

**DEPARTMENT OF SCIENCE AND HUMANITIES**

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

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

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

**MINUTES of 6<sup>th</sup> Meeting of the Board of studies held on  
08<sup>th</sup> July 2023 at 10.30 AM**

**Venue: Seminar Hall**

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

**NATIONAL ENGINEERING COLLEGE, K.R.NAGAR, KOVILPATTI – 628 503**  
(An Autonomous Institution - Affiliated to Anna University, Chennai)  
[www.nec.edu.in](http://www.nec.edu.in)

**6<sup>th</sup> Board of Studies Meeting in the Department of  
SCIENCE AND HUMANITIES**

Venue: Seminar Hall, National Engineering College  
K.R.Nagar, Kovilpatti – 628 503

Date & Time: 08.07.2023 & 10.30 AM

**AGENDA**

S & H / BoS 6.1	:	Welcome address by Dr. M.A. Neelakantan, Board Chairman, Prof. and Head, Department of Science and Humanities.
S & H / BoS 6.2	:	Opening Remarks by Dr. A. Shenbagavalli, Dean Academics, Professor, Department of ECE
S & H / BoS 6.3	:	Confirmation of the previous BoS meeting minutes (4 <sup>th</sup> and 5 <sup>th</sup> ) for the first year UG and PG degree Programme in the Department of Science and Humanities held on November 23 <sup>rd</sup> , 2018 and July 16, 2022 respectively.
S & H / BoS 6.4	:	Presentation of Regulations 2023 curriculum structure for the first and second semester.
S & H / BoS 6.5	:	Business brought forward by the Chairman, Board of studies 6.5.1 First semester Curriculum and Syllabi of B.E/B.Tech. – MECH, ECE, CSE, EEE, IT, CIVIL and AI & DS and M.E/M.Tech CSE, EEE and IT under R-2023
S & H / BoS 6.6	:	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](http://www.nec.edu.in)

F. No. 1-1/NEC/S & H

8<sup>th</sup> July 2023

Dear Sir/Madam,

**Sub: Minutes of the 6<sup>th</sup> Meeting of the Board of studies in the Department of Science and Humanities-Reg.**

Kindly find the attachment of the Minutes of the 6<sup>th</sup> Meeting of Board of studies, Department of Science and Humanities, National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 8<sup>th</sup> July 2023 at 10.30 AM in the Seminar Hall of National Engineering college.

It is requested that comments on the Minutes, if any, may please be sent by email at [hodsh@nec.edu.in](mailto:hodsh@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.A.Neelakantan

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

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

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

## MINUTES OF THE MEETING

The 6<sup>th</sup> Meeting of the Board of Studies of the Science and Humanities was held on 08<sup>th</sup> July 2023 at 10.30AM, in Seminar Hall, National Engineering College, K.R.Nagar, Kovilpatti – 628 503

1. The following members were present:

<b>Dr.M.A.Neelakantan,</b> Professor & Head	<b>CHAIRMAN</b>
Dr.S. Thalamuthu,Asso.Professor/Chemistry	<b>INTERNAL MEMBERS</b>
Dr.S.Geetha, AP (SG)/ Mathematics	
Ms.S,S,Basitha Parveen, AP/ Mathematics	
Dr.A.Nichelson , AP (SG)/ Physics	
Dr.B.Annaraj, AP(SG)/ Chemistry	
Dr. V. Ramasubbu, AP/ Physics	
Mr. S. Gopiga Devi, AP/English	
Dr. K. Muthulakshmi, AP/English	
<b>Dr.N. Sankara Subramanian</b> Professor of Physics Thiyagarajar College of Engineering, Madurai - 625 015	<b>UNIVERSITY NOMINEE</b>
<b>Dr. Raju K. George</b> Professor of Mathematics, Dean (R&D, IPR) Indian Institute of Space Science and Technology, Thiruvananthapuram	<b>ACADEMIC EXPERTS</b>
<b>Dr.M.Dharmendra Kumar</b> Professor of Chemistry Department of Applied Science and Technology A.C.Tech. Anna University, Chennai	

<b>Dr.V.Rajendran</b> Professor and Head Department of Chemistry Anna University - Chennai	
<b>Dr.R. Joseph Ponnaiah</b> Professor of English Department of Humanities and social Sciences National Institute of Technology Thiruchirappalli	
<b>Dr. Rajan T P D</b> Senior Principal Scientist Material Science and Technology Division CSIR - National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram	Scientist
<b>Mr.L. Gowri Shenbagaraman</b> Head HR – Manufacturing, Amway India Enterprises Pvt .Ltd., Nilakottai, Dindigul	Special Invitee Meritorious Alumini
Mr. Manokaran S Final Year / MECH	<i>Student Members Nominated by the HOD</i>
Ms.Kavishka R Final Year / IT	
Mr.Guru Prasad M Final Year / ECE	
Mr. Mithun Kumar S Pre-final Year / CSE	
Ms. Vengadeswari G Pre-final Year / EEE	
Mr. Rajasekar S Pre-final Year / Civil	

**S & H / BoS 6.1: WELCOME ADDRESS BY CHAIRMAN, BOARD OF STUDIES,  
DEPARTMENT OF SCIENCE AND HUMANITIES**

The Chairman BoS of the Science and Humanities welcomed and introduced the Members of 6<sup>th</sup> Board of Studies and thanked each one of them for sparing their valuable time for attending the meeting.

S & H / BoS 6.2 : OPENING REMARKS BY DEAN ACADEMICS

Opening Remarks by Dr. A. Shenbagavalli, Dean Academics, Professor Department of ECE. The Dean explained the evolution of Regulations from 2011 to 2019

S& H / BoS 6.3 : TO CONFIRM THE MINUTES OF FOURTH AND FIFTH BOS MEETING HELD ON NOVEMBER 23<sup>rd</sup> 2018 and JULY 16<sup>th</sup> 2022 respectively.

The minutes of the **Fourth Board of Studies meeting** held on November 23<sup>rd</sup> 2018 and the **Fifth Board of Studies meeting held on** July 16<sup>th</sup> 2022 respectively were communicated to the members. The comments received have been incorporated and placed for confirmation. The same were approved by the 17<sup>th</sup> and 18<sup>th</sup> Academic Council.

S & H / BoS 6.4 : CURRICULUM AND STRUCTURE OF R – 2023 PRESENTATION

The first and Second semester curriculum structure of R-2023 was presented by Dr. S. Thalamuthu, Associate Professor of Chemistry, Department of Science and Humanities

S& H / BoS 6.5: **TO CONFIRM AND APPROVE THE CURRICULUM AND SYLLABI OF FIRST SEMSTER UG and PG DEGREE PROGRAMME (Based on OBE &CBCS) B.E/B.Tech. – MECH, ECE, CSE, EEE, IT, CIVIL and AI & DS R-2023**

**RESOLVED TO APPROVE** the curriculum and syllabi of first semester UG degree programme (BASED ON OBE & CBCS) B.E/B.Tech. – MECH, ECE, CSE, EEE, IT, CIVIL and AI &DS and M.E/M.Tech. – CSE, EEE and IT to be offered under R-2023

- **R-2023 B.E/B.Tech. – MECH, ECE, CSE, EEE, IT, CIVIL and AI & DS**
- **R-2023 M.E/M.Tech. –CSE, EEE and IT**

S& H /BoS6.6:SUGGESTIONS GIVEN BY THE BOS MEMBERS

6.6.1	<p><b>General Suggestions</b></p> <ul style="list-style-type: none"> <li>• The BoS members suggested that the number of credits for Basics Science Courses may be increased upto 15.</li> <li>• The Subject expert strongly demands to offer at least two credits to the Environmental science and Engineering course.</li> </ul>	
6.6.2	<p><b>English</b></p> <ul style="list-style-type: none"> <li>▪ Advised to omit Instruction Writing and avoid more grammar topics to avoid impelling language structures.</li> <li>▪ Insisted to prescribe Non detailed texts to practice reading skills</li> <li>▪ Suggested to bring Review of Book under one of the COs</li> <li>▪ Suggested to add “Principles and Practice in Second Language Acquisition by Stephen D. Krashen” as text book to insist on understanding various hypotheses of language acquisition.</li> <li>▪ Recommended “Writing with Power” by Peter Elbow as text book which helps to pen down ideas</li> </ul> <p>PG</p> <ul style="list-style-type: none"> <li>▪ Suggested to include “Reading as Rhetorical Invention, Knowledge, Persuasion and the Teaching of Research-based Writing” by Doug Brent as a reference book</li> </ul>	<ul style="list-style-type: none"> <li>▪ The topics Instruction Writing and some of the grammar topics are removed</li> <li>▪ Non-detailed texts are included in the Text Books.</li> <li>▪ Review of the Book is included in CO4.</li> <li>▪ “Principles and Practice in Second Language Acquisition by Stephen D. Krashen” is added as text book.</li> <li>▪ Writing with Power” by Peter Elbow is included as text book.</li> </ul> <p>PG</p> <ul style="list-style-type: none"> <li>▪ “Reading as Rhetorical Invention, Knowledge, Persuasion and the Teaching of Research based Writing” by Doug Brent is included as reference book</li> </ul>

6.6.3	<b>Mathematics</b>	
	<p><b>For UG –Sem 1</b></p> <ul style="list-style-type: none"> <li>▪ Include Linearization of Non Linear systems by using Taylor Series in CO2.</li> <li>▪ Spring Mass System, and RCL Circuit to be added as application in CO3.</li> <li>▪ Include Shallow wave equations (application of first order PDE) in CO5.</li> </ul> <p><b>For PG –M.E IT</b></p> <ul style="list-style-type: none"> <li>▪ Include Linear Algebra in CO1 –Vector Space-Basis – Dimensions-Inner product –Norm</li> </ul> <p><b>For M.E CSE</b></p> <ul style="list-style-type: none"> <li>▪ Include Linear Algebra - Vector Space Basis– Dimensions - Innerproduct –Normsin CO1.</li> <li>▪ Remove the topics Back Propagation and Automatic Differentiation from CO3.</li> <li>▪ Include Differntiation of Multi variable functions, multi variable Taylor Series in CO4</li> <li>▪ Remove Laplace Transform and include Wavelet Transform and its properties in CO6</li> </ul> <p><b>For M.E EEE</b></p> <ul style="list-style-type: none"> <li>▪ Basic Linear Algebra topics to be included.</li> </ul>	<p><b>For UG – Sem 1:</b></p> <ul style="list-style-type: none"> <li>• Linearization of Nonlinear Systems using Taylor Series is included in CO2.</li> <li>• The topics suggested are included.</li> <li>• Shallow Wave Equations (application of first-order PDE) are included in CO5.</li> </ul> <p><b>For PG – M.E IT:</b></p> <ul style="list-style-type: none"> <li>• The suggested topics are included in CO1.</li> </ul> <p><b>For M.E CSE:</b></p> <ul style="list-style-type: none"> <li>• The topics such as Linear Algebra - Vector Space, Basis, Dimensions, Inner Product, and Norm are includedin CO1.</li> <li>• The mentioned topics are removed.</li> <li>• The suggested topics are included.</li> <li>• The topics are removed.Wavelet Transform and its properties are included in CO6</li> </ul> <p><b>For M.E EEE:</b></p> <ul style="list-style-type: none"> <li>• Basic linear Algebra topics are included.</li> </ul>



	<ul style="list-style-type: none"> <li>▪ Suggested Reference Books: Ordinary Differential Equations by Nanda Kumar A.K, P.S.Datti, Raju .K.George–Cambridge University press –FOR UG Numerical Linear Algebra – SundaraPandian FOR UG AND PG. An introduction to Optimization – Edwin K.P, John Chong, StanislawH.Zak.</li> <li>▪ Suggested Software: Mathematica, Maple, MatLab, SciLab, SageMath</li> </ul>	<ul style="list-style-type: none"> <li>• The suggested Reference Books are taken into account for UG and PG students.</li> <li>• The suggested Software Maple and MatLab are taken into account.</li> </ul>
<b>6.6.4 Physics</b>		
	<ul style="list-style-type: none"> <li>▪ The BoS member suggested changing the CO statements</li> <li>▪ It was suggested to omit the portions like the reciprocal lattice, Laue method, geometrical basis of powder X-ray diffraction, under the topic of Crystallography</li> <li>▪ The title of the Waves and Photonics may be changed to Laser and Fiber Optics</li> <li>▪ The determination of structural parameters using XRD pattern may be included in the lab experiment</li> </ul>	<ul style="list-style-type: none"> <li>▪ The CO statements are revised.</li> <li>▪ In Crystallography, the portion on reciprocal lattice, Laue method, and the geometrical basis of powder X-ray diffraction are removed.</li> <li>▪ The title is changed to Laser and Fiber Optics.</li> <li>▪ Determination of structural parameters using XRD pattern is included.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ The BoS member suggested the reference book A Text Book of Engineering Physics authored by Dr. M.N.Avadhanalu and Dr.P.G.Kshirsagar</li> </ul>	<ul style="list-style-type: none"> <li>▪ The suggested book is included under the textbooks category.</li> </ul>
<b>6.6.5 Chemistry</b>		
	<ul style="list-style-type: none"> <li>▪ The syllabus should be divided equally in the five COs of the course.</li> <li>▪ They suggested to remove the Zeolite process and suggested to add hazard index calculations in CO1.</li> <li>▪ Determination of rate of corrosion can be removed in theory part and this can be included in the laboratory.</li> <li>▪ The subject experts suggested to replace the Ni-CAD battery with Nickel-metal Hydride battery in CO3.</li> <li>▪ The title of CO5 can be changed as “Instrumental Methods of Analysis”</li> </ul>	<ul style="list-style-type: none"> <li>▪ The course contents are equally divided for the entire COs.</li> <li>▪ Hazard index calculations are included instead of Zeolite process.</li> <li>▪ The experiment is included in the laboratory.</li> <li>▪ It is resolved to include “Nickel Metal Hydride batteries” in CO3 as it is found to be a vital topic to be covered before the introduction of other energy storage devices.</li> <li>▪ The title of CO5 is changed as “Instrumental Methods of Analysis”</li> </ul>

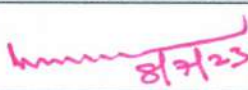
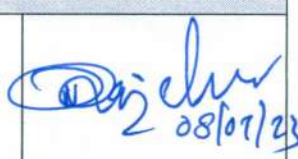
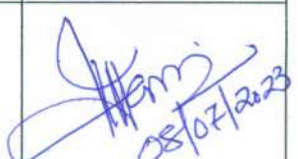
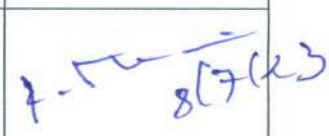


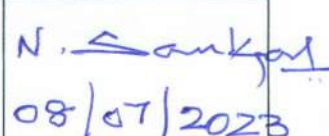
The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and Syllabi.

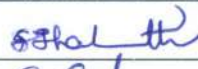




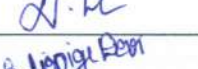


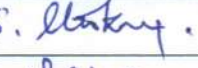

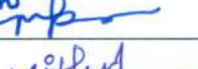

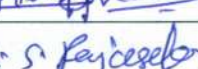

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

- a) The Curriculum and Syllabi for 1<sup>st</sup> semester B.E/B.Tech degree programme offered under Regulations 2023.

Ms.S.Gopiga Devi Assistant Professor / English thanked all the members for their kind cooperation and the meeting came to an end.

**Members Present**

CHAIRMAN		
1.	Dr.M.A.Neelakantan Professor & Head	 8/7/23
ACADEMIC EXPERT		
2.	Dr. N. Rajendran Professor, Director, Center for International Affairs Department of Chemistry Anna University, Chennai.	 08/07/23
3.	Dr. Raju K. George, Professor of Mathematics, Dean (R&D, IPR), Indian Institute of Space Science and Technology, Tiruvandrum	 08/07/2023
4.	Dr. R. Joseph Ponnaiah, Professor of English, Department of Humanities and social Sciences, National Institute of Technology, Thiruchirappalli	 8/7/23
5.	Dr. M.Dharmendra Kumar, Professor / Chemistry, Department of Applied Science and Technology, AC Tech, Anna University, Chennai	 8/7/23
INDUSTRIAL EXPERT		
6.	Mr.L. Gowri Shenbagaraman, Head HR – Manufacturing, Amway India Enterprises Pvt. Ltd., Dindigul	 8/9
UNIVERSITY NOMINEE		
7.	Dr.N. Sankara Subramanian Professor of Physics, Thiyagarajar College of Engineering, Madurai	 08/07/2023

INTERNAL MEMBERS		
8.	<b>Dr.S. Thalamuthu</b> , Associate Professor/Chemistry	
9.	<b>Dr.S. Geetha</b> , Assistant Professor(SG)/Mathematics	
10.	<b>Ms.S.S. Basitha Parveen</b> , Assistant Professor/ Mathematics	
11.	<b>Dr. B. Annaraj</b> , Assistant Professor(SG)/Chemistry	
12.	<b>Dr.A. Nichelson</b> , Assistant Professor(SG)/Physics	
13.	<b>Dr.V.Rama Subbu</b> , Assistant Professor/Physics	
14.	<b>Ms.S. Gopiga Devi</b> , Assistant Professor/English	
15.	<b>Dr.K.Muthu Lakshmi</b> Assistant Professor/English	
STUDENT MEMBERS		
16.	<b>Mr.Manokaran S - Final Year Mech</b>	
17.	<b>Ms.Kavishka - Final Year IT</b>	
18.	<b>Mr.Guru Prasad - Final Year ECE</b>	
19.	<b>Mr.Mithun Kumar - III Year CSE</b>	
20.	<b>Ms.Vengadeswari G - III Year EEE</b>	
21.	<b>Mr.Rajasekar S - III Year CIVIL</b>	

  
8.2.23  
**CHAIRMAN**  
**BOARD OF STUDIES**

Dr. M.A. Neelakantan, M.Sc., M.Phil., B Ed., Ph.D  
Professor & Head  
Department of Science & Humanities  
National Engineering College (Autonomous)  
K.R. Nagar, Kovilpatti - 628 503.