NATIONAL ENGINEERING COLLEGE
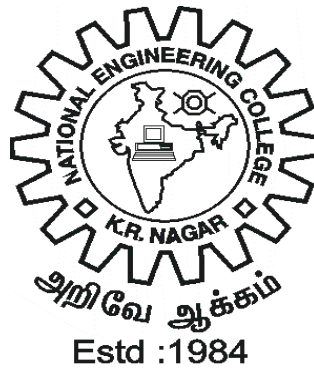
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K.R.NAGAR, KOVILPATTI – 628 503

Estd :1984

14th BOARD OF STUDIES MEETING – MINUTES

Google Online Meet
PERIOD - DECEMBER 2020

Department of Mechanical Engineering

MINUTES of 14th Meeting of the Board of Studies held on
19th December, 2020 at 10.00 a.m. (through Online mode)
Google meet Link: meet.google.com/jkd-irvd-avr

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

Department of Mechanical Engineering

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

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

www.nec.edu.in

14th Board of Studies Meeting
Department of Mechanical Engineering

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

Date & Time: 19.12.2020& 10.00 a.m.

Through Online Mode

Google Meet Link: meet.google.com/jkd-irvd-avr

AGENDA

BoS / MECH14.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Mechanical Engineering
BoS / MECH14.2	:	Confirmation of the Minutes of the 13th meeting of Board of Studies in the department of Mechanical Engineering held on May 23,2020 and Action taken report of 13th meeting of Board of Studies
BoS / MECH14.3	:	Business brought forward by the Chairman, Board of studies

	14.3.1	Inclusion of introduction to AI based additional open elective courses in B.E Mechanical Engineering Programme under R2019 1. Foundations of Artificial Intelligence – 3 Credit 2. Essentials of Machine Learning – 3 Credit 3. Artificial Intelligence in Predictive Maintenance – 1 credit 4. Artificial Intelligence in Intelligent Manufacturing – 1 credit 5. Artificial Intelligence in Production Management – 1 credit
	14.3.2	Change of Course Name

	14.3.3	Syllabus for Open Elective Courses – II in B.E. Mechanical Engineering programme under Regulation 2019. 1) Testing and Calibration of Instruments 2) Digital Electronics for Engineers 3) Instrumentation and Control 4) Microprocessor, Microcontroller and Applications 5) Electrical Drives and Control
	14.3.4	Syllabus for Open Elective Courses – III in B.E. Mechanical Engineering programme under Regulation 2019. 1) Computer Graphics and Virtual Reality 2) Mobile Application and Development 3) Object Oriented Programming 4) Programming in Python 5) Fundamentals of Java Programming 6) Programming for Robotics 7) Fundamentals of Artificial Intelligence 8) Simulation and Modelling
	14.3.5	Syllabus for Professional Elective Courses (Thermal Module) in B.E. Mechanical Engineering Programme under Regulation 2019.
	14.3.6	Syllabus for Professional Elective Courses (Design Module) in B.E. Mechanical Engineering Programme under Regulation 2019.
	14.3.7	Syllabus for Additional Open Elective Courses in M.E. Energy Engineering programme under Regulation 2019 1) Material Testing and Characterization Techniques 2) Micro Manufacturing 3) Non-destructive Testing and Evaluation 4) Polymers and Composite Materials 5) Surface Engineering
	14.3.8	Offering courses for Open Elective Courses to Civil, CSE and EEE Programmes under Regulation 2019. Civil 1. Project Management and Finance 2. Product Design and Development

			3. Energy Engineering
			
			CSE
			  1. Design Thinking
			  2. Fundamentals of Robotics
			  3. Nanotechnology
			
			EEE
			  1. Power Plant Engineering
			  2. Mechatronics

		14.3.9	Inclusion of 2 credit course on "Innovation through Design Thinking".
		14.3.10	Formal approval for handling one or two descriptive courses in R-2105 and R-2019 through online mode by NEC faculty
		14.3.11	The discussion and approval of NEC Innovation and Startup Policy (NEC ISP) – 2020.
		14.3.12	Commercialized a Product Developed through NewGen IEDC and EDII Tamil Nadu.
BoS / MECH14.4	:	Suggestions given by the BOS Members	
BoS / MECH14.5	:	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

19th December, 2020

Dear Sir/Madam,

Sub: *Minutes of the 14th Meeting of the Board of studies in the Mechanical Engineering - Reg.*

Kindly find attached herewith the Minutes of the 14th Meeting of Board of studies of the Mechanical Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 19th December2020 at 10.00 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 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 14th Meeting of the Board of studies of the Mechanical Engineering was held on 19th December 2020 at 10.00a.m. through online mode (Google Meet Link: meet.google.com/jkd-ivrd-avr) 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. D.Ravindran, Professor	Internal Members
3.	Dr.S.Iyah Raja, Asso. Professor	
4.	Dr.D.Venkat Kumar, Asso. Professor	
5.	Dr. M.Kathiresan, Asso. Professor	
6.	Dr. R.Harichandran, Asso. Professor	
7.	Dr.I. Sankar, Asst.Professor (S.G)	
8.	Dr.D. Vignesh Kumar, Asst. Prof. (S.G)	
9.	Mr.P.Ramanan, Asst. Professor (S.G)	
10.	Dr.F.Michael Thomas Rex, Asst. Prof. (S.G)	
11.	Dr. P. Hariharasakthisudhan, Asst. Prof. (S.G)	
12.	Mr. R.Vignesh Kumar, 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.	Mr. R. Kanda Subburaj Chief Engineer, Project Controls, AMEC Foster Wheeler India Pvt. Ltd, Chennai	Industrial Expert related to

20.	Mr. S. Suresh Senior Vice President and Business Head (EM), Wheels India Limited, Padi, Chennai	Placement
21.	Dr. K. Murugan Scientist –E, Centre for Engineered Coatings (CEC), ARCI, Hyderabad – 500 005, Telangana	Meritorious Alumnus Nominated by the Principal
22.	Dr.A.Arockiarajan Professor / Applied Mechanics, Indian Institute of Technology, Chennai	Special Invitees
23.	Mr.P.Muniyandi Principal Scientific Officer Bharat Earth Movers Limited New Thippasandra, Bengaluru – 56007	
24.	Mr.P.S.Sriram Vice President – Operations (Plant – Head) Daimler india commercial vehicles, Chennai.	
25.	Mr. Vinoth Kumar. M Plant Head, Interplex Electronics India Pvt. Ltd., Chennai	
26.	Mr. T. Anandhavel, II Year Student	Student Members
27.	Mr. C. Surya, III Year Student	
28.	Mr. J. Sam Joebin, III Year Student	
29.	Mr. M. Pradheep, IV Year Student	

BoS / MECH14.1	:	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 14th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / MECH 14.2	:	TO CONFIRM THE MINUTES OF THIRTEENTH BOS MEETING HELD ON 23rd May, 2020

		The minutes of the **Thirteenth Board of Studies meeting** held on 23rd May, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council. (Enclosed in Annexure – I)
BoS / MECH 14.3.1	:	**TO CONFIRM AND APPROVE** the introduction to AI based additional open elective courses in B.E Mechanical Engineering Programme under R-2019 (Enclosed in Annexure – II)
		RESOLVED TO APPROVE the introduction to AI based additional open elective courses in B.E. Mechanical Engineering Programme under R-2019
BoS / MECH 14.3.2	:	**TO CONFIRM AND APPROVE** the change of course name in B.E. Mechanical Engineering Programme under R-2019 (Enclosed in Annexure – III)
		RESOLVED TO APPROVE the change of course name in B.E. Mechanical Engineering Programme under R-2019
BoS / MECH 14.3.3	:	**TO CONFIRM AND APPROVE** the syllabus of Open Elective Courses – II in B.E. Mechanical Engineering programme under R-2019. (Enclosed in Annexure – IV)
		RESOLVED TO APPROVE the syllabus of Open Elective Courses – II in B.E. Mechanical Engineering programme under R-2019.
BoS / MECH 14.3.4		**TO CONFIRM AND APPROVE** the syllabus of Open Elective Courses – III in B.E. Mechanical Engineering programme under R-2019. (Enclosed in Annexure – V)
		RESOLVED TO APPROVE the syllabus of Open Elective Courses – III in B.E. Mechanical Engineering programme under R-2019.
BoS / MECH 14.3.5		**TO CONFIRM AND APPROVE** the syllabus of Professional Elective Courses (Thermal Module) in B.E. Mechanical Engineering Programme under R-2019. (Enclosed in Annexure – VI)
		RESOLVED TO APPROVE the syllabus of Professional Elective Courses (Thermal Module) in B.E. Mechanical Engineering Programme under R-2019.

BoS / MECH 14.3.6		**TO CONFIRM AND APPROVE** the syllabus of Professional Elective Courses (Design Module) in B.E. Mechanical Engineering Programme under R-2019. (Enclosed in Annexure – VII)
		RESOLVED TO APPROVE the syllabus of Professional Elective Courses (Design Module) in B.E. Mechanical Engineering Programme under R-2019.
BoS / MECH 14.3.7		**TO CONFIRM AND APPROVE** the syllabus of Open Elective Courses in M.E. Energy Engineering programme under R-2019 (Enclosed in Annexure – VIII)
		RESOLVED TO APPROVE the syllabus of Open Elective Courses in M.E. Energy Engineering programme under R-2019
BoS / MECH 14.3.8		**TO CONFIRM AND APPROVE** offering Open Elective Courses to Civil, CSE and EEE Programmes under Regulation 2019. (Enclosed in Annexure – IX)
		RESOLVED TO APPROVE offering Open Elective Courses to Civil, CSE and EEE Programmes under R-2019.
BoS / MECH 14.3.9		**TO CONFIRM AND APPROVE** a 2-credit course on "Innovation through Design Thinking". (Enclosed in Annexure – X)
		RESOLVED TO APPROVE a 2-credit course on "Innovation through Design Thinking".
BoS / MECH 14.3.10		**TO CONFIRM AND APPROVE** the conduct of one or two descriptive courses in fully online mode handled by NEC faculty
		RESOLVED TO approve the conduct of one or two descriptive courses in fully online mode handled by NEC faculty
BoS / MECH 14.3.11		**TO CONFIRM AND APPROVE** NEC Innovation and Startup Policy (NEC ISP) - 2020. (Enclosed in Annexure – XI)
		DISCUSSED AND RECOMMENDED subject to the approval of the Academic council and the University.
BoS / MECH 14.4	:	**Suggestions Given by the Members**
14.4.1	:	The introduction to AI based additional Open Elective Courses may be offered to the students from 3rd year

			onwards.
	14.4.2	:	Pitot tube, Anemometer and National standards for Calibration may be incorporated in the syllabus of open elective course "Testing and Calibration of Instruments".
	14.4.3	:	The following topics may be included in the syllabus of open elective course – III (Computational Skills). Augmented Reality, Database Management System, Back end programming.
	14.4.4	:	Advanced topics may be incorporated in "Internal Combustion Engines" course.
	14.4.5		Body design, Hybrid electric vehicle, Indian standards for emission, testing standards, safety in automobiles topics may be included in the programme elective course, "Automobile Engineering"
	14.4.6		A new course "Hybrid Electric Vehicles" may be introduced as programme elective.
	14.4.7		Latest electrical and electronics may be incorporated in "Automotive Electronics".
	14.4.8		The content of Unit 2 in Refrigeration and Airconditioning course may be revised.
	14.4.9		Introduction about safety regulations, crashworthiness, ARI can be added in Vehicle systems design course.
	14.4.10		Design for welding and welded assembly can be added in the course "Design for Manufacture, Assembly and Environments".
	14.4.11		The content of the Material Testing and Characterization techniques course and Surface Engineering course may be revised.
	14.4.12		NEC Innovation and Startup Policy is recommended subject to the approval of the Academic council and the University.
	14.4.13		The members of BOS appreciated the efforts taken by the department for developing Innovative Agro Tech Product by K.R.Innovation Centre through NewGen IEDC and EDII Tamil Nadu.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately about this online teaching and learning process.

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

a) Inclusion of Introduction to AI based additional Open Elective Courses for III-year B.E. Mechanical Engineering Programme under R-2019.

b) Change of Course Name

c) Syllabus of new open elective courses (Group-II and Group-III) in B.E. Mechanical Engineering Programme under R-2019

d) Syllabus of new professional elective courses (Thermal and Design Module) in B.E. Mechanical Engineering Programme under R-2019

e) Syllabus of new open elective courses in M.E. Energy Engineering Programme under R-2019

f) Syllabus of open elective courses offering for Civil, CSE and EEE Programmes under R-2019

g) Inclusion of 2 credit course on "Innovation Through Design Thinking"

h) to conduct of one or two descriptive courses in fully online mode handled by NEC faculty

i) NEC Innovation and Startup Policy (NEC ISP) - 2020

Dr. D.Ravindran, Professor / Mechanical Engineering thanked all the members for their kind cooperation and the meeting came to an end.
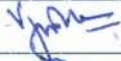
Members Present Online

Dr.D.Mohanlal, Professor, Department of Mechanical Engineering, CEG campus, Anna university, Chennai-600 025	*University Nominee*
Dr. R. Velraj, Professor & Director, Institute for Energy Studies, CEG, Anna University, Chennai–600025	*Academic Experts*

Dr.-Ing. M. Duraiselvam, Professor, Department of Production Engineering, NIT, Trichy	
Dr. A.Arockiarajan Professor, Department of Applied Mechanics, Indian Institute of Technology, Chennai	
Dr. K. Murugan, Scientist –E, Centre for Engineered Coatings (CEC), ARCI, Hyderabad – 500 005, Telangana	*Meritorious Alumnus*
Mr. R. Kanda Subburaj, Chief Engineer, Project Controls, AMEC Foster Wheeler India Pvt. Ltd, Chennai	
Mr.P.Muniyandi, Principal Scientific Officer, Controllerate of Quality Assurance, Bharat Earth Movers Ltd, Bengaluru	*Industrial Experts*
Mr. Vinoth Kumar. M, Plant Head, Interplex Electronics India Pvt. Ltd., Chennai	
Mr.P.S.Sriram, Director (Industrial), Alstom Transport India Ltd., Chennai.	

Members Present

Chairman	
Dr.K.Manisekar, Professor & Head	*ku-sc*
Internal Members	
Dr. D.Ravindran, Professor	through online
Dr.S.Iyah Raja, Asso. Professor	*signature*
Dr.D.Venkat Kumar, Asso. Professor	*D.V signature*
Dr. M.Kathiresan, Asso. Professor	through online
Dr. R.Harichandran, Asso. Professor	*R.H. signature*
Dr.I. Sankar, Asst. Professor (S.G)	through online
Dr.D. Vignesh Kumar, Asst.Professor (S.G)	*signature*
Mr.P.Ramanan, Asst Professor (S.G)	*signature*
Dr.F.Michael Thomas Rex, Asst. Professor (S.G)	*signature*
Dr. P. Hariharasakthisudhan, Asst. Professor (S.G)	*signature*

Mr. R.Vignesh Kumar, Asst. Professor	*(signature)*
Mr. C.Suresh Kumar, Asst. Professor	*(signature)*
Mr.S.S.Ananthan, Adjunct Faculty	through Online
Mr. M.Vivekanandan, Adjunct Faculty	through Online
Student Members Nominated by the HOD	
Mr. T. Anandhavel, II Year Student	through Online
Mr. C. Surya, III Year Student	through Online
Mr. J. Sam Joebin, III Year Student	through Online.
Mr. M. Pradheep, IV Year Student	through Online

CHAIRMAN
BOARD OF STUDIES

ANNEXURE - I

Action taken for Minutes of 13th BoS Meeting

As per BOS Committee suggestion,

1. The limitations of digital manufacturing and machine learning concepts were included in the syllabus of one credit course "Digital Manufacturing".

2. All kind of standards was incorporated into the syllabus of one credit course "Codes and Standards".

3. The syllabus of open elective course "Laser Technology" was revised.

4. Engineering applications of Nano Technology was incorporated in the syllabus of open elective course "Fundamentals of Nano science".

5. FTIR analysis and mechanical testing of polymers were included in the syllabus of open elective course "Polymer Science and Technology".

18/12/2020

Chairman
Board of Studies

14th BOARD OF STUDIES MEETING – DEPARTMENT OF MECHANICAL ENGINEERING ON 19.12.2020

Department of Electronics and Communication Engineering

MINUTES 14th Meeting of the Board of studies held on
16th December, 2020 at 10.00AM

Venue: Conference Hall,
National Engineering College, K.R.Nagar, Kovilpatti– 628503
(through Google meet)

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Department of Electronics and Communication Engineering

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F. No. 1-2/NEC/Branch/ECE

18thDecember, 2020

Dear Sir/Madam,

Sub: *Minutes of the 14th Meeting of the Board of studies in Electronics and Communication Engineering - Reg.*

The 14h Meeting of Board of studies of the Electronics and Communication Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628503 was conducted on 16th December,2020 at 10.00 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

14th 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)

Date & Time: 16.12.2020& 10.00 AM

AGENDA

ECE/BoS14.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Electronics and Communication Engineering
ECE/BoS 14.2	:	Confirmation of the Minutes and action taken report of the 13th meeting of Board of studies in the Department of Electronics and Communication Engineering held on21st May 2020.
ECE/BoS14.3	:	Business brought forward by the Chairman, Board of studies 14.3.1. Elective courses for UG degree programme under R-2015. 14.3.2. Core, elective and one credit courses for UG degree programme under R-2019 14.3.3. Redefining comprehension course(19EC73C) to test the employability skill.
ECE /BoS14.4	:	Any other items • Incorporating innovation skill related courses like design thinking in R-2019 • NEC innovation and start up policy
ECE /BoS14.5	:	Suggestions given by the BoS Members

Department of Electronics and Communication Engineering

MINUTES OF THE MEETING

The 14th Meeting of the Board of studies of the Electronics and Communication Engineering was held on 16th December, 2020at 10.00 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.Shunmugavel, Senior Prof, Director	Internal Members
3.	Dr. S.Tamilselvi, Professor	
4.	Dr. V.R.S.Mani, Asso. Prof (SG)	
5.	Dr. T.S.Arun Samuel, Asso. Prof	
6.	Dr. T.Vijayanandh, Asst. Prof (SG)	
.7.	Dr. K.J.Prasanna Venkatesan, Asst. Prof (SG)	
8.	Mr. A.Saravana Selvan, Asst. Prof (SG)	
9.	Mr. S.Cammillus, Asst. Prof (SG)	
10.	Mrs. R.Manjula Devi, Asst. Prof (SG)	
11.	Mr. C.Balamurugan, Asst. Prof (SG)	
12.	Mr. K.Subramanian, Asst. Prof (SG)	
13.	Mr. M.Satheesh Kumar, Asst. Prof (SG)	
14.	Mr. M.Sathish Kumar, Asst. Prof	
15.	Mr. B.Ganapathyram, Asst. Prof	
16.	Ms. J.E.Jeyanthi, Asst. Prof	
17.	Mrs. Viswalakshmi, Adjunct Faculty	
18.	Dr. M. Meenakshi, Professor, Department of ECE, College of Engineering, Guindy Campus, Chennai.	Academic Experts
19.	Dr.M.Ganesh Madhan, Professor, Department of ECE Madras Institute of Technology,	

	Anna University, Chennai.	
20.	Dr. Suvra Sekhar Das Associate Professor, Sanyal School of Telecommunication, IIT, Kharagpur	
21.	Dr.Klutto Milleth, Chief Technologist Centre of Excellence in Wireless Technology IIT Madras IIT Madras Research Park Taramani Chennai .	Alumni Member
22.	Mr.Srivatsan Srinivasan Chief Architect Cognizant, USA	
23.	Dr.R.Pandeeswari Associate Professor Department of ECE NIT, Trichy.	
24.	Mr.S.Vijay bharat Associate Vice President Mistral Solutions Pvt Ltd Chennai	
25.	Mr.S.Lakshmanan Senior HR VVDN Technologies Pvt Ltd Chennai	Industrial Experts
26.	Mr.K.A.Irshadh Abdul Rasheed Associate Partner Cyber Security Ernst And Young LLP Chennai	
27.	Mr. Mathankumar Viswanathan Manager (Software) VVDN Technologies Pvt Ltd Chennai	
28.	Mr. Sethuraman Thangavelu Manager (Software) VVDN Technologies Pvt Ltd Chennai	Special Invitee

29.	Mr. VigneshAnanthan Manager (Hardware) VVDN Technologies Pvt Ltd Chennai	
30.	Mr.S.Shunmugavel, Final Year ECE	Student Members
31.	Ms.K.Mari Priyadarshini, Final Year ECE	

BoS/ECE14.1 : 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 14th Board of Studies.

BoS/ECE 14.2 : TO CONFIRM THE MINUTES OF THIRTEENTHBOS MEETING HELD ON 21ST MAY 2020.

The minutes of the **Thirteenth Board of Studies meeting** held on 21st May 2020were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the13th Academic council.

➤ Action Taken Report

(Enclosed in *Annexure I*)

BoS/ECE14.3.1 : **Approval for Elective Courses for UG Degree Programme Under R-2015**

Resolved to approve the following two elective courses framed by Industrial expert for UG Degree Programme Under R-2015

1. Cyber Security: Governance, Risk and Compliance- 1 Credit
2. Edge Analytics and Internet of Things- 3 Credit

Approval for Core, Elective and One-Credit Courses for UG

BoS/ECE14.3.2 : **Degree Programme Under R-2019.**

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

(Enclosed in *Annexure II*)

BoS/ECE14.3.3 **Approval toRedefine the Comprehension Course (19EC73C)**

Resolved to approve and redefined the Comprehension Course (19EC73C) to test the Employability Skill of the students.

BoS/ECE14.3.4 **Approval for incorporating Innovation Skill related Courses like Design Thinking in R-2019**

Resolved to approve a course called 'Innovation through Design Thinking' in R-2019.

BoS/ECE14.3.5 **Approval for NEC Innovation and Startup Policy**

Resolved to approve the NEC innovation and startup policy

BoS/ECE 14.5 : **SUGGESTIONS GIVEN BY THE BOS MEMBERS**

14.5.1 : The syllabus content of the core course 19EC61C-Wireless Communication under R-2019 may be lessened and finetuned.

14.5.2 : It is recommended to include a one credit Advanced communication lab in the seventh semester under R-2019.

14.5.3 : The content of the core course 19EC71C-Microwave and Optical Communication under R-2019need to be redefined. Unit 1, unit 2 and unit 3 content may be reduced. RADAR topic in unit 3 may be removed.

14.5.4 : The redundant topics in elective course 19EC01E-Speech and Audio Processing under R-2019 may be removed.

14.5.6 : The first unit of the elective course 19EC03E-Mixed Signal Design under R-2019 needs to be modified.

14.5.7 : The topics ARMA, AR and MA Model parameters can be shifted from unit 1 to unit 3 in elective course 19EC04E-Adaptive

Signal processing under R-2-1019.

14.5.8 : In elective course 19EC06E-Digital Signal Processors under R-2019, unit 3 and unit 5 may be swapped.

14.5.9 : Fabrication issues and design challenges may be included in the elective course 19EC18E-Introduction to MEMES under R-2019.

14.5.10 : The sequence of topics may be redefined in the elective course 19EC19E-Information theory and coding under R-2019. The basics of error correcting code need to be added.

14.5.11 : Recent text and reference books may be included in the elective course 19EC20E-Satellite communications under R-2019.

14.5.12 : The content related to types of Radar and RF front end may be included in unit 1 and Radar and its applications may be added in unit 5 of the elective course 19EC21E-Radar and Navigation Aids under R-2019.

14.5.13 : The order and repetition of the content may to be noted in the elective course 19EC22E-Statistical Theory of Communication under R-2019 and redundancy may be eliminated

14.5.14 : Different types of antenna can be included in unit 1 and navigational autonomous ground vehicle system may be included in unit 5 of the elective course 19EC24E-Global Navigational Satellite System under R-2019.

14.5.15 : Standardization with limitations may be included in unit 4 of the elective course 19EC25E-Electromagnetic Interference and Compatibility under R-2019.

14.5.16 : The content may be modified without redundancy in the elective course 19EC26E-Advanced Wireless Communication under R-2019.

14.5.17 : Redundant content in the elective course 19EC27E-Error Control Codes under R-2019 may be removed.

14.5.18 : Cloud security topic may be included in the elective course of 19EC59E-Fundamentals of Cyber Security under R-2019.

Significance of the Innovation through Design Thinking course was presented by Dr.I. Sankar, AP (SG)/Mechanical Engineering Department for the approval of BoS.

NEC Innovation and Startup policy was presented by Mr.B.Ganapathyram, AP/ECE, for the approval of BoS.

Conducting few elective courses through online in the forthcoming semester was presented by Dr.S.TamilSelvi, Professor/ECE, and the members suggested that instead of having 100% of online mode, blending of online and classroom teaching may be generative.

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-2015
2. Core, elective and one credit courses for UG degree programme under R-2019
3. Redefining comprehension course (19EC73C) to test the employability skill
4. Any other items

   - Incorporating innovation skill related courses like design thinking in R-2019
   - NEC innovation and startup policy

Ms. J.E.Jeyanthi, AP/ECE thanked all the members for their kind cooperation and the meeting came to an end.
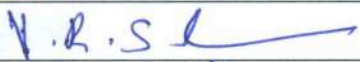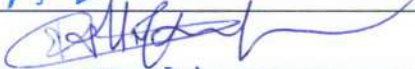
Members Present Online:

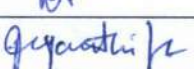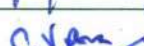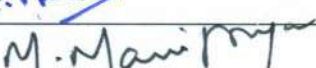|		
1.	Dr. M.Ganesh Madhan Professor, Dept. of ECE, Madras Institute of Technology campus, Anna University, Chennai – 600044.	Academic Expert
2.	Dr.M.Meenakshi Professor, Dept. of ECE, College of Engineering, Guindy Campus, Chennai - 600025	
3.	Dr. Suvra Sekhar Das Associate Professor, Sanyal School of Telecommunication, IIT, Kharagpur	
4.	Dr.J.KluttoMilleth Chief Technologist Centre Of Excellence in Wireless Technology IIT-Madras Research Park, Chennai	Alumni Stakeholders

5.	**Mr.Srivatsan Srinivasan** Chief Architect Cognizant, USA	
6.	**Dr.R.Pandeeswari** Associate Professor Department of ECE NIT, Trichy.	
7.	**Mr.S.VIJAY BHARAT** Associate Vice President Mistral Solutions Pvt Ltd Chennai	Industrial Expert
8.	**Mr.S.LAKSHMANAN** Senior HR VVDN Technologies Pvt Ltd Chennai	
9.	**Mr.K.A.IRSHADH ABDUL RASHEED** Associate Partner Cyber Security Ernst And Young LLP Chennai	
10.	**Mr. Mathankumar Viswanathan** Manager (Software) VVDN Technologies Pvt Ltd Chennai	Special Invitee
11.	**Mr. Sethuraman Thangavelu** Manager (Software) VVDN Technologies Pvt Ltd Chennai	
12.	**Mr. Vignesh Ananthan** Manager (Hardware) VVDN Technologies Pvt Ltd Chennai	
13.	**Mr.S.Shunmugavel,** Final Year ECE	Student Member

Members Present

Board Chairman	
Dr. A. Shenbagavalli Professor & Head Department of Electronics and Communication Engineering	

Internal Members	
Dr. S.Shanmugavel, Senior Prof, Director	
Dr. S.Tamilselvi, Professor	
Dr. V.R.S.Mani, Asso. Prof (SG)	
Dr. T.S.Arun Samuel, Asso. Prof	
Dr. T.Vijayanandh, Asst. Prof (SG)	
Dr. K.J. Prasanna Venkatesan, Asst. Prof (SG)	
Mr. A.Saravana Selvan, Asst. Prof (SG)	
Mr. S.Cammillus, Asst. Prof (SG)	
Mrs. R.Manjula Devi, Asst. Prof (SG)	
Mr. C.Balamurugan, Asst. Prof (SG)	
Mr. K.Subramanian, Asst. Prof (SG)	
Mr. M.Satheesh Kumar, Asst. Prof (SG)	
Mr. M.Sathish Kumar, Asst. Prof	
Mr. B.Ganapathyram, Asst. Prof	
Ms. J.E. Jeyanthi, Asst. Prof	
Mrs. Viswalakshmi, Adjunct Faculty	
Ms.K.Mari Priyadarshini, Final Year ECE	

CHAIRMAN

BOARD OF STUDIES

14th BOARD OF STUDIES MEETING – DEPARTMENT OF ECE ON 16.12.2020

Meet - bgi-vixm-zfs - Work - Microsoft Edge

https://meet.google.com/bgi-vixm-zfs?authuser=1

● REC   Jeyanthi J.E ECE is presenting

Meeting details   ✕

People (29)   Chat

Professional Electives.pdf - Adobe Acrobat Reader DC

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COURSE OUTCOMES

Upon completion of this course, the students will be able to

CO1 :   Understand the multiple access technique and physical layer parameters for Long Term Evolution. (K2)

CO2 :   Apply MIMO basics for the fourth Generation wireless communication technologies. (K2)

CO3 :   Understand the concept of multiple access technique required for 5G wireless communications. (K2)

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Sethuraman Th...

B	BGR ECE
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D	Director
D	Dr. Pandeeswari Ramas...
D	Dr. VRS Mani
D	Dr.Ganesh Madhan
	Irshadh Abdul Rasheed
	Jeyanthi J.E ECE
	Jeyanthi J.E ECE
	Jeyanthi J.E ECE Presentation
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M	Manjula devi ECE

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11:40 AM
12/16/2020

Department of Computer Science and Engineering

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

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

www.nec.edu.in

14th Board of Studies Meeting in the Department of
Computer Science and Engineering

Meeting Mode: Through online (GoogleMeet)

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

Date & Time: 19.12.2020 & 10.30 AM

Agenda

BoS / CSE 14.1	:	Welcome address and Opening Remarks by Chairman, Board of Studies in the department of Computer Science and Engineering
BoS / CSE 14.2	:	Confirmation of the Minutes of the 13th meeting of Board of studies in the department of Computer Science and Engineering held on 30th May 2020 and Action taken report of 13th meeting of Board of studies
BoS / CSE 14.3	:	Business brought forward by the Chairman, Board of studies 14.3.1. Approval of Elective courses for B.E -CSE degree programme under R-2019 14.3.2. Approval of one credit courses for B.E -CSE degree programme under R-2019 14.3.3. Approval for NEC Innovation and Startup Policy(NEC-ISP) 2020 14.3.4. Approval for Innovation through design thinking course 14.3.5. Approval for online courses for one or two theory courses
BoS / CSE 14.4	:	Any other items
BoS / CSE 14.5	:	Suggestions given by the BoS Members

Department of Computer Science and Engineering

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F. No. 1-1/NEC/CSE

19th December, 2020

Dear Sir,

Sub: *Minutes of the 14th Meeting of the Board of studies in the Computer Science and Engineering -Reg.*

Kindly find attached herewith the Minutes of the 14th Meeting of Board of studies of the Computer Science and Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 19th December 2020 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

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

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

www.nec.edu.in

Department of Computer Science and Engineering

MINUTES OF THE MEETING

The 14th Meeting of the Board of studies of the Computer Science and Engineering was held on 19th December, 2020 at 10.30 AM through Google Meet.

The following members were present:

1.	**Dr.V.GOMATHI,** Professor & Head	Chairman
2.	Dr.K.G.Srinivasagan, Professor	Internal Members
3.	Dr.V.Kalaivani, Professor	
4.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
5.	Dr.S.Maheswari, Associate Professor	
6.	Dr.M.Bhuvaneswari, Assistant Professor (SG)	
7.	Ms.J.Naskath, Assistant Professor (SG)	
8.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
9.	Ms.R.Rajakumari, Assistant Professor (SG)	
10.	Mr.D.Vijayakumar, Assistant Professor (SG)	
11.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
12.	Dr.G.Sivakamasundari,Assistant Professor (SG)	
13.	Ms.G.R.Hemalakshmi, Assistant Professor (SG)	
14.	Ms.V.Anusuya Devi, Assistant Professor	
15.	Dr. K. S. Easwarakumar, Professor, Dept. of Computer Science and Engineering, CEG Campus, Anna University, Chennai .	University Nominee
16.	Dr. C.Krishna Mohan, Professor & Head, Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.	Academic Experts

17.	Dr. C. Mala, Professor, Dept. of Computer Science and Engineering, National Institute of Technology Trichy, Trichy.	Academic Experts
18.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Avinashi Road, Peelamedu. Coimbatore.	
19.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Civil Aerodrome Post, Coimbatore.	
20.	Mr.Roy Antony Arnold, Lead - Education and Research, Infosys Pvt Ltd.,Chennai.	Industrial Experts
21.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services,Chennai.	
22.	Mr.Lawrence Mohanraj, Country Lead – Academic Initiative, IBM India Pvt. Ltd, IBM Towers, Chennai.	
23.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	
24.	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.	
25.	Ms. Jeya Ramani. S.M, III year CSE	Student Members Nominated by the HOD
26.	Mr. Manickavasagan.P, III year CSE	

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 14.1	:	**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 14th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / CSE 14.2	:	**TO CONFIRM THE MINUTES OF 13th BOS MEETING HELD ON 30th MAY, 2020**

The minutes of the **Thirteenth Board of Studies meeting** held on 30th May, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council.

> **Action Taken Report**

(Enclosed in Annexure I)

BoS/CSE 14.3.1	:	**TO CONFIRM AND APPROVAL OF ELECTIVE COURSES FOR B.E-CSE DEGREE PROGRAMME UNDER R-2019**

RESOLVED TO approve some of the Programme Elective Courses, Open Elective Courses for B.E - CSE degree programme and Open Elective Courses for B.E-Mechanical Engineering, EEE and ECE degree programme under R-2019

> **R-2019- Programme Elective Courses Syllabus and Open Elective Courses**

(Enclosed in Annexure II)

BoS/ CSE 14.3.2	:	**TO CONFIRM AND APPROVAL OF ONE CREDIT COURSES FOR B.E-CSE DEGREE PROGRAMME UNDER R-2019**

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

> **R-2019- One credit courses syllabus**

(Enclosed in Annexure III)

BoS/ CSE 14.3.3	:	**TO CONFIRM AND APPROVAL FOR NEC INNOVATION AND STARTUP POLICY(NEC-ISP) 2020**

RESOLVED TO approve NEC Innovation and Startup Policy (NEC-ISP) 2020

> **NEC Innovation and Startup Policy (NEC-ISP) 2020**

(Enclosed in Annexure IV)

BoS / CSE 14.1	:	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 14th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / CSE 14.2	:	TO CONFIRM THE MINUTES OF 13th BOS MEETING HELD ON 30th MAY, 2020

The minutes of the **Thirteenth Board of Studies meeting** held on 30th May, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council.

➢ **Action Taken Report**

(Enclosed in Annexure I)

BoS/CSE 14.3.1	:	**TO CONFIRM AND APPROVAL OF ELECTIVE COURSES FOR B.E-CSE DEGREE PROGRAMME UNDER R-2019**

RESOLVED TO approve some of the Programme Elective Courses, Open Elective Courses for B.E - CSE degree programme and Open Elective Courses for B.E-Mechanical Engineering, EEE and ECE degree programme under R-2019

➢ **R-2019- Programme Elective Courses Syllabus and Open Elective Courses**

(Enclosed in Annexure II)

BoS/ CSE 14.3.2	:	**TO CONFIRM AND APPROVAL OF ONE CREDIT COURSES FOR B.E-CSE DEGREE PROGRAMME UNDER R-2019**

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

➢ **R-2019- One credit courses syllabus**

(Enclosed in Annexure III)

BoS/ CSE 14.3.3	:	**TO CONFIRM AND APPROVAL FOR NEC INNOVATION AND STARTUP POLICY(NEC-ISP) 2020**

RESOLVED TO approve NEC Innovation and Startup Policy (NEC-ISP) 2020

➢ **NEC Innovation and Startup Policy (NEC-ISP) 2020**

(Enclosed in Annexure IV)

BoS/CSE 14.3.4	:	**TO CONFIRM AND APPROVAL FOR INNOVATION THROUGH DESIGN THINKING COURSE**

RESOLVED TO approve innovation through design thinking course

> **Innovation through design thinking - 2 credits elective course**

(Enclosed in Annexure V)

BoS/CSE 14.3.5	:	**TO CONFIRM AND APPROVE FOR ONLINE COURSES FOR ONE OR TWO THEORY COURSES**

RESOLVED TO approve the conduct of one or two theory courses fully in online mode

> **R-2019 – Online courses for one or two theory courses**

(Enclosed in Annexure VI)

BoS/CSE 14.4	:	**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 14.5	:	**SUGGESTIONS GIVEN BY THE BOS MEMBERS**
14.5.1	:	List of Programme Elective Courses are appreciated by Anna University nominee and commented that syllabus is fine.
14.5.2	:	The content of syllabus of Programme Elective Courses are appreciated by Academic expert members.
14.5.3	:	Inclusion of latest technologies in one credit courses is appreciated by industrial experts and commented that syllabus is framed with excellent technical aspects and analyzed well as per industrial needs.
14.5.4	:	Pre-requisites may be included for all elective courses.
14.5.5	:	For 'Data science' and 'Social media analytics' courses, practical components may be included by involving Tableau Academy, IBM and Honeywell platforms. For 'Formal Proofs of Cryptography' course, practical components may be included.
14.5.6	:	For AI and healthcare course, the contents may be revised by including models of computing and clinical data analysis.

14.5.7 : Programme Elective Course on 'Design thinking' course may be framed with higher level contents of design thinking process.

14.5.8 : Ethereum tool may be included in 'Block chain Architecture and Design' course.

14.5.9 : 'Full Stack Development ' course may be included in one credit course.

14.5.10 : BoS members suggested to include 'Ideathon' as one of the assessments tool for the course 'Innovation through Design Thinking'

14.5.11 : 'Structured Query Language' course may alone be offered instead of additional 'Database Management Systems' course as open elective course.

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 Elective courses for B.E-CSE degree programme under R-2019.
b. Approval of one credit courses for B.E-CSE degree programme under R-2019.
c. Approval for NEC Innovation and Startup Policy (NEC-ISP) 2020.
d. Approval for Innovation through design thinking –Two credits course.
e. Approval for online courses for one or two theory courses.

Dr.M.Jayalakshmi, Assistant Professor (SG) thanked all the members for their kind cooperation and the meeting came to an end.

Members Present Online:

1.	**Dr.V.GOMATHI,** Professor & Head	Chairman
2.	Dr.K.G.Srinivasagan, Professor	Internal Members
3.	Dr.V.Kalaivani, Professor	
4.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
5.	Dr.S.Maheswari, Associate Professor	
6.	Dr.M.Bhuvaneswari, Assistant Professor (SG)	
7.	Ms.J.Naskath, Assistant Professor (SG)	

8.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
9.	Ms.R.Rajakumari, Assistant Professor (SG)	
10.	Mr.D.Vijayakumar, Assistant Professor (SG)	
11.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
12.	Dr.G.Sivakamasundari,Assistant Professor (SG)	
13.	Ms.G.R.Hemalakshmi, Assistant Professor (SG)	
14.	Ms.V.Anusuya Devi ,Assistant Professor	
15.	Dr. K. S. Easwarakumar Professor, Dept. of Computer Science and Engineering, CEG Campus Anna University, Chennai .	University Nominee
16.	Dr. C.Krishna Mohan Professor & Head Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.	Academic Experts
17.	Dr. C. Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology Trichy, Trichy.	
18.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Avinashi Road, Peelamedu. Coimbatore.	
19.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Civil Aerodrome Post, Coimbatore.	
20.	Mr.Roy Antony Arnold, Lead - Education and Research, Infosys Pvt Ltd.,Chennai.	Industrial Experts
21.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services,Chennai.	
22.	Mr.Lawrence Mohanraj, Country Lead – Academic Initiative, IBM India Pvt. Ltd, IBM Towers, Chennai	

23.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	Industrial Experts
24.	Ms.G.Maria Justin Mary, IT-Lead Remedy Application, Honeywell Technology Solutions, Madurai.	Industrial Experts and Alumni
25.	Mr.Manikanda Raman Viswanathan, Principal Architect, Cognizant Digital Operations, CTS,Chennai.	
26.	Ms. Jeya Ramani. S.M, III year CSE	Student Members Nominated by the HOD
27.	Mr. Manickavasagan.P , III year CSE	

CHAIRMAN
BOARD OF STUDIES

Annexure I

Action Taken Report for Minutes of 13th BOS

As per BOS committee suggestions,

- 15CS81C-Project Work Viva voce is conducted through online as per the recommendations of Anna University, Chennai.

- Internships have undergone by students during lock down based on student's domain interest.

CHAIRMAN
BOARD OF STUDIES

Department of Computer Science and Engineering

Minutes of Meeting of the Board of Studies held on
19th December, 2020 at 12.30 PM

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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Department of Computer Science and Engineering

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

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www.nec.edu.in

Board of Studies Meeting in the Department of
Computer Science and Engineering

Meeting Mode: Through online (GoogleMeet)

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

Date & Time: 19.12.2020 & 12.30 PM

Agenda

BoS / UGC-NSQF-Diploma 1.1	:	Welcome address and Opening Remarks by Chairman, Board of Studies in the department of Computer Science and Engineering
BoS / UGC-NSQF-Diploma 1.2	:	Business brought forward by the Chairman, Board of studies 1. Approval of Curriculum for the Diploma Programmes approved by University Grants Commission (UGC) under National Skills Qualifications Framework (NSQF) 2. Approval of Detailed Syllabi for the Diploma Programmes approved by University Grants Commission (UGC) under National Skills Qualifications Framework (NSQF)
BoS / UGC-NSQF-Diploma 1.3	:	Any other items
BoS / UGC-NSQF-Diploma 1.4	:	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
Department of Computer Science and Engineering

MINUTES OF THE MEETING

The Meeting of the Board of studies of the Computer Science and Engineering was held on 19th December, 2020 at 12.30 PM through Google Meet.

The following members were present:

1.	**Dr.V.GOMATHI** Professor & Head	Chairman
2.	Dr.K.G.Srinivasagan, Professor	Internal Members
3.	Dr.V.Kalaivani, Professor	
4.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
5.	Dr.S.Maheswari, Associate Professor	
6.	Dr.M.Bhuvaneswari, Assistant Professor (SG)	
7.	Ms.J.Naskath, Assistant Professor (SG)	
8.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
9.	Ms.R.Rajakumari, Assistant Professor (SG)	
10.	Mr.D.Vijayakumar, Assistant Professor (SG)	
11.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
12.	Dr.G.Sivakamasundari, Assistant Professor (SG)	
13.	Ms.G.R.Hemalakshmi, Assistant Professor (SG)	
14.	Ms.V.Anusuya Devi ,Assistant Professor	
15.	Dr. K. S. Easwarakumar Professor, Dept. of Computer Science and Engineering, CEG Campus Anna University, Chennai .	University Nominee
16.	Dr. C.Krishna Mohan Professor & Head Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.	Academic Experts

17.	Dr. C. Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology Trichy, Trichy.	
18.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Avinashi Road, Peelamedu. Coimbatore.	Academic Experts
19.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Civil Aerodrome Post, Coimbatore.	
20.	Mr.Roy Antony Arnold, Lead - Education and Research, Infosys Pvt Ltd.,Chennai.	
21.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services,Chennai.	Industrial Experts
22.	Mr.Lawrence Mohanraj, Country Lead – Academic Initiative, IBM India Pvt. Ltd, IBM Towers, Chennai	
23.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	
24.	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.	

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 / UGC-NSQF-Diploma 1.1	:	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 Board of Studies and explained the objective of the diploma courses approved by University Grants Commission (UGC) under National Skills Qualifications Framework (NSQF) scheme.
BoS / UGC-NSQF-Diploma 1.2	:	**TO CONFIRM AND APPROVAL OF CURRICULUM FOR DIPLOMA PROGRAMMES UNDER R-2019**
		RESOLVED TO approval of curriculum for the following five Diploma programme under R-2019 1. WEB APP DEVELOPMENT 2. ROBOTIC PROCESS AUTOMATION 3. NETWORK AND MANAGEMENT 4. IOT SOLUTION DEVELOPMENT 5. LINUX ADMINISTRATION ➢ **R-2019- UGC-NSQF-Diploma Programmes Curriculum** (Enclosed in Annexure I)
BoS/ UGC-NSQF-Diploma 1.2	:	**TO CONFIRM AND APPROVAL OF DETAILED SYLLABI FOR DIPLOMA PROGRAMMES UNDER R-2019**
		RESOLVED TO approval of detailed syllabus for the following five Diploma programme under R-2019 1. WEB APP DEVELOPMENT 2. ROBOTIC PROCESS AUTOMATION 3. NETWORK AND MANAGEMENT 4. IOT SOLUTION DEVELOPMENT 5. LINUX ADMINISTRATION ➢ **R-2019- UGC-NSQF-Diploma Programmes detailed syllabus** (Enclosed in Annexure II)
BoS/ UGC-NSQF-Diploma 1.3	:	**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/ UGC-NSQF-Diploma 1.4	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
1.4.1	:	The main objectives of the UGC – NSQF scheme are appreciated by the Industrial Experts. They also pointed out the need of one year diploma programmes will create work ready manpower on large scale. They appreciated that UGC – NSQF scheme will fulfill the gap of a demand and supply skilled workforce.
1.4.2	:	The content of syllabus of General Education Component courses is appreciated by Academic expert members.
1.4.3	:	Inclusion of latest technology based courses in diploma programmes are appreciated by industrial experts and commented that syllabus of the skill development components courses can be reduced.
1.4.4		For Interactive web app development Technology course in Web App Development Diploma, the contents may be revised by focusing HTML5,CSS, and JavaScript.
1.4.5		For Fundamentals of Software Engineering course in Robotic Process Automation Diploma, the contents may be revised by reducing the various SDLC models other than Waterfall model and Agile model.
1.4.6		The industrial expert suggested introducing the very specific content of syllabus to the target group for skill development. Getting the Diploma certificate should give confident to the students to get transition from non-formal to organized job market.
1.4.7	:	Computer system assembly, trouble shooting and repairing course may be included in Network and Management Diploma programme.
1.4.8	:	For all the courses of diploma programme, practical/demonstration/hands-on based content delivery methods need to be followed than conceptual explanation.
1.4.9	:	In Diploma in IOT Solution Development, the concentration has to be given for Arduino programming and product development in the first semester. The second semester courses may illustrate about Raspberry Pi board programming

			and product development.
	1.4.10	:	For Diploma in Linux Administration programme, Kali Linux and its default tools may be explored to the students and the File System Management course may be merged with Linux basic concepts.

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 for Curriculum for the Diploma Programmes approved by UGC under NSQF.
b. Approval for Detailed Syllabi for the Diploma Programmes approved by UGC under NSQF.

Dr.M.Jayalakshmi, Assistant Professor (SG) thanked all the members for their kind cooperation and the meeting came to an end.

Members Present Online:

1.	**Dr.V.GOMATHI** Professor & Head	Chairman
2.	Dr.K.G.Srinivasagan, Professor	Internal Members
3.	Dr.V.Kalaivani, Professor	
4.	Dr.K.Mohaideen Pitchai, Associate Professor (SG)	
5.	Dr.S.Maheswari, Associate Professor	
6.	Dr.M.Bhuvaneswari, Assistant Professor (SG)	
7.	Ms.J.Naskath, Assistant Professor (SG)	
8.	Dr.M.Jayalakshmi, Assistant Professor (SG)	
9.	Ms.R.Rajakumari, Assistant Professor (SG)	
10.	Mr.D.Vijayakumar, Assistant Professor (SG)	
11.	Ms.S.Kalaiselvi, Assistant Professor (SG)	
12.	Dr.G.Sivakamasundari,Assistant Professor (SG)	
13.	Ms.G.R.Hemalakshmi, Assistant Professor (SG)	
14.	Ms.V.Anusuya Devi ,Assistant Professor	
15.	Dr. K. S. Easwarakumar Professor, Dept. of Computer Science and Engineering, CEG Campus, Anna University, Chennai .	University Nominee

16.	Dr. C.Krishna Mohan Professor & Head Dept. of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Hyderabad.	Academic Experts
17.	Dr. C. Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology Trichy, Trichy.	
18.	Dr.G.R.Karpagam, Professor, Dept. of Computer Science and Engineering, PSG College of Technology, Avinashi Road, Peelamedu, Coimbatore.	
19.	Dr.G.Kousalya , Professor & Head of the Department, Dept. of Computer Science and Engineering, Coimbatore Institute of Technology, Civil Aerodrome Post, Coimbatore.	
20.	Mr.Roy Antony Arnold, Lead - Education and Research, Infosys Pvt Ltd., Chennai.	Industrial Experts
21.	Mr.Srinivasan Rajendren, Service Delivery Manager, Tata Consultancy Services,Chennai.	
22.	Mr.Lawrence Mohanraj, Country Lead – Academic Initiative, IBM India Pvt. Ltd, IBM Towers, Chennai	
23.	Mr.D.Siddharthan, Delivery Manager, Wipro Technologies Pvt. Ltd, Chennai.	
24.	Ms.G.Maria Justin Mary IT-Lead Remedy Application, Honeywell Technology Solutions, Madurai.	Industrial Experts and Alumni
25.	Mr.Manikanda Raman Viswanathan, Principal Architect, Cognizant Digital Operations, CTS, Chennai.	

CHAIRMAN
BOARD OF STUDIES

● REC   H   HOD CSE - Gomathi Velusamy is presenting

Meeting details

People (30)   Chat

19CS04E   **DATA MINING**   L T P C QP
                                              3 0 0 3 A

COURSE OUTCOMES
Upon completion of this course, the student will be able to
CO1: Apply pre-processing methods based on characteristics of data. (K3)
CO2: Comprehend features of classification techniques.(K2)
CO3: Identify appropriate clustering technique to analyze the data.(K3)
CO4: Use association rule mining to generate rules. (K3)
CO5: Use recent trends of Data mining in Business applications (K3)

UNIT I   DATA MINING AND DATA PREPROCESSING   12
Introduction to KDD process – Knowledge discovery from databases – Need for data pre
processing – Data cleaning – Data integration and transformation – Data reduction – Data
discretization and concept hierarchy generation.

UNIT II   CLASSIFICATION   9
Basic Concepts – Decision Tree induction – Bayes Classification Methods – Rule Based
Classification – Model Evaluation and Selection – Techniques to improve Classification
Accuracy –Classification: Advanced concepts – Bayesian Belief Networks - Support Vector
Machine –Classification using frequent Patterns.

UNIT III   CLUSTER ANALYSIS   9
Cluster Analysis: Basic concepts and Methods – Cluster Analysis – Partitioning methods –
Hierarchical methods – Density Based Methods– Grid Based Methods - Evaluation of

Kalaiselvi Csepg
Lawrence Mohanraj
maheswari cse
mala chelliah
Mani Viswanathan
MANICKAVASAGAN ...
Maria Justin Mary Sri...
Mohaideen Pitchai K.
naskath cse
Place ment
Prof. K S Easwarakum...
rajakumari cse

HOD CSE - Gomathi...   Lawrence Mohanraj
Siddharthan Devan...   Roy Antony Arnold...
mala chelliah   Mohaideen Pitchai ...
Mani Viswanathan   Dr.V.Kalaivani
anusuyadevi cse   C Krishna Mohan

Meeting details ∧

Raise hand   Turn on captions   HOD CSE - Gomathi Velusamy is presenting

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Department of Electrical and Electronics Engineering

MINUTES 14th Meeting of the Board of Studies held on
29th December 2020 at 10.30 AM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: https://meet.google.com/qra-wzcf-iee

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

14th Board of Studies Meeting in the Department of
Electrical and Electronics Engineering

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: https://meet.google.com/qra-wzcf-iee

Date & Time: 29.12.2020 & 10.30 AM

AGENDA

BoS / EEE 14.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the Department of Electrical and Electronics Engineering
BoS / EEE 14.2	:	Confirmation of the Minutes of the 13th meeting of Board of Studies in the Department of Electrical and Electronics Engineering held on 27th May 2020, and Action Taken report of 13th meeting of Board of studies
BoS / EEE 14.3	:	Business brought forward by the Chairman, Board of studies 14.3.1 Remaining Core courses for UG degree programmes under R-2019 14.3.2 Open elective and One credit courses for UG degree programmes under R-2019 14.3.3 Redefining the comprehensive courses to test the employability skills
BoS / EEE 14.4	:	Incorporating Innovation Skill related courses like design thinking leading to completion of projects, presented by Dr.I.Sankar, Chief Coordinator, NEC NewGen IEDC.
BoS / EEE 14.5	:	NEC Innovation and Startup Policy (NEC-ISP) 2020 will be presented by Mr.B.Ganapathy Ram, Technical Lead (Hardware: IOT), NEC Business Incubator Cell.
BoS / EEE 14.6	:	Any other items
BoS / EEE 14.7	:	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)
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F. No. 1-1/NEC/EEE.

29th December, 2020
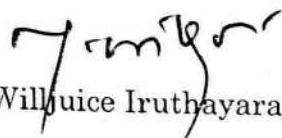
Dear Sir/Madam,

Sub: *Minutes of the 14th Meeting of the Board of studies in the EEE-Reg.*

Kindly find attached herewith the Minutes of the 14h Meeting of Board of studies of the Electrical and Electronics Engineering of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 29th December, 2020 at 10.30 AM in the Conference Hall of 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 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 14ʰ Meeting of the Board of studies of the Electrical and Electronics Engineering was held on 29th December, 2020 at 10.30 AM in the Conference Hall of 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.G.Kannayeram Assistant Professor(S.G) / EEE	
7.	Dr.M.P.E.Rajamani Assistant Professor (S.G) / EEE	
8.	Dr. V. Suresh Kumar, Professor, Department of Electrical and Electronics Engineering, Thiagarajar College of Engineering, Madurai, Tamilnadu.	Academic Expert
9.	Dr. Rajesh Joseph Abraham Associate Professor, Department of Avionics, Indian Institute of Space Science and Technology, Valiamala P.O., Thiruvananthapuram, Kerala.	
10.	Dr. S. Usa, Professor, Department of Electrical and Electronics Engineering, CEG Campus, Anna University, Chennai.	University Nominee

11.	Dr. S. Paramasivam, R&D Head, Electrical Drives, Danfoss Industries Ltd., Chennai	
12.	Dr. Santosh Kumar Annadurai GE T&D Ltd., GIS R&D Centre, Unit R&D Head, Padappai, Chennai.	Industrial Expert
13.	Dr. Hariram Satheesh, Principal Scientist, ABB Global Industries and Services Ltd, Bangalore.	
14.	Mr. M. Ramesh Senior Technical Engineer, Hardware Design and Development, Data Patterns India Pvt. Ltd., Chennai.	
15.	Dr.V. Sankaranarayanan, Professor & Head, Department of Electrical and Electronics Engineering, National Institute of Technology, Tiruchirapalli.	Special Invittee
16.	Mr. S. Joseph Francis, Final Year / EEE	Student Members
17.	Ms. H. Selvadevi, Final Year / EEE	

The Industrial Expert **Mr.S.Subramanian**, Senior Maintenance Engineering (I), Kudankulam Nuclear Power Project, Kudankulam, and **Mr. R. Jayakumar**, Assistant Vice President Wipro Technology Ltd.,Bangalore could not attend the meeting due to their prior commitments and unavoidable reasons and were granted leave of absence.

BoS / EEE 14.1	:	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 14th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / EEE 14.2	:	TO CONFIRM THE MINUTES OF THIRTEENTH BOS MEETING HELD ON 27th May 2020
		The minutes of the Thirteenth Board of Studies meeting held on 27th May 2020 were communicated to the members vide letter No. F. No. 1-1/NEC/EEE, Dated 27.05.2020.

The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council.

Action Taken Report

(Enclosed in Annexure I)

BoS / EEE 14.3.1	:	TO CONFIRM AND APPROVE THE SYLLABUS OF PROGRAMME CORE COURSES COURSES FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of programme core courses for UG (B.E. – EEE) PROGRAMME under R–2019.
Bos/EEE 14.3.2	:	TO CONFIRM AND APPROVE THE SYLLABUS OF OPEN ELECTIVE AND ONE CREDIT COURSES FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of open elective and one credit courses for UG (B.E. – EEE) PROGRAMME under R–2019.
Bos/EEE 14.3.3	:	TO CONFIRM AND APPROVE THE SYLLABUS OF THE COMPREHENSION COURSES TO TEST THE EMPLOYABILITY SKILLS FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019
		RESOLVED TO approve the syllabus of comprehension for UG (B.E. – EEE) PROGRAMME under R–2019
Bos/EEE 14.4	:	TO CONFIRM AND APPROVE THE SYLLABUS OF THE DESIGN THINKING COURSES TO INCORPORATE THE INNOVATION SKILL LEADING TO COMPLETION OF PROJECTS FOR UG (B.E. – EEE) PROGRAMME UNDER R–2019.
		RESOLVED TO approve the syllabus of design thinking course for UG (B.E. – EEE) PROGRAMME under R–2019

Bos/EEE 14.5	:	TO CONFIRM AND APPROVE THE NEC INNOVATION AND STARTUP POLICY (NECISP) 2020.
		RESOLVED TO approve the NEC innovation and startup policy (NECISP) 2020.
Bos/EEE 14.6	:	ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMAN OF THE BOS
14.6.1	:	Interdisciplinary projects may be allowed among students within the scope to to create a powerful learning experience and emphasize integrative learning, critical thinking, and creative problem solving.
14.6.2	:	Students may be encouraged to do NPTEL/MOOC Courses for credit transfer as per the regulation.
14.6.3	:	Tamil Nadu Electric Vehicle Policy 2019 may be included as a content, while framing Electric Vehicle syllabus as per the Guidelines from AICTE and Government of Tamil Nadu.
14.6.4	:	The necessity for Design thinking course is appreciated by the committee and the implementation of the course may be considered for fourth or fifth semester.
14.6.5	:	The committee has discussed the Proposed NEC Innovation and startup policy 2020, and approved the same for the benefit for the students welfare.
Bos/EEE 14.7	:	SUGGESTIONS GIVEN BY THE BOS MEMBERS
14.7.1	:	In the course Power Systems-II, the topic SCADA and wide area monitoring system may be included.
14.7.2	:	In the course Switchgear and Protection, the topic integration of SCADA along with wide area monitoring system may be included.
14.7.3	:	The title of the course " Protection and Switchgear Laboratory" may be renamed as " Switchgear and Protection Laboratory"
14.7.4	:	The one credit courses "Computational Fluid Dynamics" and

		"Electrical Stress Analysis", may be given as 3 credit programme elective courses with additional contents.
14.7.5	:	In the one credit course "Digital substation", the contents GOOSE, Substation communication and protocol,may be removed.
14.7.6	:	The couse related to network and communication may be given as one credit course.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and Syllabi. Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

Dr. N. B. Prakash, Associate Professor /EEE thanked all the members for their kind cooperation and the meeting came to an end.

CHAIRMAN

BOARD OF STUDIES

Action Taken on Suggestions from 13th BOS Meeting

Suggestions	Action Taken
The BoS chairman proposed to conduct Project Work viva voce examinations for final year UG (B.E. – EEE) & PG (M.E – HVE) through online mode as per the recommendations of Anna University, Chennai.	The Project Work viva voce examinations have been conducted through online mode.
For the one credit elective course "15EE18L PCB Design and Fabrication", it is proposed to consider as practical course with 'L T P C' as '0 0 2 1' with total of 30 periods. Hence it is further propose to conduct End Semester Examination as practical examination.	It is approved as practical course.
In the course "Instrumentation Practices in Industries", the title may be changed to "Quality Practices for Safety Critical Instrumentation System" and suggested to include standards and calibration of measuring instruments in the syllabus.	Corrections are incorporated in the curriculum and syllabus
BOS members suggested that relaxations may be given to rural area students who are lagging in internet facilities regarding online learning management systems.	Attendance relaxation upto 2 days has been given for the rural area students, keeping network facilities in mind.
BOS members insisted to make proof for every lectures, assessments conducted through online during lockdown period.	All the lectures are recorded and they have been posted in moodle. Verified the same in academic audit.
BOS members insisted that conduction of End Semester examination through online mode may be avoided.	End Semester examination has been conducted through online mode but under the supervision of proctors allotted (Each proctor with 20 students). The students have been supervised under audio and video by the proctor.
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

Department of Civil Engineering

MINUTES of the 11th Meeting of the Board of Studies held on
17th December 2020, 10:00 am

Venue: Civil Department CADD Lab through Google Meet (Online)
https://drive.google.com/file/d/1LzYwJfd4BKlhHELwSuERiejxDI16qnA/view?usp=sharing,
National Engineering College,K.R.Nagar,Kovilpatti– 628503

National Engineering College, K.R.Nagar, Kovilpatti – 628 503
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11th Board of Studies Meeting in the Department of
Civil Engineering

Venue: Civil Department CADD Lab through Google Meet (Online)
https://drive.google.com/file/d/1LzYwJfd4BKlhHELwSuERiejxDI16qnA/view?usp=sharing,
National Engineering College,K.R.Nagar,Kovilpatti– 628503

Date & Time:17.12.2020& 10.00 am

Agenda

BoS / CIVIL11.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Civil Engineering
BoS / CIVIL11.2	:	Confirmation of the Minutes of the 10th meeting of Board of studies in the department of Civil Engineering held on 11th May 2020 and Action taken report of 10th meeting of Board of studies
BoS / CIVIL11.3	:	Business brought forward by the Chairman, Board of studies 11.3.1 The Syllabus of Seventh and Eighth Semester courses and part of One credit (OEC), Programme elective (PEC), Open elective (OEC) courses for UG Degree Programme under Regulation 2019. 11.3.2 Modification in Curriculum of One credit courses under Regulation 2019. 11.3.3 Approval for NEC Innovation and Startup Policy 2020 11.3.4 Approval for Innovation through Design thinking one credit multidisciplinary course. 11.3.5 Formal approval for handling one or two descriptive courses in R –2105 and R– 2019 through online mode by NEC faculty.
BoS / CIVIL11.4	:	Any other items
BoS / CIVIL11.5	:	Suggestions given by the BoS Members

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

17.12.2020

Dear Sir/Madam,

Sub: *Minutes of the 11ᵗʰ Meeting of the Board of Studies in the* Civil Engineering - *Reg.*

Kindly find attached herewith the Minutes of the 11ᵗʰ Meeting of Board of studies of the Civil Engineering of the National Engineering College,K.R.Nagar, Kovilpatti – 628503 held on 17.12.2020 at 10.00 AM in the civil department CADD lab through online Google Meet, 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 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 11th Meeting of the Board of Studies of the Civil Engnieering was held on 17th December 2020 at 10:00 am in the Civil Department CADD lab through online Google Meet of the National Engineering College, K.R.Nagar, Kovilpatti– 628503

The following members were present:

1	**Dr.C.PuthiyaSekar** Professor& Head	Chairman
2	Dr.A.Cyril Thomas AP(SG)-Civil	Internal Members
3	Dr.C.Chella Gifta AP-Civil	
4	Mrs.R.Venkadalakshmi AP-Civil	
5	Mr.S.Sebastin AP-Civil	
6	Mr.R.Sivasankar AP-Civil	
7	Mr.S.Daniel Raj AP-Civil	
8	Mr.M.Franchis David AP-Civil	
9	Ms.B.Anitha AP-Civil	
10	Mrs.M.Balamaheshwari AP-Civil	
11	Mr.P.Gokul AP-Civil	
12	Mr.V.Arulpandian AP-Civil	
13	Mr.S.M.Murali Ram Kumar AP-Civil	
14	**Dr. S. Arul Jayachandran,** Professor, Department of Civil Engineering, Indian Institute Technology Madras, Chennai -600 036.	Academic Experts
15	**Dr.P.Jayabalan** Professor , Department of Civil Engineering, National Institute of Technology Trichy	
16	**Dr.T.Velrajan,** Professor, Department of Civil Engineering, Thiagarajar college of Engineering, Madurai- 625 015.	

17	**Dr.K.Chinnaraju,** Professor, Department of Civil Engineering, College of Engineering Guindy campus, Anna University,Chennai-600 025.	University Nominee
18	**Dr.P.D.Arumairaj,** Principal Consultant, AlzumGeoCivil Integrated Services, Thadagam Road, Coimbatore -6414 025.	Industrial Expert
19	**Dr. Colonel.P. Nallathambi ,** Principal Structural Consultant, Sakthi Consultancy Pvt Ltd. Chromepet, Chennai -600 044.	
20	Ms.M.Ambal Devi, Final year	Student Members
21	Ms.M.Muthu Pravena, Final year	

BoS / CIVIL 11.1 : 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 11th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

BoS / CIVIL 11.2 : TO CONFIRM THE MINUTES OF TENTH BOS MEETING HELD ON 11th MAY, 2020

The minutes of the **Tenth Board of Studies meeting** held on 11th MAY, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council meeting.

  ➤ **Action Taken Report**

   (Enclosed in Annexure I)

BoS/CIVIL 11.3.1 : **TO CONFIRM AND APPROVE** THE SYLLABUS OF SEVENTH AND EIGHTH SEMESTER COURSES AND PART OF ONE CREDIT (OEC), PROGRAMME ELECTIVE (PEC), OPEN ELECTIVE (OEC) COURSES FOR UG DEGREE PROGRAMME UNDER REGULATION 2019.

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

BoS/CIVIL 11.3.2 **TO CONFIRM AND APPROVE** THE MODIFICATION IN

CURRICULUM OF ONE CREDIT COURSE (INTELLIGENT BUILDING MARKING IS CHANGED AS BUILDING MARKING) UNDER REGULATION 2019.

RESOLVED TO approve the modification in curriculum of one credit course (Intelligent building marking is changed as building marking) under Regulation 2019.

BoS/CIVIL 11.3.3   **TO CONFIRM AND APPROVE** THE NEC INNOVATION AND STARTUP POLICY 2020.

RESOLVED TO approve the NEC Innovation and Startup Policy 2020.

BoS/CIVIL 11.3.4   **TO CONFIRM AND APPROVE** THE INNOVATION THROUGH DESIGN THINKING ONE CREDIT MULTIDISCIPLINARY COURSE.

RESOLVED TO approve the innovation through design thinking one credit multidisciplinary course.

BoS/CIVIL 11.3.5   **TO CONFIRM AND APPROVE** FOR HANDLING ONE OR TWO DESCRIPTIVE COURSES IN R-2015 AND R-2019 FULLY ONLINE MODE BY NEC FACULTY.

RESOLVED TO approve for handling one or two descriptive courses in R-2015 and R-2019 fully online mode by NEC faculty.

BoS / CIVIL 11.4   :   **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 proposed Curriculum under R-2019

BoS / CIVIL 11.5   :   **SUGGESTIONS GIVEN BY THE BOS MEMBERS**

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

11.5.1 In unit I of Advanced Steel Structures, BoS recommended to change the title as Introduction instead of Introduction to beam column.

11.5.2 In unit II of Advanced Steel Structures, BoS recommended to include concept of Pre-engineering building techniques.

11.5.3 In unit V of Non Destructive Testing, BoS recommended to include topic called as Fire damaged building.

11.5.4 In the curriculum of R-2019, BoS recommended that the course named as Earthquake Geotechnical Engineering to be changed as Geotechnical Earthquake Engineering.

11.5.5 In unit I of Environmental Impact Assessment, BoS recommended to change the title as Introduction to EIA instead of Fundamentals and Introduction to EIA.

11.5.6 In unit III of Ecological Engineering, BoS recommended to include topic called as Green building and Bio mimicry.

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

11.5.7 In Recent advancements in Special Concrete, BoS recommended to revise the course syllabus with latest topics like High Strength Concrete, Nano Concrete and Repair materials and techniques. Some of topics found to be repetitive and it can deleted.

11.5.8 In Design of Foundation elements, BoS recommended to include the topic such as Design of Machine foundation and well foundation.

11.5.9 In Bridge Construction Techniques, BoS recommended to include the topic such as Prestressed Prefabrication technique.

11.5.10 In Decentralised Waste Water Treatment Systems (DEWATS), BoS recommended to remove the content related to fundamental topics and Imhoff tank.

11.5.11 In Building marking, BoS recommended to include the topic such as Setting out of building, Contour preparation and 3D scanning of building.

11.5.12 In the curriculum of R-2019, BoS recommended that the course named as Earth quake Resistance Considerations as per Indian Standards to be changed as Earthquake Resistant Design.

11.5.13 In the curriculum of R-2019, BoS recommended that the course named as Environmental Noise Pollution and Control to be changed as Environmental Noise Pollution.

11.5.14 In the curriculum of R-2019, BoS recommended that the course named as Computer aided building drawing to be changed as Computer aided Building Layout drawing.

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.
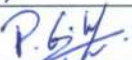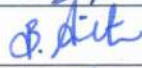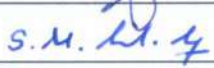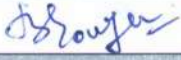
a) The final year syllabus for UG degree programme under R-2019.
b) The modification in curriculum under R-2019.
c) NEC Innovation and Startup Policy 2020.
d) Innovation through Design thinking – One credit multidisciplinary course.
e) approval for handling one or two descriptive courses in R 2105 and R 2019 through online mode by NEC faculty.

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

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
6.	DR. Colonel.P. Nallathambi , Principal Structural Consultant &Managing Sakthi Consultancy Pvt Ltd. Chromepet, Chennai -600 044.	Industrial Expert

Members Present

Board Chairman	
Dr.C.PuthiyaSekar Professor Department of civil Engineering	
Internal Members	
Dr.A.Cyril Thomas AP (S.G) - Civil	
Dr.C.Chella Gifta AP-Civil	
Mrs.R.Venkada Lakshmi AP-Civil	
Mr.S.Sebastin AP-Civil	
Mr.R.Sivasankar AP-Civil	
Mr.S.Danielraj AP-Civil	
Mr.M.Franchis David AP-Civil	
Mrs.M.Balamaheswari AP-Civil	
Mr.P.Gokul AP-Civil	
Ms.B.Anitha AP-Civil	
Mr.V.Arulpandian AP-Civil	
Mr.S.M.Murali Ram Kumar AP-Civil	
Mr.B.Gowtham AP-Civil	
Student Members	
Ms.M.Ambal Devi, IV-Year	
Ms.M.Muthu Pravena, IV-Year	

CHAIRMAN

BOARD OF STUDIES

ANNEXURE I

Action taken for Minutes of 10th BoS Meeting

As per BoS Committee Suggestions,

1. Courses conducted to incresase maximum credits to be earned as 31 for second years .

2. Courses conducted to incresase maximum credits to be earned as 34 for third years.

3. online internship programmes were conducted through online by field experts as per AICTE mandatory internship policy.

4. Special consideration offered to the students living in rural areas due to the limited level of internet access.

5. Online internship training programme conducted based on students interest in various domains engaging the students to work from their respective home during this lock down period.

6. Sufficient interval provided between the end semester examinations conducted for regular courses and additional courses conducted during lockdown period.

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

(An Autonomous Institution - Affiliated to Anna University, Chennai)
www.nec.edu.in

14th Board of studies Meeting in the Department of
Information Technology

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: meet.google.com/yom-hanj-bfz

Date & Time: 17.12.2020 & 10.00 a.m.

Agenda

BoS / IT 14.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the department of Information Technology
BoS / IT 14.2	:	Confirmation of the Minutes of the 13th meeting of Board of studies in the department of Information Technology held on 22nd MAY 2020 and Action taken report of 13th meeting of Board of studies
BoS / IT 14.3	:	Business brought forward by the Chairman, Board of studies 14.3.1 Remaining Core courses and elective courses for UG degree programmes under R-2019 14.3.2 Additional Elective courses for PG degree programmes under R-2019 14.3.3 One credit courses for UG degree programmes under R-2019 14.3.4 Redefining the comprehensive courses including aptitude and verbal ability to test the employability skills
BoS / IT 14.4	:	Any other items
BoS / IT 14.5	:	Suggestions given by the BoS Members

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Department of Information Technology

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

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F. No. 14.1/NEC/ IT/2020-21

<div align="right">

17th Dec, 2020

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Dear Sir/Madam,

Sub: *Minutes of the 14th Meeting of the Board of studies in the Information Technology - Reg.*

Kindly find attached herewith the Minutes of the 14th Meeting of Board of studies of the Information Technology of National Engineering College, K.R.Nagar, Kovilpatti – 628503 held on 17thDec, 2020 at 10.00 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 or by post, at the earliest. If no comments are received, within ten days, the Minutes shall be taken as confirmed. With Kind Regards,

<div align="right">

Yours Sincerely

(Dr.D.Manimegalai)

</div>

Department of Information Technology

MINUTES of 14th Meeting of the Board of studies held on
17thDec, 2020 at 10.00 AM

Meeting Mode: Through online (GoogleMeet)

Google Meet Link: meet.google.com/yom-hanj-bfz

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

MINUTES OF THE MEETING

The 14th Meeting of the Board of studies of the Information Technology was held on 17th Dec 2020 at 10.00 AM through Google Meet.

1. The following members were present:

1.	Dr.D.Manimegalai	Chairman
2.	Dr.V.Seenivasagam, Prof. & COE	Internal Members
3.	Dr.B.Paramasivan, Professor	
4.	Dr.R.Muthukkumar, Asso. Prof.	
5.	Dr.S.Chidambaram, Asst. Prof. (SG)	
6.	Dr.S.Rajagopal, Asst. Prof. (SG)	
7.	Ms.V.Anitha, Asst. Prof.	
8.	Ms.R.Priyadharshini, Asst. Prof.	
9.	Dr.S.Swamynathan, Professor, Department of Information Science &Technology, Anna University, Chennai.	University Nominee
10.	Dr.P.Yogesh, Professor, Department of Information Science &Technology, Anna University, Chennai.	Academic/Alumni Expert
11.	Dr. Shajulin Benedict, Assistant Professor, Department of Computer Science and Engineering, IIIT - Kottayam.	Special Invitee
12.	Dr. Debasis Samanta, Associate Professor Department of Computer Science & Engineering, IIT - Kharagpur.	Special Invitee
13.	Mr.Antony Arravindh, Senior Project Manager, HCL Technologies, Chennai.	Alumni/Industrial Expert
14.	Dr.K.M.Suceendran, General Manager, Tata Consultancy Services, Chennai.	Industrial Expert
15.	Arun Sunder. S, Third year	Student Members
16.	Keerthana. P.J, Third year	

Dr.P.Yogesh, Professor, Department of Information Science &Technology, could not attend the meeting due to unavoidable reasons and was granted leave of absence.

BoS / IT 14.1	:	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 14th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.
BoS / IT 14.2	:	TO CONFIRM THE MINUTES OF THIRTEENTH BOS MEETING HELD ON 22nd MAY, 2020.
		The minutes of the **Thirteenth Board of Studies meeting** held on 22nd May, 2020 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 13th Academic council. ➤ **Action Taken Report** (Enclosed in *Annexure I*)
BoS / IT 14.3.1		**TO CONFIRM AND APPROVE** THE REMAINING CORE COURSES AND ELECTIVE COURSES FOR UG DEGREE PROGRAMMES UNDER R-2019
		RESOLVED TO approve the remaining core courses and elective courses for UG degree programmes under r-2019
BoS / IT 14.3.2		**TO CONFIRM AND APPROVE** ADDITIONAL ELECTIVE COURSES FOR PG DEGREE PROGRAMMES UNDER R-2019
		RESOLVED TO approve Additional Elective courses for PG degree programmes under R-2019
BoS / IT 14.3.3		**TO CONFIRM AND APPROVE** ONE CREDIT COURSES FOR UG DEGREE PROGRAMMES UNDER R-2019
		RESOLVED TO approve One credit courses for UG degree programmes under R-2019
BoS / IT 14.3.4		**TO CONFIRM AND APPROVE** THE COMPREHENSIVE COURSES INCLUDING APTITUDE AND VERBAL ABILITY TO TEST THE EMPLOYABILITY SKILLS
		RESOLVED TO approve the comprehensive courses including aptitude and verbal ability to test the employability skills
BoS / IT 14.4	:	**ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION**

		OF THE CHAIRMAN OF THE BOS
		NEC Innovation and Startup Policy (NEC-ISP) 2020 and a one credit course on Innovation through design thinking were also approved by all members. They also congratulated the faculty members for their team efforts towards continuing Education.
BoS / IT 14.5	:	**SUGGESTIONS GIVEN BY THE BOS MEMBERS**
14.5.1	:	Latest edition and recent year books under text and reference materials must be included. Web references from NPTEL and Coursera etc., must be included.
14.5.2	:	Each unit must comprise at least three to four lines of detailed topics. Intermediate topics must also be added under each unit.
14.5.3	:	Course Outcomes must be reframed with proper keywords.
14.5.4	:	In *Bio informatics* Case study on healthcare may be added. Bio informatics tools may be added under Unit V.
14.5.5	:	*Data Warehousing and Data Mining* New data warehousing and mining tools (ETL tools) may be added under Unit V. Open source software products like RapidMiner and others may be included.
14.5.6	:	In *Cloud Computing* Unit IV may include topics related to Security. Unit V may include applications, Case studies and tools like Open Stack, AWS, Role of VMWare etc.,
14.5.7	:	In *GPU Computing* Content may include NVIDIA Processor. Laboratory component may be added.
14.5.8	:	Syllabus may be reframed for the *Theory of Computation* One credit course by referring to any standard syllabus.
14.5.9	:	Open elective course *Virtual and Augmented Reality* should be given as a programme elective (department)

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) Remaining Core courses and elective courses for UG degree programmes under R-2019

b) Additional Elective courses for PG degree programmes under R-2019

c) One credit courses for UG degree programmes under R-2019

d) Redefining the comprehensive courses including aptitude and verbal ability to test the employability skills

Dr.S.Chidambaram, Asst. Prof. (SG), thanked all the members for their kind cooperation and the meeting came to an end.

Members Present Online:

1.	Dr.D.Manimegalai, Prof & Head ,Board Chairman	Chairman
2.	Dr.V.Seenivasagam, Prof. & COE	Internal Members
3.	Dr.B.Paramasivan, Professor	
4.	Dr.R.Muthukkumar, Asst. Prof. (SG)	
5.	Dr.S.Chidambaram, Asst. Prof. (SG)	
6.	Dr.S.Rajagopal, Asst. Prof. (SG)	
7.	Ms.V.Anitha, Asst. Prof.	
8.	Ms.R.Priyadharshini, Asst. Prof.	
9.	Dr.S.Swamynathan, Professor, Department of Information Science &Technology, Anna University, Chennai.	University Nominee
10.	Dr.P.Yogesh, Professor, Department of Information Science &Technology, Anna University, Chennai.	Academic Experts
11.	Dr. Shajulin Benedict, Assistant Professor, Department of Computer Science and Engineering, IIT - Kottayam.	Special Invitee
12.	Dr. Debasis Samanta, Associate Professor Department of Computer Science & Engineering, IIT - Kharagpur.	

13.	Mr.Antony Arravindh, Senior Project Manager, HCL Technologies, Chennai.	Industrial Experts and Alumni
14.	Dr.K.M.Suceendran, General Manager, Tata Consultancy Services, Chennai.	Industrial Expert
15.	Arun Sunder. S, Third year	Student Members
16.	Keerthana. P.J, Third year	

D.M

CHAIRMAN
BOARD OF STUDIES

ANNEXURE I

Actions taken for Minutes of 13th BoS Meeting

As per BOS Committee suggestion,

- Examinations for additional courses handled during the lockdown period may be conducted with adequate time gap from examinations of regular courses.

- Viva voce for Project Work may be conducted online as per the recommendations of Anna University, Chennai.

- Sufficient period of time may be given to students of rural area who are lagging in digital learning facilities.

CHAIRMAN
BOARD OF STUDIES

14th BOARD OF STUDIES MEETING – DEPARTMENT OF IT ON 17.12.2020