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
Information Technology
Artificial Intelligence & Data Science

MINUTES of 22nd Meeting of the Board of Studies held on
23rd Nov 2024, 10.30 AM

Venue: Conference Hall, Autonomous Block, National Engineering College
K.R.Nagar, Kovilpatti – 628 503

22nd Board of Studies Meeting in the Departments of
Computer Science and Engineering
Information Technology
Artificial Intelligence & Data Science

Venue: Conference Hall, Autonomous Block, National Engineering College

K.R.Nagar, Kovilpatti – 628 503

Date & Time: 23.11.2024 & 10.30 AM

Agenda

BoS / CSE, IT, AI&DS 22.1	:	Confirmation of the Minutes of the 21st meeting of Board of studies in the departments of Computer Science & Engineering, Information Technology, Artificial Intelligence & Data Science held on 25th May 2024 and Action taken report of 21st meeting of Board of studies.
BoS / CSE, IT, AI&DS 22.2	:	Business brought forward by the Chairman, Board of studies 22.2.1. Core Courses for the 5th semester of B.E. CSE, B.Tech IT and AI&DS degree programmes under R-2023. 22.2.2. Proposed Verticals in B.E. CSE, B.Tech IT and AI&DS degree programmes under R-2023, along with the syllabus of 5th semester Elective courses. 22.2.3. Course design document for 4th semester courses of R-2023 B.E. CSE, B.Tech IT and AI&DS programmes. 22.2.4. Refinement of R2019 Elective Courses for B.E. CSE, B.Tech IT and AI&DS programmes. 22.2.5. Modification of Curriculum Structure for B.Tech IT programme under R-2023. 22.2.6. Core Course for the 4th semester M.E.CSE and M.Tech ISCW degree programmes under R-2023.
BoS / CSE, IT, AI&DS 22.3	:	Any other items.
BoS / CSE, IT, AI&DS 22.4	:	Suggestions given by the BoS Members

F. No. 1-1/NEC/CSE, IT, AI&DS

23rd Nov, 2024

Dear Sir/Madam,

Sub: *Minutes of the 22nd Meeting of the Board of studies in the Computer Science and Engineering, Information Technology, Artificial Intelligence & Data Science -Reg.*

Kindly find attached herewith the Minutes of the 22nd Meeting of Board of studies of the Computer Science and Engineering, Information Technology and Artificial Intelligence & Data Science of the National Engineering College, K.R.Nagar, Kovilpatti – 628 503 held on 23rd Nov 2024 at 10.30 AM in the Conference Hall, Autonomous Block of 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 emails at hodcse@nec.edu.in / hodit@nec.edu.in / hodai@nec.edu.in or by post, at the earliest. If no comments are received, within ten days, the minutes shall be taken as confirmed.

Yours Sincerely

Dr.V.Kalaivani
Chairman/BoS-AI&DS

Dr.K.G.Srinivasagan
Chairman/ BoS-IT

Dr.V.Gomathi
Chairman/ BoS-CSE

Department of Computer Science and Engineering
Information Technology
Artificial Intelligence & Data Science

MINUTES OF THE MEETING

The 22nd Meeting of the Board of studies of the Computer Science and Engineering, Information Technology and Artificial Intelligence & Data Science was held on 23rd Nov, 2024 at 10.30 AM in the Conference Hall, Autonomous Block of National Engineering College.

The following members were present in the Conference Hall, Autonomous Block

1.	Dr.V.Gomathi Professor & Head/ CSE	Chairman BoS/ CSE
2.	Dr.K.G.Srinivasagan Professor & Head/ IT	Chairman BoS/ IT
3.	Dr.V.Kalaivani Professor & Head/ AI & DS	Chairman BoS/ AI & DS
	Experts attended the Meeting	
4.	Dr.S.Sendhil Kumar Professor, Dept. of Information Science and Technology, CEG Campus, Anna University, Chennai.	Anna University Nominee
5.	Dr.V.Masilamani Professor and Head, Dept. of Computer Science and Engineering, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram.	Academic Experts Nominated by the Academic Council
6.	Dr.C.Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology, , Tiruchirappalli.	
7.	Dr. B.L. Velammal	

	Associate Professor, Dept. of Computer Science and Engineering, Anna university, Chennai.	
8.	**Mr.Roy Antony Arnold** Lead-Education and Research, Infosys Private Ltd., Chennai.	Experts from Industries
9.	**Mr.Sivaram Sundaram** Senior Director, Comcast India Engineering Centre, Thoraipakkam, Chennai	
10.	**Mr. Sudeesh Sankaravel** Associate fellow, Data Science, Verizon, Chennai	
11.	**Dr.V. Natarajan (R&D)** Scientist, Quantum Security Research Group, SETS Chennai.	
12.	**Dr.Shajulin Benedict** Associate Professor, Indian Institute of Information Technology, Kottayam, Kerala	Alumni Member
13.	**Dr.K.Mohaideen Pitchai** Professor/ CSE	Internal Members
14.	**Dr.S.Kalaiselvi** Associate Professor/ CSE	
15.	**Dr.J.Naskath** Associate Professor/ CSE	
16.	**Dr.R.Rajakumari** Assistant Professor (SG) / CSE	
17.	**Dr.G.Sivakamasundari** Assistant Professor (SG) / CSE	
18.	**Dr.B.Shunmugapriya** Assistant Professor (SG) / CSE	
19.	**Dr.S.Dheenathayalan** Assistant Professor (SG) / CSE	
20.	**Ms.D.Thamarai Selvi** Assistant Professor/ CSE	
21.	**Mr.J.Karthikeyan** Assistant Professor/ CSE	
22.	**Ms.R.Vazhan Arul Santhiya** Assistant Professor/ CSE	
23.	**Dr.J.Ida Christy** Assistant Professor/ CSE	

24.	Dr.R.Muthukkumar Professor/ IT	
25.	Dr.S.Chidambaram Associate Professor/ IT	
26.	Dr.S.Rajagopal Assistant Professor (SG)/ IT	
27.	Ms.V.Anitha Assistant Professor (SG)/ IT	
28.	Ms.N.Gowthami Assistant Professor/ IT	
29.	Ms.S.Santhi Assistant Professor/ IT	
30.	Dr.B.Paramasivan Professor/ AI&DS	
31.	Dr.Ravirathinam Duraikannu Adjunct Faculty/ AI&DS	
32.	Ms.V.Veera Anusuya Assistant Professor / AI&DS	
33.	Ms.K.Poorani Assistant Professor / AI&DS	
34.	Ms.P.Rampriya Assistant Professor / AI&DS	
35.	Ms.G.Dhivya Assistant Professor / AI&DS	
36.	Ms.K.R.Indira Assistant Professor / AI&DS	
37.	Mr.K.Lokesh IV year/ CSE	
38.	Ms.B. Siva Nadhini IV year/ CSE	
39.	Ms.S.Girija IV year/ IT	Student Members Nominated by concern HODs
40.	Mr.S.Alex III year/ IT	
41.	Mr.E.Vignesh III year / AI&DS	
42.	Ms.M.Shriya, III year / AI&DS	

Mr.K.Sujeeth, Senior Technical Lead – Data Analyst, Mercedes Benz R&D India, Kundanahalli, Bangalore could not attend the meeting due to his prior commitments and Dr.Sujesh Sreedharan (R&D),Engineer-G, Sree Chitra Tirunal

Institute for Medical Sciences and Technology, Trivandrum could not attend the meeting due to his health issues and both of them was granted leave of absence.

BoS / CSE, IT, AI&DS 22.1	:	**TO CONFIRM THE MINUTES OF 21st BOS MEETING HELD ON 25th MAY, 2024** The minutes of the 21st **Board of Studies** meeting held on 25th May 2024 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 21st Academic council. ➤ Action Taken Report (Enclosed in Annexure I)
BoS / CSE, IT, AI&DS 22.2.1	:	**TO CONFIRM** R-2023 B.E. CSE, B.Tech IT and AI&DS degree programmes core courses of 5th semester curriculum and syllabi. **RESOLVED** R-2023 B.E. CSE, B.Tech IT and AI&DS degree programmes core courses of 5th semester curriculum and syllabi.
BoS / CSE, IT, AI&DS 22.2.2	:	**TO CONFIRM** Proposed Verticals for R-2023 B.E. CSE/ B.Tech IT and AI&DS programmes - Elective lists and syllabus of 5th semester elective courses. **RESOLVED** Proposed Verticals for R-2023 B.E. CSE/ B.Tech IT and AI&DS programmes - Elective lists and syllabus of 5th semester elective courses.
BoS / CSE, IT, AI&DS 22.2.3	:	**TO CONFIRM** Course design document for 4th semester courses of R-2023 B.E. CSE, B.Tech IT and AI&DS programmes. **RESOLVED** Course design document for 4th semester courses of R-2023 B.E. CSE, B.Tech IT and AI&DS programmes.
BoS / CSE, IT, AI&DS 22.2.4	:	**TO CONFIRM** Refinement of R2019 Elective Courses for B.E. CSE, B.Tech IT and AI&DS programmes. **RESOLVED** Refinement of R2019 Elective Courses for B.E. CSE, B.Tech IT and AI&DS programmes.
BoS / CSE, IT, AI&DS 22.2.5	:	**TO CONFIRM** Modification of Curriculum Structure for B.Tech IT programme under R-2023. **RESOLVED** Modification of Curriculum Structure for B.Tech IT programme under R-2023.

BoS / CSE, IT, AI&DS 22.2.6		**TO CONFIRM** Core Course for the 4th semester M.E.CSE and M.Tech ISCW degree programmes under R-2023. **RESOLVED** Core Course for the 4th semester M.E.CSE and M.Tech ISCW degree programmes under R-2023.
BoS / CSE, IT, AI&DS 22.3	:	**ANY OTHER ITEMS, IF ANY, WITH THE PERMISSION OF THE CHAIRMANS OF THE BOS (CSE, IT and AI&DS)** 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 framing curriculum structure, syllabi and verticals under regulation 2023.
BoS / CSE, IT, AI&DS 22.4	:	**SUGGESTIONS GIVEN BY THE BOS MEMBERS**
BoS / CSE, IT, AI&DS 22.4.1	:	**For R2023 – UG Programmes (B.E.(CSE), B.Tech. (IT and AI&DS)** For B.E. CSE / B.Tech IT / B.Tech AI&DS, in few of the courses, for syllabus reference lists, suggested to avoid the inclusion of website URLs.
BoS / CSE, IT, AI&DS 22.4.2	:	In few of the Core courses, it is suggested to check the coverage of course contents and relevance of CO statements.
BoS / CSE, IT, AI&DS 22.4.3	:	In 23CS54C/23IT53C – Web Technology course name shall be renamed as Modern Web Technologies.
BoS / CSE, IT, AI&DS 22.4.4	:	In 23CS55C/23IT52C - Artificial Intelligence course, contents on basics of AI may be added.
BoS / CSE, IT, AI&DS 22.4.5	:	In 23CS53C/23AD51C - DevOps and Agile Methodologies course, topics on GitHub can be revised as Version Control and AWS as Cloud Services. Docker and Kubernetes may be added and the credit may also be increased as 3.
BoS / CSE, IT, AI&DS 22.4.6	:	In 23IT51C - Cryptography and Network Security course, Steganography and Watermarking topics can be removed; OWASP Top 10, basics on Number Theory can be added. The reference book by Behrouz A. Forouzan may be shifted as text book.
BoS / CSE, IT, AI&DS 22.4.7	:	In 23AD52C-Natural Language Processing, conventional textbooks may be included.

BoS / CSE, IT, AI&DS 22.4.8	:	In 23AD53C- Big Data Analytics course, advanced concepts like AWS, Cloud may be included as separate course in verticals.
BoS / CSE, IT, AI&DS 22.4.9	:	In 23AD55C-Deep learning, laboratory exercises may be given as generic.
BoS / CSE, IT, AI&DS 22.4.10	:	The proposed vertical on "Network Security" shall be renamed as "Cyber Security".
BoS / CSE, IT, AI&DS 22.4.11	:	In the proposed six verticals (offered commonly for B.E. CSE, B.Tech IT and B.Tech AI&DS) it is suggested to refine the following course names: • 23CS02E/23IT02E/23AD02E - Smart Contract and Web 3.0 course name to be renamed as Ethereum Smart Contract. • 23CS11E/23IT11E/23AD11E - Python Web Frameworks course name to be renamed as Python based Web Frameworks or Web Frameworks using Python. • 23CS13E/23IT13E/23AD13E - Open Source Technologies course name to be renamed as Open Source Technologies for Web Development. • 23CS17E/23IT17E/23AD17E– Software Testing Techniques course name to be renamed as Fullstack Testing • 23CS54E/23IT54E/23AD54E - IoT Security course name to be renamed as IoT and Hardware Security or Hardware Security. • 23CS59E/23IT59E/23AD59E - Network Forensics course name to be renamed as Digital Forensics.

BoS / CSE, IT, AI&DS 22.4.12	:	In the presented syllabus for few of the courses, under four of the verticals (offered commonly for B.E. CSE, B.Tech IT and B.Tech AI&DS) it is suggested to refine COs, course contents as detailed below:
		• **Blockchain Technology**
		   ○ In 23CS01E/23IT10E/23AD01E - Blockchain Architecture and Design course, the topics on trust types can be added in CO1. The CO3 and CO4 contents can be swapped.
		   ○ In 23CS33E/23IT33E/23AD33E - Game Development course may be renamed as Secure Game Development. Also, the course should blend the concepts of Game Development and Blockchain by properly sharing CO contents.

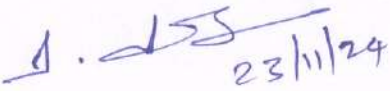|		

	:	**• Business Analytics**
		
		   ○ In 23CS62E/23IT62E/23AD62E - Data Mining course, CO4 contents can be refined. Also, the reference books should be recent edition books.
		
		   ○ In 23CS63E/23IT63E/23AD63E - Data Engineering course, Kubernetes can be removed and may be shifted to 23CS53C/23AD51C - DevOps and Agile Methodologies Core course.
		
		   ○ In 23CS64E/23IT64E/23AD64E - Image and Video Analytics, for Text book, publisher's name was missing and suggested to include the same.
		
		• Computational Intelligence
		
		   ○ In 23CS22E/23IT22E/23AD22E - Machine Learning Techniques course, suggested to focus on supervised learning concepts in CO2 & CO3 and to focus on unsupervised learning concepts in CO4 and CO5 with case study.
		
		   ○ Edge Intelligence course can be offered to deal with emerging trends.
		
		• Industrial AI
		
		   ○ In 23CS41E/23IT42E/23AD41E - Generative AI course, topic on Google Copilot should be changed as Copilot. CO4 content st be refined and case studies can be added. Also, the Text book covering the entire syllabus shall be included.
		
		   ○ In 23CS42E/23IT42E/23AD42E - AI for Industrial applications course, CO4 contents to be refined.

BoS / CSE, IT, AI&DS 22.4.13		For B.Tech IT programme, the curriculum structure is refined under R-2023. • 5ᵗʰ Semester Programme Elective Course – III is shifted to 6ᵗʰ Semester and Open Elective Course – I shifted from 6ᵗʰ to 5ᵗʰ Semester. • UI/UX Design course is shifted as an Elective course and Big Data Analytics is introduced as a Core course during 6ᵗʰ Semester.
BoS / CSE, IT, AI&DS 22.4.14	:	**For R2023 – PG Programmes (M.E.(CSE) & M.Tech (ISCW))** For M.E CSE / M.Tech ISCW, In 23CT41C/23IC41C - Project Work – II course, CO5 title should be changed. Industrial practices may also be offered for PG students.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and the Syllabi of R-2023.

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

a. Core Courses for the 5th semester of B.E. CSE, B.Tech IT and AI&DS degree programmes under R-2023.

b. Proposed Verticals in B.E. CSE, B.Tech IT and AI&DS degree programmes under R-2023, along with the syllabus of 5th semester Elective courses.

c. Course design document for 4th semester courses of R-2023 B.E. CSE, B.Tech IT and AI&DS programmes.

d. Refinement of R2019 Elective Courses for B.E. CSE, B.Tech IT and AI&DS programmes.

e. Modification of Curriculum Structure for B.Tech IT programme under R-2023.

f. Core Course for the 4th semester M.E.CSE and M.Tech ISCW degree programmes under R-2023.

Dr.J.Ida Christy, Assistant Professor/CSE, thanked all the members for their valuable suggestions and cooperation and the meeting came to an end.

Members Present

Dr.V.Gomathi Professor & Head/ CSE Chairman BoS/ CSE	
Dr.K.G.Srinivasagan Professor & Head/ IT Chairman BoS/ IT	
Dr.V.Kalaivani Professor & Head/ AI & DS Chairman BoS/ AI & DS	
Experts attended the 22nd BOS meeting *Expert Nominated by the Anna University, Chennai.*	
Dr.S.Sendhil Kumar Professor Department of Information Science and Technology, CEG Campus, Anna University, Chennai.	
Academic Experts Nominated by the Academic Council	
Dr.V.Masilamani Professor and Dean SA, Dept. of Computer Science and Engineering, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram.	

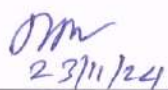|	
Dr.C.Mala Professor, Dept. of Computer Science and Engineering, National Institute of Technology, Tiruchirappalli.	
Dr. B.L. Velammal Associate Professor, Dept. of Computer Science and Engineering, Anna university, Chennai.	
Experts from Industries	
Mr.Roy Antony Arnold Lead-Education and Research, Infosys Private Ltd., Chennai.	
Mr.Sivaram Sundaram Senior Director, Comcast India Engineering Centre, Thoraipakkam, Chennai	
Mr. Sudeesh Sankaravel Associate fellow, Data Science, Verizon, Chennai	
Scientist from Research & Development Laboratories	
Dr.V. Natarajan (R&D) Scientist, Quantum Security Research Group, SETS Chennai.	
Alumni Member	
Dr.Shajulin Benedict Associate Professor, Indian Institute of Information Technology, Kottavam, Kerala	
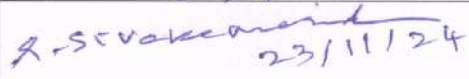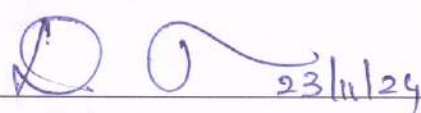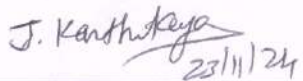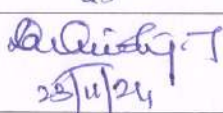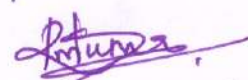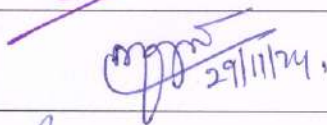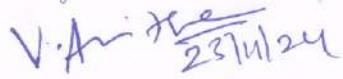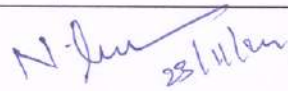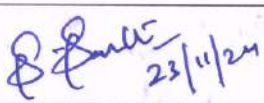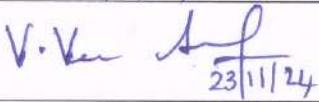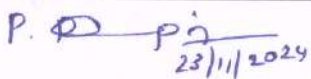
Internal BoS Members	
Dr.K.Mohaideen Pitchai Professor/ CSE	
Dr.S.Kalaiselvi Associate Professor/ CSE	
Dr.J.Naskath Associate Professor/ CSE	

Dr.R.Rajakumari Assistant Professor (SG) / CSE	*(signature)* 23/11/2024
Dr.G.Sivakamasundari Assistant Professor (SG) / CSE	*(signature)* 23/11/24
Dr.B.Shunmugapriya Assistant Professor (SG) / CSE	*(signature)* 23/11/2024
Dr.S.Dheenathayalan Assistant Professor (SG) / CSE	S. *(signature)* 23.11.24
Ms.D.Thamarai Selvi Assistant Professor/ CSE	*(signature)* 23/11/24
Mr.J.Karthikeyan Assistant Professor/ CSE	J. Karthikeya *(signature)* 23/11/24
Ms.R.Vazhan Arul Santhiya Assistant Professor/ CSE	*(signature)* 23/11/24
Dr.J.Ida Christy Assistant Professor/ CSE	*(signature)* 23/11/24
Dr.R.Muthukkumar Professor/ IT	*(signature)*
Dr.S.Chidambaram Associate Professor/ IT	*(signature)* 29/11/24
Dr.S.Rajagopal Assistant Professor (SG)/ IT	*(signature)* 23/11/24
Ms.V.Anitha Assistant Professor (SG)/ IT	V.Ani *(signature)* 23/11/24
Ms.N.Gowthami Assistant Professor/ IT	N. *(signature)* 23/11/24
Ms.S.Santhi Assistant Professor/ IT	*(signature)* 23/11/24
Dr.B.Paramasivan Professor/ AI&DS	*(signature)* 23/11/24
Dr.Ravirathinam Duraikannu Adjunct Faculty/ AI&DS	*(signature)* 23/11/24
Ms.V.VeeraAnusuya Assistant Professor / AI&DS	V.Ve *(signature)* 23/11/24
Ms.K.Poorani Assistant Professor / AI&DS	*(signature)*
Ms.P.Rampriya Assistant Professor / AI&DS	P. *(signature)* 23/11/2024

Ms.G.Dhivya Assistant Professor / AI&DS	G.Dly 23/11/24
Ms.K. R. Indira Assistant Professor / AI&DS	ICE Dly 23/11/24
Mr.K.Logesh IV year/ CSE	K. Logh 23/11/24
Ms.B.Siva Nandhini IV year/ CSE	B. Sia Mal 23/11/24
Ms.S.Girija IV year/ IT	S. Girija. 23/11/24
Mr.S.Alex III year/ IT	Alex S 23/11/24
E.Vignesh III year / AI&DS	E.Vignesh 23/11/24
M.Shriya III year / AI&DS	Shriya N 23.11.24

V.Kal 23/11/24
CHAIRMAN
BOS / AI & DS

CHAIRMAN
BOS / IT

V.L 23/11/24
CHAIRMAN
BOS / CSE

Annexure I

Action Taken Report for Minutes of 21st BOS

As per BOS committee suggestions,

- UG course contents are reduced
- The curriculum structure of 23CS43C/23CS44C-Design And Analysis of Algorithm was modified
- In 23CS41C / 23IT41C – Java Programming course is renamed as Java for Developers and CO contents were refined.
- The course content of 23CS44C / 23IT45C – Database Management Systems was refined.
- In B.E(CSE) curriculum 23CS53-Object Oriented Analysis and Design is shifted from 6th semester to 5th semester.
- In 23IT42C – Business Process Modelling, real world scenarios have been added as case studies.
- In 23AD42C - Data mining, the reprint edition of the text books are included and CO3 statement are rephrased.
- In 23AD43C- Machine learning, the syllabus contents are reduced, applications are mentioned as generic and dimensionality reduction technique and factor analysis are included in CO5 and CO7 statement are rephrased.
- Reinforcement learning are offered as a separate course.
- 23AD32C - Computer networks course in 3rd semester are swapped with 23AD42C –Data Mining course in 4th semester.
- Program Elective Course I moved to V semester.
- In 23AD45C- Data Science are changed as Fundamentals of Data Science and Analytics.

CHAIRMAN
BOS / AI & DS

CHAIRMAN
BOS / IT

CHAIRMAN
BOS / CSE

22nd BOARD OF STUDIES MEETING - DEPARTMENT OF CSE, IT

&

4th BOARD OF STUDIES MEETING - DEPARTMENT OF AI&DS ON 25.11.2024