university, Chennai-600 025	<i>University Nominee</i>
<b>Dr. R. Velraj,</b> Professor & Director, Institute for Energy Studies, CEG, Anna University, Chennai-600025	<i>Academic Experts</i>
<b>Dr.-Ing. M. Duraiselvam,</b> Professor, Department of Production Engineering, NIT, Trichy	
<b>Dr. A.Arockiarajan</b> Professor, Department of Applied Mechanics, Indian Institute of Technology, Chennai	
<b>Dr. K. Murugan,</b> Scientist –E, Centre for Engineered Coatings (CEC), ARCI, Hyderabad – 500 005, Telangana	<i>Meritorious Alumnus</i>

<b>Mr. R. Kanda Subburaj,</b> Chief Engineer, Project Controls, AMEC Foster Wheeler India Pvt. Ltd, Chennai	<i>Industrial Experts</i>
<b>Mr. Vinoth Kumar. M,</b> Plant Head, Interplex Electronics India Pvt. Ltd., Chennai	

### Members Present

<b>Chairman</b>	
Dr.K.Manisekar, Professor & Head	h.u-82
<b>Internal Members</b>	
Dr.S.Iyah Raja, Asso. Professor	[Signature]
Dr.D.Venkat Kumar, Asso. Professor	D.V → [Signature]
Dr. M.Kathiresan, Asso. Professor	online
Dr. R.Harichandran, Asso. Professor	R.H → [Signature]
Dr.I. Sankar, Asst. Professor (S.G)	online
Dr.D. Vignesh Kumar, Asst.Professor (S.G)	[Signature]
Dr.P.Ramanan, Asst Professor (S.G)	P.R → [Signature]
Dr.F.Michael Thomas Rex, Asst. Professor (S.G)	online
Dr. P. Hariharasakthisudhan, Asst. Professor (S.G)	online
Dr. T.Sakthi, AP/Humanities	T.Sakthi
Mr. A.Andrews, Asst. Professor	online
Mr. C.Suresh Kumar, Asst. Professor	[Signature]
Mr.S.S.Ananthan, Adjunct Faculty	online
Mr. M.Vivekanandan, Adjunct Faculty	online
<b>Student Members Nominated by the HOD</b>	
Mr. C. Surya, III Year Student	online
Mr. J. Sam Joebin, III Year Student	online
Mr. W.Robin, III Year Student	online
Mr. X.Cheselton, III Year Student	online

h.u-52  
CHAIRMAN  
BOARD OF STUDIES

# 15<sup>th</sup> BOS Meeting – Department of Mechanical Engineering on 26.06.2021

This screenshot shows a Google Meet session in progress. The main window displays a presentation slide titled 'UNIT II FUNDAMENTAL ANALYSIS'. The slide content is as follows:

<b>UNIT II</b>	<b>FUNDAMENTAL ANALYSIS</b>	9
Economic Analysis – Economic forecasting and stock Investment Decisions – Forecasting techniques – Economy and Industry Analysis - Industry life cycle – Company Analysis Measuring Earnings – Forecasting Earnings – Applied Valuation Techniques – Grnham and Dodds investor ratios.		
<b>UNIT III</b>	<b>TECHNICAL ANALYSIS</b>	9
Fundamental Analysis Vs Technical Analysis – Charting methods – Market Indicators - Trend – Trend reversals – Patterns - Moving Average – Exponential moving Average – Oscillators – ROC Momentum – MACD – RSI – Stochastics.		
<b>UNIT IV</b>	<b>PORTFOLIO CONSTRUCTION AND SELECTION</b>	9
Portfolio analysis - Reduction of portfolio risk through diversification – Portfolio risk - Portfolio Selection - Feasible set of portfolios - Efficient set - Markowitz model - Single index model - Construction of optimum portfolio - Multi-index model.		
<b>UNIT V</b>	<b>PORTFOLIO EVALUATION</b>	9
Capital Asset Pricing model - Lending and borrowing - CML - SML - Pricing with CAPM -		

The meeting interface shows several participants in a grid view, including Kandesubburaj Ramesh, HOD Mech NEC, S S Ananthan, Karupiah Murugan, moham lat, Durai selvam, Arockiajan A IITM, and 14 others. The system tray at the bottom indicates the time is 11:27 AM on 06/26/2021.

This screenshot shows a Google Meet session in progress. The main window displays a presentation slide titled '19ME29E COMPOSITE MATERIALS'. The slide content is as follows:

<b>19ME29E</b>	<b>COMPOSITE MATERIALS</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		3	0	0	3

**COURSE OUTCOMES**  
Upon completion of this course, the student will be able to  
CO1: Explain the fundamentals of composite materials and its classification (K2)  
CO2: Describe the knowledge in polymer matrix composites and its processing methods (K2)  
CO3: Understand the metal matrix composites and its manufacturing processes (K2)  
CO4: Comprehend the ceramic matrix composite and its processing routes. (K2)  
CO5: Discuss Mathematical techniques to predict the macroscopic properties of different Laminates. (K2)

**UNIT I INTRODUCTION TO COMPOSITE MATERIALS** 9  
Definition, need – Classification of composite materials – General characteristics – Applications – Matrices – Polymer, Graphite, Ceramic and Metal Matrices – Fibers – Glass, Carbon, Ceramic and Aramid fibers – characteristics of fibers and matrices -Lamina Constitutive Equations: Lamina Assumptions – Macroscopic Viewpoint, Generalized Hooke's Law - Reduction to Homogeneous Orthotropic Lamina – Rule of mixtures.

**UNIT II POLYMER MATRIX COMPOSITES** 9  
Polymer resins – thermosetting resins, thermoplastic resins – reinforcement fibres – rovings – woven fabrics – non woven random mats – various types of fibres. PMC processes - hand lay-up processes – spray up processes – compression moulding – reinforced reaction injection moulding - resin transfer moulding – Pultrusion – Filament winding – Injection moulding.

The meeting interface shows participants including Kandesubburaj Ramesh, HOD Mech NEC, S S Ananthan, VELRAJ RAMALINGAM, moham lat, Vinodh Kumar, Durai selvam, and 15 others. The system tray at the bottom indicates the time is 10:33 AM on 06/26/2021.

Department of Electronics and Communication Engineering

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

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15<sup>th</sup> Board of studies Meeting in the Department of  
**Electronics and Communication Engineering**

Google Online Meet Link: <https://meet.google.com/pxf-segf-fza>

Date & Time: 26.06.2021 & 04.00 PM

**AGENDA**

ECE/BoS15.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Electronics and Communication Engineering
ECE/BoS15.2	:	Confirmation of the Minutes and action taken report of the 14 <sup>th</sup> meeting of Board of studies in the Department of Electronics and Communication Engineering held on 16 <sup>th</sup> December2020.
ECE/BoS15.3	:	Business brought forward by the Chairman, Board of studies 15.3.1. Elective courses for UG degree programme under R-2019. 15.3.2. Onecredit courses for UG degree programme under R-2019
ECE /BoS15.4	:	Any other items
ECE /BoS15.5	:	Suggestions given by the BoS Members

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

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

28<sup>th</sup> June, 2021

Dear Sir/Madam,

**Sub: *Minutes of the 15<sup>th</sup> Meeting of the Board of studies in Electronics and Communication Engineering - Reg.***

The 15<sup>th</sup> Meeting of Board of studies of the Electronics and Communication Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 was conducted on 26<sup>th</sup> June, 2021 at 04.00PM 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

MINUTES 15<sup>th</sup> Meeting of the Board of studies held on  
26<sup>th</sup> June, 2021 at 04.00 PM

Google meet Link: <https://meet.google.com/pxf-segf-fza>



# Department of Electronics and Communication Engineering

## MINUTES OF THE MEETING

The 15<sup>th</sup> Meeting of the Board of studies of the Electronics and Communication Engineering was held on 26<sup>th</sup> June, 2021 at 04.00 PM in the Google online meet 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.Shunmugavel, 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. M. Meenakshi, Professor, Department of ECE, College of Engineering, Guindy Campus, Chennai.	
20.	Dr.M.Ganesh Madhan, Professor, Department of ECE, Madras Institute of Technology, Chennai.	

21.	Mr.Srivatsan Srinivasan Chief Architect Cognizant, USA	Alumni Member
22.	Dr.R.Pandeeswari Associate Professor Department of ECE NIT, Trichy.	
23.	Mr.S.Vijay bharat Associate Vice President Mistral Solutions Pvt Ltd Bangalore	Industrial Experts
24.	Mr.K.A.Irshadh Abdul Rasheed Associate Partner Cyber Security Ernst And Young LLP Chennai	
25.	Mr. A. Gowrisankar Senior Manager- SI CALIBER INTERCONNECT SOLUTIONS Coimbatore.	Special Invitee
26.	Mr.Senthil Kumar Damodaran Director- ATE Testing CALIBER INTERCONNECT SOLUTIONS Coimbatore	
27.	Ms. T. Deepika, Third Year ECE	Student Members
28.	Ms.M. Shenbagaramya, Third Year ECE	

The Industry Expert Member Mr.Srivatsan Srinivasan, Chief Architect, Cognizant Technologies, USA could not attend the meeting due to his prior commitments and unavoidable reasons and was granted leave of absence.

BoS/ECE15.1 : 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 15<sup>th</sup> Board of Studies.

BoS/ECE 15.2 : TO CONFIRM THE MINUTES OF FOURTEENTH BOS MEETING HELD ON 26<sup>TH</sup> DECEMBER 2020.

The minutes of the fourteenth Board of Studies meeting held on 26<sup>TH</sup> December 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 14<sup>th</sup> Academic council.

➤ Action Taken Report

(Enclosed in Annexure D)

BoS/ECE15.3.1 : Approval for Remaining Elective Courses for UG Degree Programme Under R-2019

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

BoS/ECE15.3.2 : Approval for One-Credit Courses for UG Degree Programme Under R-2019.

Resolved to approve the One-Credit Courses for UG Degree Programme Under R-2019.

BoS/ECE 15.5 : SUGGESTIONS GIVEN BY THE BOS MEMBERS

15.5.1 : 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”

15.5.2 : In the course 19EC36E Advanced 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.

- 15.5.3 : 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.
- 15.5.4 : 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.
- 15.5.5 : The word "Component" may be removed from the title of the course 19EC39E - Embedded Linux System components.
- 15.5.6 : Title of the Unit 4 in the course 19EC45EBio-Medical Electronics may be modified with respective tot the content included.
- 15.5.7 : 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 power supply design in the course content.
- 15.5.8 : 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.
- 15.5.9 : In the course 19EC63E Machine Learning Techniques, applications may be included in the course content.
- 15.5.10 : 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.
- 15.5.11 : The topics on EMI/EMC, radar sensing may be introduced in the course 19EC06NAutomotiveElectronics under R-2019.
- 15.5.12 : In the course 19EC08N ARM Processor and Programming, title of the units may be modified properly.
- 15.5.13 : 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.
- 15.5.14 : 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)

15.5.15 : It is suggested to check the sequence of experiments and include isolator and circulator in the course 19EC17L Computational Electromagnetics Lab under R2019

15.5.16 : It is recommended to include Log Analytics, attacks, Security incidents in the course 19EC09L Network Traffic Analysis using Wireshark under R2019

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. Elective courses for UG degree programme under R-2019
2. One credit courses for UG degree programme under R-2019

Dr.V.Suresh Associate Professor/ECE thanked all the members for their kind cooperation and the meeting came to an end.

**Members Present Online:**

1.	<b>Dr. A. Shenbagavalli</b> Professor & Head, Department of Electronics and Communication Engg	Board Chairman
2.	<b>Dr. M.Ganesh Madhan</b> Professor, Dept. of ECE, Madras Institute of Technology campus, Anna University, Chennai – 600044.	Academic Experts
3.	<b>Dr.M.Meenakshi</b> Professor, Dept. of ECE, College of Engineering, Guindy Campus, Chennai - 600025	
4.	<b>Dr.R.Pandeeswari</b> Associate Professor Department of ECE NIT, Trichy.	Alumni Member
5.	<b>Mr.S.Vijay Bharat</b> Associate Vice President Mistral Solutions Pvt Ltd Bangalore	Industrial Experts

6.	<b>Mr.K.A.Irshadh Abdul Rasheed</b> Associate Partner Cyber Security Ernst And Young LLP, Chennai	
7.	<b>Mr. A. Gowrisankar</b> Senior Manager- SI CALIBER INTERCONNECT SOLUTIONS Coimbatore	Special Invitee
8.	<b>Mr.Senthil Kumar Damodaran</b> Director- ATE Testing CALIBER INTERCONNECT SOLUTIONS Coimbatore	
9.	Dr. S.Shunmugavel, Senior Prof, Director	Internal Members
10.	Dr. S.Tamilselvi, Professor	
11.	Dr.V.Vijayarangan, Professor	
12.	Dr. V.R.S.Mani, Asso. Prof (SG)	
13.	Mr.N.Arumugam, Asso Prof	
14.	Dr.V.Suresh, Asso. Prof	
15.	Dr. T.S.Arun Samuel, Asso. Prof	
16.	Dr. T.Vijayanandh, Asst. Prof (SG)	
17.	Dr. K.J. Prasanna Venkatesan, Asst. Prof (SG)	
18.	Mr. A.Saravana Selvan, Asst. Prof (SG)	
19.	Mr. S.Cammillus, Asst. Prof (SG)	
20.	Mrs. R.Manjula Devi, Asst. Prof (SG)	
21.	Mr. C.Balamurugan, Asst. Prof (SG)	
22.	Mr. K.Subramanian, Asst. Prof (SG)	
23.	Mr. M.Satheesh Kumar, Asst. Prof (SG)	
24.	Mr. M.Sathish Kumar, Asst. Prof	
25.	Mr. B.Ganapathyram, Asst. Prof	
26.	Ms. T. Deepika, Third Year ECE	
27.	Ms.M. Shenbagaramya, Third Year ECE	

  
CHAIRMAN

BOARD OF STUDIES

# 15th BOS Meeting – Department of Electronics and Communication Engineering on 26.06.2021

The screenshot shows a Google Meet window with a presentation slide titled "NANO ELECTRONICS". The slide content includes:

**COURSE OUTCOMES:**

- CO1: Understand the basic concepts of nanoelectronics and various aspects of nanoelectronics (NQ)
- CO2: Demonstrate the basic knowledge of Semiconductor materials and silicon technology (QS)
- CO3: Understand the basic concepts of MOSFET working (KQ)
- CO4: To understand the advanced nanoelectronic devices (KQ)
- CO5: Understand the nanoelectronic device (KQ)

**UNIT I: Introduction to Nano-electronics**

- Introduction to Nano-electronics, Limitations of conventional microelectronics, Classical Physics, Classical Wave and Quantum, Particle-in-a-box, Heisenberg's Uncertainty Principle, Quantum wavefunctions, resonant states and tunneling.

**UNIT II: Single Quantum Approaches**

- Quantum Well, Technology, Scaling and Reliability Challenges, Basic MOS Transistor Types, Modes of operation, CMOS operation, Drain Current, Threshold Voltage, Energy band diagram of MOSFET, Nanoscale MOSFET, Factor-affecting MOSFET, System integration.

**UNIT III: Advanced Nanoelectronic Devices**

The meeting interface shows the presenter "arunsamuel ece" and a list of participants including Dr. Ganesh Madhan, Govrnisankar, A, Mani V.R.S, Mani V.R.S, Mani V.R.S, Meenakshi M, Prasanna Venkatesan K.J, Saravona selvan, and Sotheesh Kumar ECE.

The screenshot shows a Google Meet window with a presentation slide titled "OPEN ELECTIVES UNDER R-2019". The slide content includes:

S. No	Course Category	Course Code	COURSE TITLE	L	T	P	C	QP
1.	OE	19DE01	Basics of Communication Systems	3	0	0	3	A
2.	OE	19DE02	Advanced Communication systems	3	0	0	3	A
3.	OE	19DE03	Overview of Communication systems	3	0	0	3	A
4.	OE	19DE04	CMOS technology and Chip Testing	3	0	0	3	A
5.	OE	19DE05	Renewable Sensors	3	0	0	3	A
6.	OE	19DE06	Automotive Electronics	3	0	0	3	A
7.	OE	19DE07	Electronics and Microprocessor	3	0	0	3	A
8.	OE	19DE09	ARM processor and programming	3	0	0	3	A
9.	OE	19DE10	Fundamentals of Digital Signal Processing	3	0	0	3	A
10.	OE	19DE11	Embedded and Real Time Systems	3	0	0	3	A

The meeting interface shows the presenter "arunsamuel ece" and a list of participants including vijayanandh ece, Dr. Ganesh Ma..., shenbagavalli ..., arunsamuel ece, 26 others, and You. The slide also includes a logo for GRIET and a "(link)" text.

Department of Computer Science and Engineering

MINUTES of 15<sup>th</sup> Meeting of the Board of Studies held on  
25<sup>th</sup> June, 2021 at 10.30 AM

Meeting Mode: Through online (GoogleMeet)  
Google Meet Link: <https://meet.google.com/zgn-upjd-vuz>

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



**National Engineering College, K.R.Nagar, Kovilpatti – 628 503**  
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www.nec.edu.in

**15<sup>th</sup> Board of Studies Meeting in the Department of  
Computer Science and Engineering**

Meeting Mode: Through online (Google Meet)

Google Meet Link: <https://meet.google.com/zgn-upjd-vuz>

Date & Time: 25.06.2021 & 10.30 AM

Agenda

BoS / CSE 15.1	:	Welcome address and Opening Remarks by Chairman, Board of Studies in the department of Computer Science and Engineering
BoS / CSE 15.2	:	Confirmation of the Minutes of the 14 <sup>th</sup> meeting of Board of studies in the department of Computer Science and Engineering held on 19 <sup>th</sup> December 2020 and Action taken report of 14 <sup>th</sup> meeting of Board of studies
BoS / CSE 15.3	:	Business brought forward by the Chairman, Board of studies 15.3.1. Approval of syllabi for Comprehension (core), Elective courses for B.E. CSE programme under R-2019 15.3.2. Approval of syllabi for 1 credit course for B.E. CSE programme under R-2019
BoS / CSE 15.4	:	Any other items
BoS / CSE 15.5	:	Suggestions given by the BoS Members

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

F. No. 1-1/NEC/CSE

25<sup>th</sup> June, 2021

Dear Sir,

**Sub: Minutes of the 15<sup>th</sup> Meeting of the Board of studies in the Computer Science and Engineering -Reg.**

Kindly find attached herewith the Minutes of the 15<sup>th</sup> Meeting of Board of studies of the Computer Science and Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 25<sup>th</sup> June 2021 at 10.30 AM through Google Meet. 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 hodcse@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

  
28/6  
Dr.V.Gomathi

Department of Computer Science and Engineering

### MINUTES OF THE MEETING

The 15<sup>th</sup> Meeting of the Board of studies of the Computer Science and Engineering was held on 25<sup>th</sup> June, 2021 at 10.30 AM through Google Meet.

The following members were present:

1.	<b>Dr.V.GOMATHI</b> Professor & Head	Chairman
2.	Dr.V.Kalaivani, Professor	Internal Members
3.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
4.	Dr.M.Bhuvaneshwari, Assistant Professor (SG)	
5.	Ms.J.Naskath, Assistant Professor (SG)	
6.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
7.	Ms.R.Rajakumari, Assistant Professor (SG)	
8.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
9.	Ms.V.Anusuya Devi ,Assistant Professor	
10.	Dr. K. S. Easwarakumar Professor, Dept. of Computer Science and Engineering, CEG Campus Anna University, Chennai .	University Nominee
11.	Dr. C.Krishna Mohan Professor & Head Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.	Academic Experts

12.	Dr. C. Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology Trichy, Trichy.	Academic Experts
13.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Avinashi Road, Peelamedu. Coimbatore.	
14.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Civil Aerodrome Post, Coimbatore.	
15.	Mr.Roy Antony Arnold, Lead - Education and Research, Infosys Pvt Ltd.,Chennai.	
16.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services,Chennai.	Industrial Experts
17.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	
18.	Ms.G.Maria Justin Mary IT-Lead Remedy Application, Honeywell Technology Solutions, Madurai.	Industrial Experts and Alumni
	Mr.Manikanda Raman Viswanathan, Principal Architect, Cognizant Digital Operations, CTS,Chennai.	
19.	Ms. Suji S, II year CSE	Student Members
20.	Mr. Narain C A, II year CSE	Nominated by the HOD

Mr. Somu chockalingam, president, Doyen Systems Pvt Ltd,Chennai could not attend the meeting due to their prior commitments and unavoidable reasons and were granted leave of absence.

BoS / CSE 15.1 : WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN, BOARD OF STUDIES IN THE DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Chairman, BoS of the Computer Science and Engineering welcomed and introduced the members of 15<sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / CSE 15.2 : TO CONFIRM THE MINUTES OF 14<sup>th</sup> BOS MEETING HELD ON 19<sup>th</sup> DECEMBER, 2020

The minutes of the **Fourteenth Board of Studies meeting** held on 19<sup>th</sup> December 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 14<sup>th</sup> Academic council.

➤ **Action Taken Report**

(Enclosed in Annexure I)

BoS/CSE 15.3.1 : **TO CONFIRM AND APPROVE OF SYLLABI FOR COMPREHENSION (CORE), ELECTIVE COURSES FOR B.E. CSE PROGRAMME UNDER R-2019**

**RESOLVED TO** approve syllabi for comprehension (core), some of the Programme Elective Courses for B.E-CSE degree programme

BoS/ CSE 15.3.2 : **TO CONFIRM AND APPROVE OF ONE CREDIT COURSES FOR B.E.-CSE DEGREE PROGRAMME UNDER R-2019**

**RESOLVED TO** approve one credit course for B.E.-CSE degree programme under R-2019

BoS/CSE 15.4 : **ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS**

On the whole, this new initiative was very much appreciated by all members. The challenges faced by the students (if any) should be periodically discussed with them. They also congratulated the faculty members for their team efforts towards continuing Education.

BoS / CSE 15.5 : **SUGGESTIONS GIVEN BY THE BOS MEMBERS**

- 15.5.1 : The objective of comprehension course is appreciated by industrial expert members.
- 15.5.2 : In the comprehension course, Special Interest Group (SIG) category-I may be included with fundamental computer science courses and this SIG is mandatory for all the students.
- 15.5.3 : In the comprehension course, Special Interest Group (SIG) category - Deep learning algorithm can be changed as Deep learning.
- 15.5.4 : List of Programme Elective Courses and Inclusion of latest technologies in the elective courses and one credit courses are appreciated by Anna University nominee and academic experts and commented that syllabi is fine.
- 15.5.5 : Real time data bases like MongoDB, PostgreSQL may be included in 'Advanced database technology' course.
- 15.5.6 'Neo4j' may be included in 'SQL programming' course.
- 15.5.7 The networks related elective courses may be specified by layer by layer.
- 15.5.8 : Pre-requisites may be included for all elective courses.

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.

- a. Approval of syllabi for Comprehension (core), Elective courses for B.E. CSE programme under R-2019.
- b. Approval of syllabi for 1 credit course for B.E. CSE programme under R-2019.

Dr.V.Kalaivani, Professor thanked all the members for their kind cooperation and the meeting came to an end.

**Members Present Online:**

1.	<b>Dr.V.GOMATHI</b> Professor & Head	Chairman
2.	Dr.V.Kalaivani, Professor	Internal Members
3.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
4.	Dr.M.Bhuvaneswari, Assistant Professor (SG)	
5.	Ms.J.Naskath, Assistant Professor (SG)	
6.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
7.	Ms.R.Rajakumari, Assistant Professor (SG)	
8.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
9.	Ms.V.Anusuya Devi ,Assistant Professor	
10.	Dr. K. S. Easwarakumar Professor, Dept. of Computer Science and Engineering, CEG Campus, Anna University, Chennai .	University Nominee
11.	Dr. C.Krishna Mohan Professor & Head Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad.	Academic Experts
12.	Dr. C. Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology, Trichy	
13.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Peelamedu. Coimbatore.	
14.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Coimbatore.	
15.	Mr.Roy Antony Arnold, Lead - Education and Research,	

	Infosys Pvt Ltd.,Chennai.	
16.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services, Chennai.	
17.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	
18.	Ms.G.Maria Justin Mary IT-Lead Remedy Application, Honeywell Technology Solutions, Madurai.	Industrial Experts and Alumni
19.	Mr.Manikanda Raman Viswanathan, Principal Architect, Cognizant Digital Operations, CTS, Chennai.	
20.	Ms. Suji S, II year CSE	Student Members Nominated by the HOD
21.	Mr. Narain C A, II year CSE	

  
 28/16/2021  
**CHAIRMAN**  
**BOARD OF STUDIES**



## Annexure I

### Action Taken Report for Minutes of 14<sup>th</sup> BOS

As per BOS committee suggestions,

- AI and healthcare course contents are revised by including models of computing and clinical data analysis.
- Full Stack Development course is included in one credit course.
- Ethereum tool is included in 'Blockchain course'.

  
28/6/2021  
CHAIRMAN  
BOARD OF STUDIES

Department of Computer Science and Engineering

MINUTES of 15<sup>th</sup> Meeting of the Board of Studies held on  
25<sup>th</sup> June, 2021 at 10.30 AM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: <https://meet.google.com/zgn-upjd-vuz>

**National Engineering College, K.R.Nagar, Kovilpatti – 628 503**  
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15<sup>th</sup> Board of Studies Meeting in the Department of  
**Computer Science and Engineering**

Meeting Mode: Through online (Google Meet)

Google Meet Link: <https://meet.google.com/zgn-upjd-vuz>

Date & Time: 25.06.2021 & 10.30 AM

Agenda

BoS / CSE 2.1	:	Welcome address and Opening Remarks by Chairman, Board of Studies in the department of Computer Science and Engineering
BoS / CSE 2.2	:	Confirmation of the Minutes of the 14 <sup>th</sup> meeting of Board of studies in the department of Computer Science and Engineering held on 19 <sup>th</sup> December 2020 and Action taken report of 14 <sup>th</sup> meeting of Board of studies for University Grants Commission (UGC) approved Diploma Programmes under National Skills Qualifications Framework (NSQF)
BoS / CSE 2.3	:	Business brought forward by the Chairman, Board of studies <ol style="list-style-type: none"><li>1. Approval of Revised Curriculum for the Diploma Programmes approved by University Grants Commission (UGC) under National Skills Qualifications Framework (NSQF)</li><li>2. Approval of Revised Syllabi for the Diploma Programmes approved by University Grants Commission (UGC) under National Skills Qualifications Framework (NSQF)</li></ol>
BoS / CSE 2.4	:	Any other items
BoS / CSE 2.5	:	Suggestions given by the BoS Members

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

F. No. 1-1/NEC/CSE

25<sup>th</sup> June, 2021

Dear Sir,

**Sub: *Minutes of the 15<sup>th</sup> Meeting of the Board of studies in the Computer Science and Engineering -Reg.***

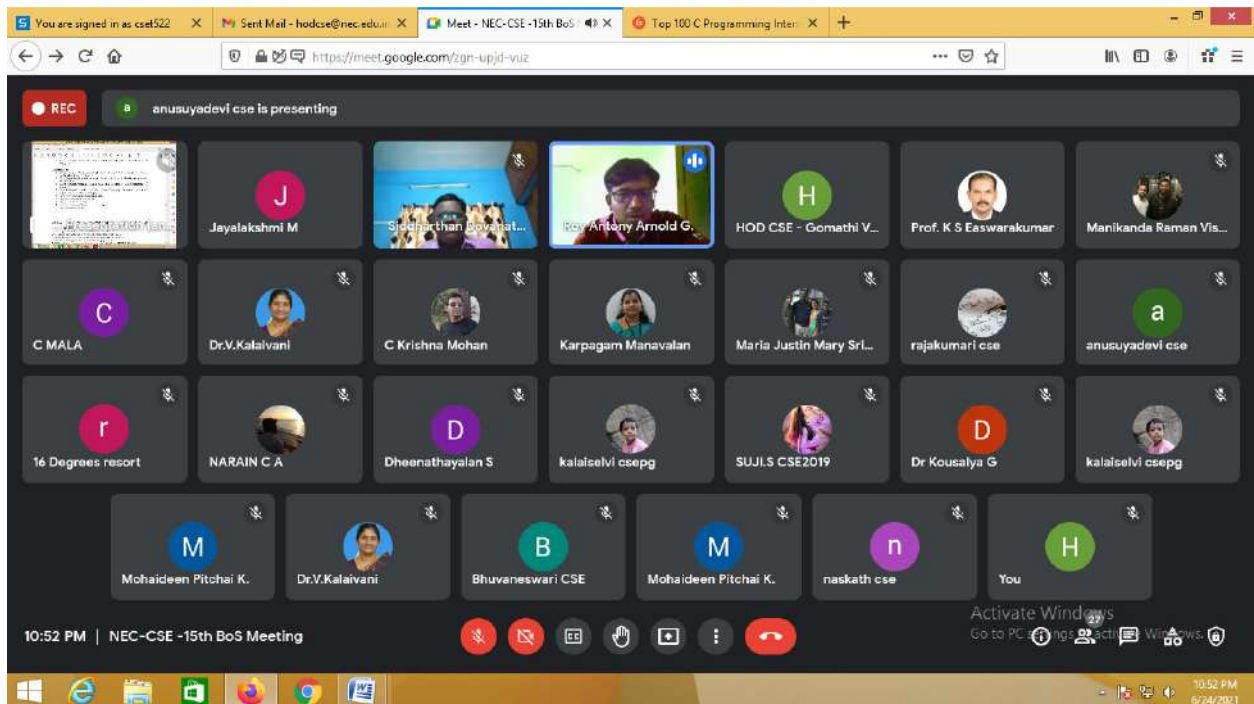
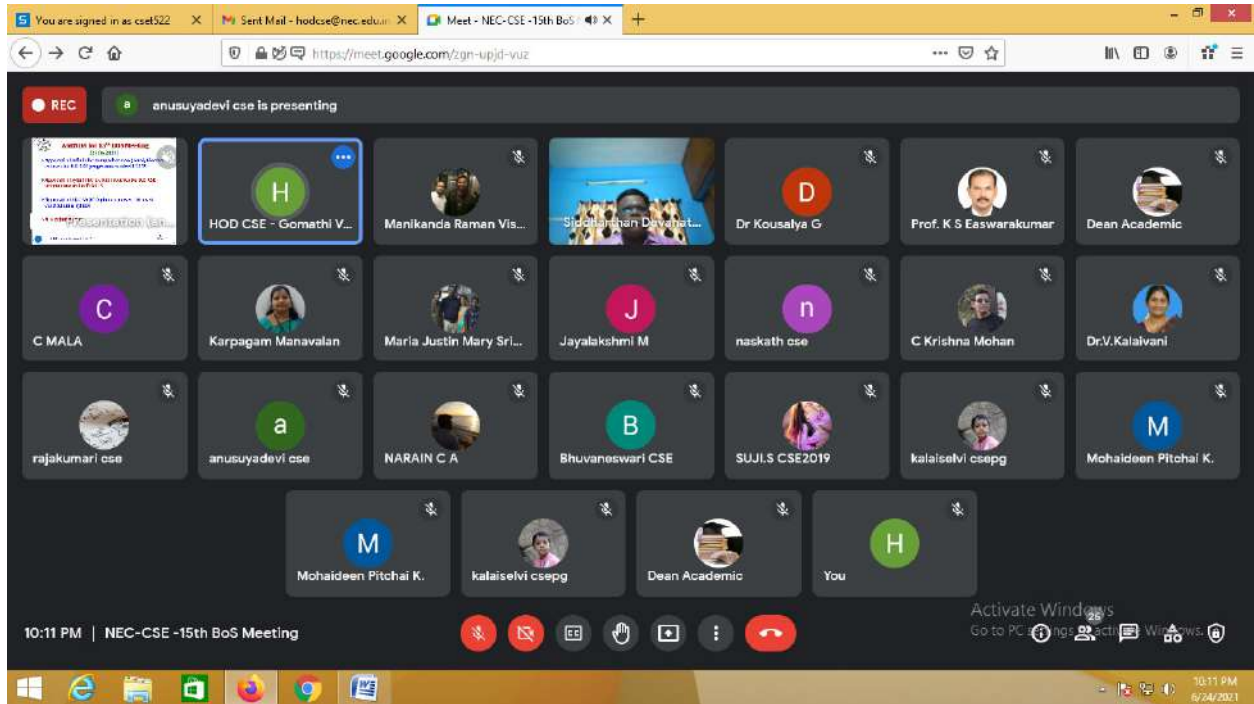
Kindly find attached herewith the Minutes of the 15<sup>th</sup> Meeting of Board of studies of the Computer Science and Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 25<sup>th</sup> June 2021 at 10.30 AM through Google Meet. Hard copy of the Minutes is also being sent to you by speed post.

It is requested that comments on the Minutes, if any, may please be sent by email at hodcse@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.V.Gomathi

# 15<sup>th</sup> BOS Meeting – Department of Computer Science and Engineering on 25.06.2021



# Department of Electrical and Electronics Engineering

MINUTES 15<sup>th</sup> Meeting of the Board of studies held on  
25<sup>th</sup> June 2021 at 02.00 PM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: <http://meet.google.com/jyk-mapj-tki>

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

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# Department of Electrical and Electronics Engineering

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

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

[www.nec.edu.in](http://www.nec.edu.in)

## 14<sup>th</sup> Board of studies Meeting in the Department of Electrical and Electronics Engineering

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: <http://meet.google.com/jyk-mapj-tki>

Date & Time: 25.06.2021 & 02.00 PM

### AGENDA

- BoS / EEE 15.1 : Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering
- BoS / EEE 15.2 : Confirmation of the Minutes of the 14<sup>th</sup> meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 29<sup>th</sup> December 2020, and Action Taken report of 14<sup>th</sup> meeting of Board of studies
- BoS / EEE 15.3 : Business brought forward by the Chairman, Board of studies  
15.3.1 Introduction of a new elective course “Mobile Robots and Control” in curriculum for UG degree programmes under R-2019  
15.3.2 Programme elective courses for UG degree programmes under R-2019
- BoS / EEE 15.4 : Any other items
- BoS / EEE 15.5 : Suggestions given by the BoS Members

Department of Electrical and Electronics Engineering  
National Engineering College, K.R.Nagar, Kovilpatti – 628 503  
(An Autonomous Institution - Affiliated to Anna University, Chennai)  
[www.nec.edu.in](http://www.nec.edu.in)

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

25<sup>th</sup> June, 2021

Dear Sir/Madam,

*Sub: Minutes of the 15<sup>th</sup> Meeting of the Board of studies in the EEE-Reg.*

Kindly find attached herewith the Minutes of the 15<sup>th</sup> Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 25<sup>th</sup> June, 2021 at 02.00 PM 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](mailto: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 15<sup>h</sup> Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 25<sup>th</sup> June, 2021 at 02.00 PM 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.M.P.E.Rajamani Assistant Professor (S.G) / EEE	Academic Expert
7.	Dr. V. Suresh Kumar, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamilnadu.	
8.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Valiamala P.O., Thiruvananthapuram, Kerala.	University Nominee
9.	Dr. S. Usa, Professor, Department of Electrical and Electronics Engineering, CEG Campus, Anna University, Chennai.	
10.	Dr. S. Paramasivam, R&D Head, Electrical Drives, Danfoss Industries Ltd., Chennai	Industrial Expert

11.	Dr. Santosh Kumar Annadurai GE T&D Ltd., GIS R&D Centre, Unit R&D Head, Padappai, Chennai.	
12.	Mr. M. Ramesh Senior Technical Engineer, Hardware Design and Development, Data Patterns India Pvt. Ltd., Chennai.	
13.	Mr. J. S. Jekhan, Second Year / EEE	Student Members
14.	Ms. J. Joyslin Janet, Second Year / EEE	

The Internal Member, Dr.G.Kannayeram Assistant Professor(S.G) / EEE, 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, the Meritorious Alumnus Mr. R. Jayakumar, Assistant Vice President, Wipro Technology Ltd., Bangalore could not attend the meeting due to his prior commitments and unavoidable reasons and were granted leave of absence.

BoS / EEE 15.1	:	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 15 <sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / EEE 15.2	:	TO CONFIRM THE MINUTES OF FOURTEENTH BOS MEETING HELD ON 29 <sup>th</sup> DECEMBER 2020
		The minutes of the Fourteenth Board of Studies meeting held on 29 <sup>th</sup> December 2020 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 29.12.2020. The comments received have been incorporated and placed for confirmation. The same was approved by the 14 <sup>th</sup> Academic council.  <b><u>Action Taken Report</u></b> (Enclosed in Annexure I)

BoS / EEE 15.3.1	:	TO CONFIRM AND APPROVE THE INTRODUCTION OF NEW ELECTIVE COURSE IN CURRICULUM FOR UG (B.E. – EEE) PROGRAMME UNDER R-2019
		RESOLVED TO approve the introduction new elective course “Mobile Robots and Control” in curriculum for UG (B.E. – EEE) PROGRAMME under R-2019.
Bos/EEE 15.3.2	:	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 15.4	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS
15.4.1	:	The course “Switchgear and Protection Laboratory” is suggested to give as one credit elective laboratory course instead of core course in seventh semester.
Bos/EEE 15.5	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
15.5.1	:	In the course “Special Electrical Machines”, topics such as PCB motor and flux switch machine may be included in Unit – V.
15.5.2	:	In the course “Power Electronics for Renewable Energy Systems”, the content of the syllabus may be framed with broad concepts of converters and inverters.
15.5.3	:	In the course “Power Electronics for Renewable Energy Systems”, the content related to generators may be reduced in the syllabus.
15.5.4	:	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.
15.5.5	:	In the course “Power System Transients”, Unit – IV may be

		completely changed to incorporate the contents such as protection and suppression of transients.
15.5.6	:	In the course “Power System Transients”, Unit – V may be included with the contents of Modelling of Lightning and over-voltage scenario.
15.5.7	:	In the course “Power Quality”, course content may be expanded with other key elements related to power quality as per IEEE1159 standard.
15.5.8	:	In the course “Power Quality”, the contents such as Application of Power factor adjustments in power plants, permitted load curves and PF, Generator vibration and VAR load may be included in Unit – III.
15.5.9	:	In the course “Power Quality”, the title of Unit – IV may be changed.
15.5.10	:	For the course “CAD of Electrical Apparatus”, L T P C may be changed to convert the course for incorporating tutorial classes.
15.5.11	:	In the course “CAD of Electrical Apparatus”, the title of Unit – II may be changed.
15.5.12	:	In the course “CAD of Electrical Apparatus”, Unit – IV and Unit – V may be given equal weightage to include application related topics.
15.5.13	:	In the course “CAD of Electrical Apparatus”, some more reference books may be added.
15.5.14	:	In the course “Insulation Technology”, the additional content of moisture interaction with insulation may be added in Unit – II.
15.5.15	:	In the course “Insulation Technology”, the contents of effect of moisture and importance of purity may be added in Unit – IV.
15.5.16	:	In the course “Insulation Technology”, some contents may be added related to alternate insulation, and degradable and non degradable insulation.
15.5.17	:	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.
15.5.18	:	In the course “Logic and Distributed Control System”, contents such as Time synchronization, Time stamping of events may be included in Unit – III.
15.5.19	:	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.
15.5.20	:	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.
15.5.21	:	In the course “Digital Signal Processing”, the content of Unit – V may be modified with latest processor used by industry in motor control and multiprocessing applications.
15.5.22	:	In the course “Robotics and Automation”, some more reference books may be included.
15.5.23	:	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
15.5.24	:	Contents in the course “Advanced Microprocessor and Microcontroller” in the course may be changed to incorporate the latest processor and technology used in industry.
15.5.25	:	In the course “Advanced Microprocessor and Microcontroller”, the content such as Industrial applications, Data processing and controls, and Data acquisition utilities may be included.
15.5.26	:	In the course “Advanced Microprocessor and Microcontroller”, the content related to Building logics and controls with Arduino for applications may be included in the application portion of Arduino.
15.5.27	:	In the course “Automotive Electrical and Electronics”, wireless charging technology may be included in Unit – III.

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. M. Bakrutheen, Assistant Professor (Senior Grade) /EEE thanked all the members for their kind cooperation and the meeting came to an end.

*M. Bakrutheen*  
25/10/2021  
CHAIRMAN  
BOARD OF STUDIES

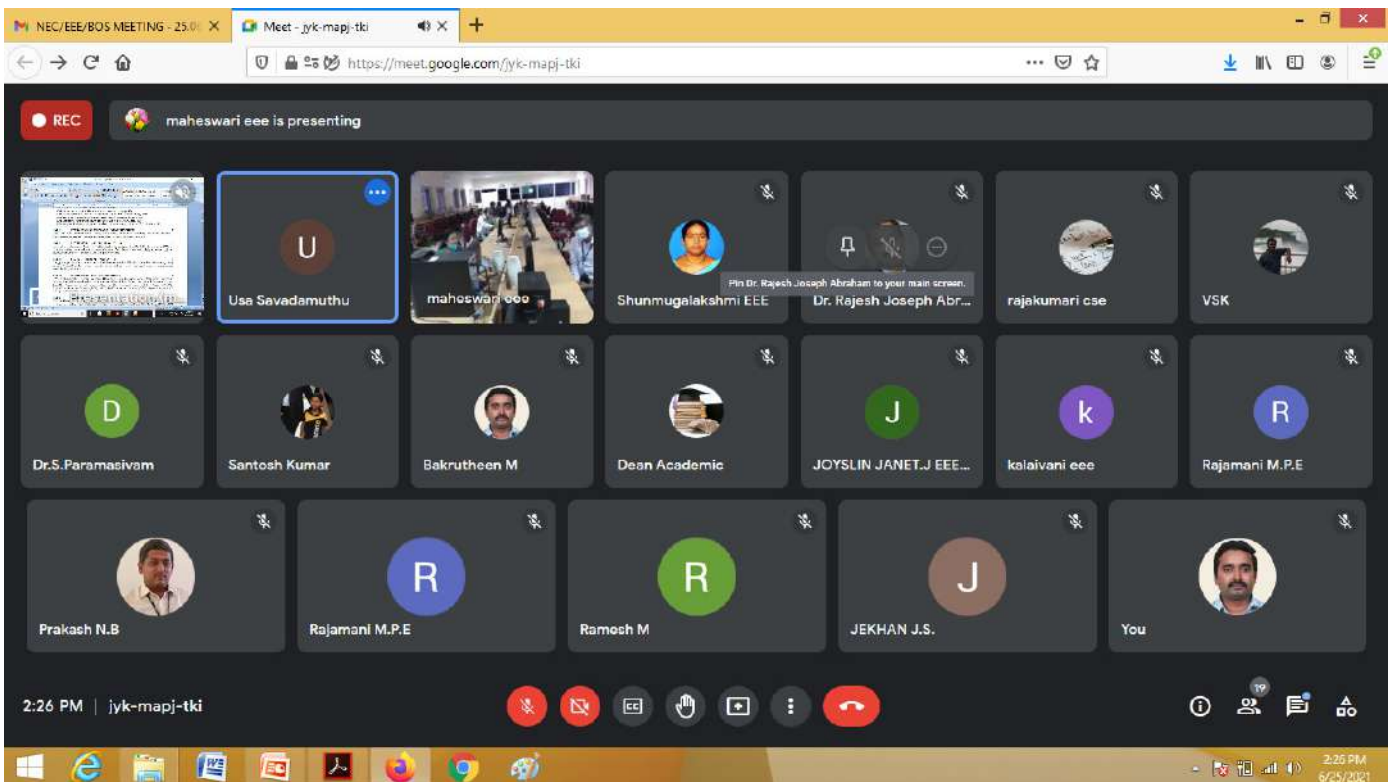
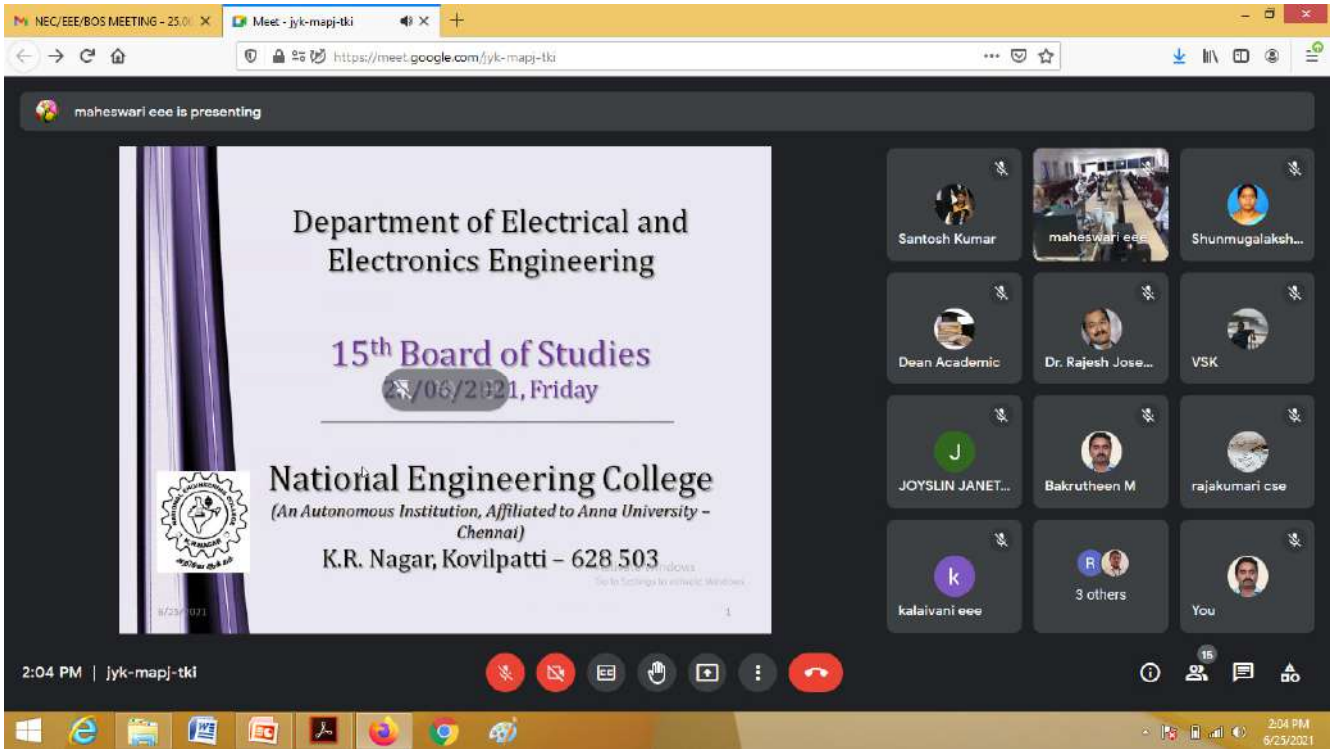
Annexure – I

Action Taken on Suggestions from 14<sup>th</sup> BOS Meeting

Suggestions	Action Taken
In the course Power Systems-II, the topic SCADA and wide area monitoring system may be included.	Corrections are incorporated in the curriculum and syllabus
In the course Switchgear and Protection, the topic integration of SCADA along with wide area monitoring system may be included.	
The course Title, "Protection and Switchgear Laboratory" may be renamed as " Switchgear and Protection Laboratory"	
The one credit courses "Computational Fluid Dynamics" and "Electrical Stress Analysis", may be given as 3 credit programme elective courses with additional contents.	The following suggestions will be incorporated in the next BOS meeting
In the one credit course "Digital substation", the contents GOOSE, Substation communication and protocol, may be removed.	
The course related to network and communication may be given as one credit course.	
The effort taken by faculty for their own video lectures, conducting assessments for the courses is appreciated by the external members.	Thanks for the compliments.

  
EEE Board Chairman

# 15<sup>th</sup> BOS Meeting – Department of Electrical and Electronics Engineering on 25.06.2021





Department of Civil Engineering

MINUTES of the 12<sup>th</sup> Meeting of the Board of Studies held on  
23<sup>rd</sup> June 2021, 10:15 am

Venue: Through Google Meet (Online)

[https://drive.google.com/file/d/1xhhq4M96oLdVrLoLdjgE4a\\_nptt\\_xnF8/view?usp=sharing](https://drive.google.com/file/d/1xhhq4M96oLdVrLoLdjgE4a_nptt_xnF8/view?usp=sharing)

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Department of Civil Engineering

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

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12<sup>th</sup> Board of Studies Meeting in the Department of  
**Civil Engineering**

Venue: Through Google Meet (Online)

[https://drive.google.com/file/d/1xhhq4M96oLdVrLoLdjgE4a\\_nptt\\_xnF8/view?usp=sharing](https://drive.google.com/file/d/1xhhq4M96oLdVrLoLdjgE4a_nptt_xnF8/view?usp=sharing)

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

Date & Time: 23.06.2021 & 10.15 am

Agenda

BoS / CIVIL12.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Civil Engineering
BoS / CIVIL12.2	:	Confirmation of the Minutes of the 11 <sup>th</sup> meeting of Board of studies in the department of Civil Engineering held on 17 <sup>th</sup> December 2020 and Action taken report of 11 <sup>th</sup> meeting of Board of studies
BoS / CIVIL12.3	:	Business brought forward by the Chairman, Board of studies 12.3.1 The Syllabus of part of One credit (OEC) and Programme elective (PEC) courses for UG Degree Programme under Regulation 2019.
BoS / CIVIL12.4	:	Any other items
BoS / CIVIL12.5	:	Suggestions given by the BoS Members

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F. No. 1-1/NEC/Civil Engg.

23.06.2021

Dear Sir/Madam,

**Sub: *Minutes of the 12<sup>th</sup> Meeting of the Board of Studies in the Civil Engineering - Reg.***

Kindly find attached herewith the Minutes of the 12<sup>th</sup> Meeting of Board of studies of the Civil Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 23.06.2021 at 10.15 AM through Google Meet (online). 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 [hodcivil@nec.edu.in](mailto:hodcivil@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.C.PuthiyaSekar

## Department of Civil Engineering

### MINUTES OF THE MEETING

The 12<sup>th</sup> Meeting of the Board of Studies of the Civil Engineering was held on 23<sup>rd</sup> June 2021 at 10:15 am through online Google Meet conducted by Civil Department, National Engineering College, K.R.Nagar, Kovilpatti- 628503

The following members were present:

1	<b>Dr.C.PuthiyaSekar</b> Professor & Head	Chairman
2	Dr.A.Cyril Thomas AP(SG)-Civil	Internal Members
3	Dr.C.Chella Gifta AP-Civil	
4	Mr.S.Sebastin AP-Civil	
5	Mr.R.Sivasankar AP-Civil	
6	Mr.S.Danielraj AP-Civil	
7	Mrs.M.Balamaheshwari AP-Civil	
8	Mr.V.Arulpandian AP-Civil	
9	Mr.B.Gowtham AP-Civil	
14	<b>Dr. S. Arul Jayachandran,</b> Professor, Department of Civil Engineering, Indian Institute Technology Madras, Chennai -600 036.	Academic Experts
15	<b>Dr.P.Jayabalan</b> Professor , Department of Civil Engineering, National Institute of Technology Trichy	
16	<b>Dr.T.Velrajan,</b> Professor, Department of Civil Engineering, Thiagarajar college of Engineering, Madurai- 625 015.	
17	<b>Dr.K.Chinnaraju,</b> Professor, Department of Civil Engineering, College of Engineering Guindy campus, Anna University, Chennai-600 025.	University Nominee
18	<b>Dr.P.D.Arumairaj,</b> Principal Consultant,	

	AlzumGeoCivil Integrated Services, Thadagam Road, Coimbatore -6414 025.	Industrial Expert
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BoS / CIVIL 12.1 : WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN,  
BOARD OF STUDIES IN THE DEPARTMENT OF CIVIL  
ENGINEERING

The Chairman, BoS of the Civil Engineering welcomed and introduced the members of 12<sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / CIVIL 12.2 : TO CONFIRM THE MINUTES OF ELEVENTH BOS MEETING HELD  
ON 17<sup>th</sup> DECEMBER, 2020

The minutes of the **Eleventh Board of Studies meeting** held on 17<sup>th</sup> DECEMBER, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 14<sup>th</sup> Academic council meeting.

➤ **Action Taken Report**

(Enclosed in Annexure I)

BoS/CIVIL 12.3.1 : **TO CONFIRM AND APPROVE THE SYLLABUS OF PART OF ONE  
CREDIT (OEC) AND PROGRAMME ELECTIVE (PEC) COURSES FOR  
UG DEGREE PROGRAMME UNDER REGULATION 2019.**

**RESOLVED TO** approve the syllabus of part of One credit (OEC) and Programme elective (PEC) courses for UG Degree Programme under Regulation 2019.

BoS / CIVIL 12.4 : **ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE  
CHAIRMAN OF THE BOS**

The BoS members had a discussion with the internal members regarding the Curriculum & the syllabus of Programme Elective Courses under R-2019

BoS / CIVIL 12.5 : **SUGGESTIONS GIVEN BY THE BOS MEMBERS**

**The suggestions given by the BoS Members in Programme Elective Courses under R 2019.**

12.5.1 In unit I of Storage Structures, BoS recommended to include the topic named as Oil storage structures along with water tank.

12.5.2 In Theory of Plates, BoS recommended to add the following text books such as,

- a) Rudolph Szilard, "Theories and Applications of Plate Analysis", Wiley India Pvt. Ltd.
  - b) Prof. K. Bhaskar and Prof. T.K. Varadan (Retd.) Plates: Theories and Applications, 2014 John Wiley & Sons, Ltd.
  - c) Bairagi, K.A Text Book of Plate Analysis, Khanna Publisher, New Delhi
- 12.5.3 In Tall Buildings, BoS recommended to add the following text book as a reference book
- a) Wolfgang Schueller, High-rise building structures, Publisher : Wiley (January 1, 1977)
- 12.5.4 In Computer Aided Design of Structures, BoS recommended to remove Unit V Software Application and advised to include software application with each Units. Instead of that, they also suggested to split any one of the Unit into two Units to make it as the Unit V.
- 12.5.5 In Industrial Structures, BoS recommended to add the following text book as a reference book
- a) Clarence W Dunham, Planning industrial structures, Publisher : McGraw-Hill Book Co; 1st edition (January 1, 1948).
  - b) National Building codes.
- 12.5.6 In the curriculum of R 2019, BoS recommended that the course named as Smart Structures and Smart Materials to be changed as Smart Materials and Smart Structures and also suggested to include a text book such as,
- a) Sadhu Singh, " Experimental Stress Analysis " Khanna Publisher : (1 January 1981).
- 12.5.7 In Basics of Dynamics and Aseismic Design, BoS recommended to add the following text book such as,
- a) S.R. Damodarasamy and S. Kavitha , Basics of Structural Dynamics and Aseismic Design, Publisher : PHI (1 December 2009)
- 12.5.8 In Design of Shell Structures, BoS recommended to add the following text book such as,
- a) Binoy. K. Chatterji, Theory and Design of Concrete Shells, Publisher : Spon Press; Revised edition (1 November 1988)

**The suggestions given by the BoS Members in One Credit Elective Courses under R 2019.**

- 12.5.9 In the curriculum of R 2019, BoS recommended that the course named as Introduction to Timber Structures to be changed as Timber Structures.

- 12.5.10 In Seismic Evaluation and Retrofitting of structures, BoS recommended to include the topic named as Testing techniques for Damage Assessment.
- 12.5.11 In Tunneling Techniques, BoS recommended to include the topic named as Tunnel Grouting.
- 12.5.12 In Soil Contamination and Remediation, BoS recommended to remove the topic named as Environmental laws and regulations and also suggested to add more soil remediation methods.
- 12.5.13 In Environmental Engineering Drawing, BoS recommended to remove the topic named as Sedimentation tank and also suggested to add screening topic along with Rapid Sand Filter.
- 12.5.14 In Analytical Instrumentation, BoS recommended to remove the topic named as Radiation Analysis.

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 and recommendations given by the members, BoS resolved to recommend the following to the Academic Council for further approval.

- a) The syllabus of part of one credit (OEC) and programme elective (PEC) courses for UG degree programme under R 2019.

Mr.B.Gowtham AP-Civil thanked all the members for their kind cooperation and the meeting came to an end.

**External Members Present Online:**

1.	Dr.K.Chinnaraju, Professor, Department of Civil Engineering, College of Engineering Guindy campus, Anna University, Chennai-600 025.	University Nominee
2.	Dr. S. Arul Jayachandran, Professor, Department of Civil Engineering, Indian Institute Technology Madras, Chennai -600 036.	Academic Expert

3.	Dr.P.Jayabalan, Professor, Department of Civil Engineering, National Institute of Technology, Trichy.	Academic Expert
4.	Dr.T.Velrajan, Professor, Department of Civil Engineering, Thiagarajar college of Engineering, Madurai- 625 015.	Academic Expert
5.	Dr.P.D.Arumairaj, Principal Consultant, AlzumGeoCivil Integrated Services, Thadagam Road, Coimbatore -6414 025.	Industrial Expert

**Internal Members Present Online**

Dr.C.PuthiyaSekar Professor & Head Department of civil Engineering	Chairman
Dr.A.Cyril Thomas AP (S.G) - Civil	Internal Members
Dr.C.Chella Gifta AP-Civil	
Mr.S.Sebastin AP-Civil	
Mr.R.Sivasankar AP-Civil	
Mr.S.Danielraj AP-Civil	
Mrs.M.Balamaheswari AP-Civil	
Mr.V.Arulpandian AP-Civil	
Mr.B.Gowtham AP-Civil	



**CHAIRMAN**

**BOARD OF STUDIES**



## ANNEXURE I

### Action taken for Minutes of 11<sup>th</sup> BoS Meeting

As per BoS Committee Suggestions,

1. In unit I of Advanced Steel Structures, the title is changed as Introduction instead of Introduction to beam column.
2. The topic called Pre-engineering building techniques is included in unit II of Advanced Steel Structures.
3. The topic called Fire damaged building is included in unit V of Non Destructive Testing.
4. In the curriculum of R 2019, the course named as Earthquake Geotechnical Engineering is changed as Geotechnical Earthquake Engineering.
5. In unit I of Environmental Impact Assessment, the title title is changed as Introduction to EIA instead of Fundamentals and Introduction to EIA.
6. The topic called as Green building and Bio mimicry is included in unit III of Ecological Engineering.
7. The topic called Design of Machine foundation and well foundation is included in Design of Foundation elements.
8. The topic called Prestressed Prefabrication technique is included in Bridge Construction Techniques.
9. The content related to fundamental topics and Imhoff tank was removed in Decentralised Waste Water Treatment Systems (DEWATS).
10. The topic such as Setting out of building, Contour preparation and 3D scanning of building are included in Building marking.
11. In the curriculum of R 2019, the course named as Earth quake Resistance Considerations as per Indian Standards is changed as Earthquake Resistant Design.
12. In the curriculum of R 2019, the course named as Environmental Noise Pollution and Control is changed as Environmental Noise Pollution.
13. In the curriculum of R 2019, the course named as Computer aided building drawing is changed as Computer aided Building Layout drawing.

# 12<sup>th</sup> BOS Meeting – Department of Civil Engineering on 23.06.2021

10:46 AM | qme-mhbq-qrd

INDUSTRIAL STRUCTURES L T P C  
3 0 0 3

**COURSE OUTCOMES**  
Upon Successful completion of this course, the students will be able to  
CO1: Construct the planning aspects of the Industrial Buildings. (K2)  
CO2: Select functional Requirement of the Industrial Buildings. (K2)  
CO3: Analyze and Design Steel Structures for Industries. (K2)  
CO4: Analyze & Design Concrete Structures for Industries. (K2)  
CO5: Explain the concept of Prefabrications and pre stressing in Industries. (K3)

**UNIT I PLANNING** 9  
Classification of industries and industrial structures – General requirements for industries like cement, chemical and steel plants – Planning and layout of buildings and components.

**UNIT II FUNCTIONAL REQUIREMENTS** 9  
Lighting – Ventilation – Acoustics – Fire safety – Guidelines from factories act.

**UNIT III DESIGN OF STEEL STRUCTURES** 9  
Industrial roofs – Crane girders – Mill buildings – Design of Bunkers and Silos – Chimney, Cooling Towers (Principles)

**UNIT IV DESIGN OF R.C. STRUCTURES** 9  
Corbels, Brackets and Nibs – Silos and bunkers – Chimneys – Principles of folded plates and shell roofs

**UNIT V PREFABRICATION** 9  
Principles of prefabrication – Prestressed precast roof trusses- construction of roof and floor slabs Wall panels-storage /transportation /handling in yard /site and erection – joints in precast structures.

10:37 AM | qme-mhbq-qrd

**UNIT IV ANALYSIS AND DESIGN** 9  
Approximate Analysis of Bearing Wall Buildings The Cross Wall Structure - The Long Wall Structure The Rigid Frame Structure Approximate Analysis for Vertical Loading - Approximate Analysis for Lateral Loading - Approximate Design of Rigid Frame Buildings-Lateral Deformation of Rigid Frame Buildings - Shear Wall Structure - Vierendeel Structure - The Hollow Tube Structure.

**UNIT V OTHER HIGH-RISE BUILDING STRUCTURE** 7  
Deep - Beam Systems – High rise suspension systems - Pneumatic High rise buildings - Space Frame Applied to High rise Buildings - Capsule Architecture.

L: 45 ; TOTAL: 45 PERIODS

**TEXT BOOKS**

1. Bryan Stafford Smith and Alex Coull, Tall Building Structures, Analysis and Design, John Wiley and Sons, Inc., 2011.
2. Taranath B.S, Structural Analysis and Design of Tall Buildings: Steel and Composite Construction, McGraw Hill, 2011.

**REFERENCES**

1. Coull, A, and Smith, Stafford, B, "Tall Buildings", Pergamon Press, London, 1997.
2. Lin,T.Y, and Bury D.Slotes, "Structural Concepts and Systems for Architects and Engineers", John Wiley, 1994.
3. Taranath B.S., Structural Analysis and Design of Tall Buildings, McGraw Hill 1998.

Department of Information Technology

MINUTES of 15<sup>th</sup> Meeting of the Board of studies held on  
23<sup>rd</sup> June, 2021 at 10.45 AM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: [meet.google.com/iip-xxdf-ird](https://meet.google.com/iip-xxdf-ird)

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Department of Information Technology

Department of Information Technology

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

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15<sup>th</sup> Board of studies Meeting in the Department of  
**Information Technology**

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: [meet.google.com/iip-xxdf-ird](https://meet.google.com/iip-xxdf-ird)

Date & Time: 23.06.2021 & 10.45 a.m.

Agenda

BoS / IT 15.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Information Technology
BoS / IT 15.2	:	Confirmation of the Minutes of the 14 <sup>th</sup> meeting of Board of studies in the department of Information Technology held on 17 <sup>th</sup> DEC 2020 and Action taken report of 14 <sup>th</sup> meeting of Board of studies
BoS / IT 15.3	:	Business brought forward by the Chairman, Board of studies 15.3.1 Refining Core courses for UG degree programme under R-2019 15.3.2 Recategorizing Elective courses for UG degree programme under R-2019
BoS / IT 15.4	:	Any other items
BoS / IT 15.5	:	Suggestions given by the BoS Members

Department of Information Technology

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

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F. No. 15.1/NEC/ IT/2020-21

23<sup>rd</sup> June, 2021

Dear Sir/Madam,

***Sub: Minutes of the 15<sup>th</sup> Meeting of the Board of studies in the Information Technology - Reg.***

Kindly find attached herewith the Minutes of the 15<sup>th</sup> Meeting of Board of studies of the Information Technology of National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 23<sup>rd</sup> June, 2021 at 10.45 AM through Google Meet. 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 [hodit@nec.edu.in](mailto:hodit@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. K. G. Srinivasagan)

**National Engineering College, K.R.Nagar, Kovilpatti – 628 503**  
(An Autonomous Institution - Affiliated to Anna University, Chennai)  
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**MINUTES OF THE MEETING**

The 15<sup>th</sup> Meeting of the Board of studies of the Information Technology was held on 23<sup>rd</sup> June 2021 at 10.45 AM through Google Meet.

1. The following members were present:

1.	Dr.K.G.Srinivasagan	Chairman
2.	Dr.R.Muthukumar, Asso. Prof.	Internal Members
3.	Dr.V.Jackins, Asst. Prof. (SG)	
4.	Mr.V.Manimaran, Asst. Prof. (SG)	
5.	Mr.G.Pandiyarajan, Asst. Prof.	
6.	Ms.V.Anitha, Asst. Prof.	
7.	Dr.S.Swamynathan, Professor, Department of Information Science &Technology, Anna University, Chennai.	University Nominee
8.	Dr.P.Yogesh, Professor, Department of Information Science &Technology, Anna University, Chennai.	Academic/Alumni Expert
9.	Dr. Shajulin Benedict, Assistant Professor, Department of Computer Science and Engineering, IIT - Kottayam.	Special Invitee
10.	Dr. Debasis Samanta, Associate Professor Department of Computer Science & Engineering, IIT - Kharagpur.	Special Invitee
11.	Mr.Antony Arravindh, Senior Project Manager, HCL Technologies, Chennai.	Alumni/Industrial Expert
12.	Dr.K.M.Suceendran, General Manager, Tata Consultancy Services, Chennai.	Industrial Expert
13.	Anandh.A, Third year	Student Members
14.	Anto Rosario.S, Third year	

BoS / IT 15.1	:	WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN, BOARD OF STUDIES IN THE DEPARTMENT OF INFORMATION TECHNOLOGY
		The Chairman, BoS of the Information Technology welcomed and introduced the members of 15 <sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / IT 15.2	:	TO CONFIRM THE MINUTES OF FOURTEENTH BOS MEETING HELD ON 17 <sup>th</sup> DEC, 2020.
		The minutes of the <b>Fourteenth Board of Studies meeting</b> held on 17 <sup>th</sup> Dec, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 14 <sup>th</sup> Academic council.  ➤ <b>Action Taken Report</b> (Enclosed in <i>Annexure D</i> )
BoS / IT 15.3.1		<b>TO CONFIRM AND APPROVE</b> REFINING CORE COURSES FOR UG DEGREE PROGRAMME UNDER R-2019
		<b>RESOLVED TO</b> approve Refining Core courses for UG degree programme under R-2019
BoS / IT 15.3.2		<b>TO CONFIRM AND APPROVE</b> RECATEGORIZING ELECTIVE COURSES FOR UG DEGREE PROGRAMME UNDER R-2019
		<b>RESOLVED TO</b> approve Recategorizing Elective courses for UG degree programme under R-2019
BoS / IT 15.4	:	<b>SUGGESTIONS GIVEN BY THE BOS MEMBERS</b>
15.4.1	:	In <b>Problem Solving Techniques</b> (Second semester) subject, Second Unit may be renamed to <i>Control Structures</i> .  Fourth Unit may cover contents related to <i>Pointers, Structures and files</i> .  Fifth Unit may cover topics of basic <i>Searching and Sorting</i> .  With reference to Problem Solving Techniques, in <b>Data Structures And Algorithms</b> (Third semester) subject, First unit may cover topics like <i>Review of Arrays, Review of</i>

		<b><i>Search Techniques, and Advanced-Search Techniques.</i></b> Problem Solving Techniques syllabus was framed and passed by CSE Board. So the comments are passed to CSE Board.
15.4.2	:	<b>Social Computing</b> subject may be moved to 'Analytics Computing' category
15.4.3	:	<b>Social and Cloud Computing</b> category may be renamed as 'Advanced Computing'
15.4.4	:	<b>Block Chain Technology</b> subject may be moved to 'Advanced Computing' category
15.4.5	:	<b>Digital Marketing</b> subject may be moved to 'Mobile Computing' category
15.4.6	:	Network and security related subjects may be grouped together under a new category and named as <b>Networking And Security</b>
15.4.7	:	<b>Social Networking</b> subject may be moved to 'Analytics Computing' category
15.4.8	:	<b>Natural Language Processing</b> subject may be added under 'Analytics Computing' category
15.4.9	:	<b>Parallel Programming</b> subject may be added under 'Programming' category

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated.

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

- a) Recategorizing Elective courses for UG degree programme under R-2019

Mr.G.Pandiyarajan, Asst. Prof., thanked all the members for their kind cooperation and the meeting came to an end.



**Members Present Online:**

1.	Dr.K.G.Srinivasagan, Prof & Head ,Board Chairman	Chairman
2.	Dr.R.Muthukkumar, Asso. Prof.	Internal Members
3.	Dr.V.Jackins, Asst. Prof. (SG)	
4.	Mr.V.Manimaran, Asst. Prof. (SG)	
5.	Mr.G.Pandiyarajan, Asst. Prof.	
6.	Ms.V.Anitha, Asst. Prof.	
7.	Dr.S.Swamynathan, Professor, Department of Information Science &Technology, Anna University, Chennai.	University Nominee
8.	Dr.P.Yogesh, Professor, Department of Information Science &Technology, Anna University, Chennai.	Academic Experts
9.	Dr. Shajulin Benedict, Assistant Professor, Department of Computer Science and Engineering, IIIT - Kottayam.	Special Invitee
10.	Dr. Debasis Samanta, Associate Professor Department of Computer Science & Engineering, IIT - Kharagpur.	
11.	Mr.Antony Arravindh, Senior Project Manager, HCL Technologies, Chennai.	Industrial Experts and Alumni
12.	Dr.K.M.Suceendran, General Manager, Tata Consultancy Services, Chennai.	Industrial Expert
13.	Anandh.A, Third year	Student Members
14.	Anto Rosario.S, Third year	

  
**CHAIRMAN**  
**BOARD OF STUDIES**  


## ANNEXURE I

### **Actions taken for Minutes of 14<sup>th</sup> BoS Meeting**

As per BOS Committee suggestion,

- Latest edition and recent year books under text and reference materials are included. Web references from NPTEL and Coursera etc., are included.
- Each unit comprises at least three to four lines of detailed topics. Intermediate topics are also added under each unit.
- Course Outcomes are reframed accordingly.

  
CHAIRMAN  
BOARD OF STUDIES  
V.A.

# 15<sup>th</sup> BOS Meeting – Department of Information Technology on 23.06.2021

