KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near **VIRUDHUNAGAR).**

MINUTES OF THE MEETING OF 5th BOARD OF STUDIES MEETING HELD ON 24-09-2022 AT - 11.00 AM TOWARDS CONSIDERING THE CURRICULUM R2021-UG AND SYLLABI (VII SEMESTER TO VIII SEMESTER) OF R2020-UG PROGRAMME & SECOND YEAR CURRICULUM AND SYLLABI (III SEMESTER TO IV SEMESTER) OF R2021.

Mode of Meeting: Hybrid Mode (both physical and online)

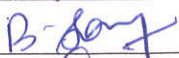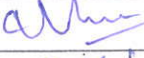Venue: CSE Conference Hall – I

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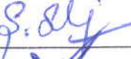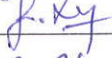
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Dr. A. Meenakshi, HoD (Department of Computer Science and Engineering) welcomed all the members of the Board of Studies and Faculty members of CSE department to the 5th BOS meeting. The following members were present:

S. No.	Name of the Expert	Designation	Capacity
1.	Dr. P. Chitra	Professor & Head/Computer Applications and Computer Science and Business Systems,Thiagarajar College of Engineering, Madurai, pccse@tce.edu Phone No:9944976549	Anna University Nominee
2.	Dr.R.B.V.Subramaanyan	Professor and Head, Department of Computer Science and Engineering National Institute of Technology, Warangal E-mail ID: rbvs66@nitw.ac.in Phone No: 9491346969	Academic Council nominated BoS Expert Member
3.	Dr.Sabu M.Thambi	Professor, School of Computer Science & Engineering (SoCSE), Technocity Campus, Trivandrum-695317, Kerala	Academic Council

		State, India. E-mail ID: sabu.thampi@iiitmk.ac.in Phone No: 9447103005	Nominee
4.	Mr.G.S.Raman	Director, Training Division, Sri Moogambikai Infotech Solutions, Madurai raman.g@mookambikainfo.com ramansriranga@gmail.com Phone No: 8870324388	Industrialist
5.	Dr.R.Venkatesan	Assistant Professor, CSE, Karunya University, Coimbatore rlvenkei2000@karunya.edu Phone No: 98948 80563	Alumni

Internal Members of BoS – Faculty members of CSE and AI & DS		
S. No.	**Name**	**Designation**
1.	Dr.A.Meenakshi	Professor and Head
2.	Dr.R.Ramya	Associate Professor / CSE UG (B. E. CSE) Programme Co-ordinator
3.	Dr.A.Anandh	Associate Professor / CSE UG (B. Tech. AI &DS) Programme Co-ordinator
4.	Dr.G.Nirmala	Assistant Professor / CSE
5.	Dr.G.Mahalakshmi	Assistant Professor / CSE
6.	Dr.G.Umamaheshwari	Assistant Professor / CSE
7.	Mrs.S.Athilakshmi	Assistant Professor / CSE
8.	Mr.B.Muthukrishnavinayagam	Assistant Professor / CSE
9.	Mrs.K.Muthulakshmi	Assistant Professor / CSE
10.	Ms.S.Janani	Assistant Professor / CSE
11.	Mrs.K.Leelarani	Assistant Professor / CSE
12.	Mr.M.Rajasekaran	Assistant Professor / CSE
13.	Ms.G.Vijayalalitha	Assistant Professor / CSE
14.	Mr.V.Rajesh Kannan	Assistant Professor / CSE
15.	Mrs.P.Kavitha	Assistant Professor / CSE
16.	Mrs.X.Ignatius Selvarani	Assistant Professor / CSE
17.	Mrs.V.Sangeetha	Assistant Professor / CSE

Sl. No	Name	Designation	Signature
18.	Mrs.S.Hemaswathi	Assistant Professor / CSE	
19.	Mrs.B.SanthiPriya	Assistant Professor / CSE	
20.	Ms.S.Jothilakshmi	Assistant Professor / CSE	
21.	Mr.S.Asir	Assistant Professor / CSE	
22.	Mrs.S.Soundariya	Assistant Professor / CSE	
23.	Dr.P.Praveen Kumar	Assistant Professor / AI & DS	
24.	Ms.T.Rajashree	Assistant Professor / AI & DS	
25.	Mrs.K.Indumathi	Assistant Professor / AI & DS	
26.	Mrs.J.Lavanya	Assistant Professor / AI & DS	
27.	Ms.S.Shopika	Assistant Professor / AI & DS	

After the brief introduction by Dr.A.Meenakshi, HoD (Department of Computer Science and Engineering) about the expert members, industrialist, alumni, faculty from the Department of Computer Science and Engineering, and the agenda items were taken up for discussion. The discussion started with R2021 UG Programme curriculum and syllabi of B.Tech. (Artificial Intelligence and Data Science), verticals and list of courses, Open electives (offered to other Departments), R2020 UG Programme curriculum and syllabi of IV year (7th to 8th semester) B.Tech. (Artificial Intelligence and Data Science) and then continued with the suggestions and recommendations received from all BOS members.

Discussions:

BOS 005.01
HoD / CSE gave a brief presentation about overview of the Department.

BOS 005.02
Dr.A.Meenakshi presented the proposed R2021 UG Curriculum of B. Tech. (Artificial Intelligence and Data Science).

SEMESTER I

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
THEORY								
1		Technical English	HS	3	0	0	3	3

2		Matrices and Differential Calculus	BS	3	1	0	4	4
3		Engineering Physics	BS	3	0	0	3	3
4		Engineering Chemistry	BS	3	0	0	3	3
5		Coding Techniques - I	EEC	3	0	0	3	3
6		Principles of Engineering	BS	0	0	0	0	3
7		Scientific Thoughts in Tamil	AUD	1	0	0	2	1
PRATICALS								
7		Physics Laboratory	BS	0	0	3	3	1
8		Mathematics Laboratory	BS	0	0	2	2	1
9		Coding Techniques - I Laboratory	EEC	0	0	3	3	1
		TOTAL		**20**	**1**	**8**	**29**	**22**

SEMESTER II

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
THEORY								
1		Professional English	HS	3	0	0	3	3
2		Vector Calculus, Complex Integration and Laplace Transforms	BS	3	1	0	4	4
3		Physics of Non-Conventional Energy Sources	BS	3	0	0	3	3
4		Environmental Science and Engineering	BS	3	0	0	3	3
5		Engineering Graphics	ES	2	0	3	5	3
6		Coding Techniques – II	EEC	3	0	0	3	3
7		Professional English	HS	3	0	0	3	3
PRATICALS								
7		Engineering Practices Laboratory	ES	0	0	4	4	2
8		Coding Techniques - II Laboratory	EEC	0	0	3	3	1
9		Chemistry Laboratory	BS	0	0	3	3	1
		TOTAL		**17**	**1**	**13**	**31**	**23**

SEMESTER III

Sl. No	Course Code	Course Name	Category	L	T	P	Contact Periods	C
				Credits				
THEORY								
1		Linear Algebra and Boundary Value Problems	BS	3	1	0	4	4
2		Digital System Design and Microprocessors	ES	3	1	0	4	4
3		System Software and Operating Systems	PC	3	0	0	3	3
4		Data Structures and Algorithms	PC	3	0	0	3	3
5		Object Oriented Programming using Java	PC	2	0	2	4	3
6		Artificial Intelligence	PC	3	0	0	3	3
7		Audit Course	AUD	3*	0	0	4	4
PRATICALS								
7		Data Structures and Algorithms Laboratory	PC	0	0	4	4	2
8		Digital System Design and Microprocessors Laboratory	PC	0	0	4	4	2
		TOTAL		19	2	10	24	31

SEMESTER IV

Sl. No	Course Code	Course Name	Category	L	T	P	Contact Periods	C
				Credits				
THEORY								
1		Probability and Statistics	BS	3	1	0	4	4
2		Database Management Systems	PC	3	0	0	3	3
3		Foundations of Data Science and Machine Learning	PC	3	0	2	5	4
4		Introduction to Internet of Things	PC	3	0	0	3	3
5		Design Thinking	ES	3	0	0	3	3
6		Scientific Thoughts in Tamil ****	AUD	2	0	0	2	2
PRATICALS								
7		Database Management Systems Laboratory	PC	0	0	4	4	2

8		Internet of Things Laboratory	PC	0	0	4	4	2
9		Mobile Application Development Laboratory	PC	0	0	4	4	2
10		Aptitude	EEC	1	1	0	2	1
		TOTAL		16	2	14	32	24

SEMESTER V

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
THEORY								
1		Fundamentals of Deep Learning	PC	3	0	0	3	3
2		Computer Networks and Security	PC	3	0	2	5	4
3		Internet Programming	PC	3	0	0	3	3
4		Big Data Analytics	PC	3	0	2	5	4
5		Professional Elective I	PE	0	0	0	0	3
6		Professional Elective II	PE	0	0	0	0	3
PRATICALS								
7		Deep Learning Laboratory	PC	0	0	4	4	2
8		Internet Programming Laboratory	PC	0	0	4	4	2
9		Internship/Mini Project	EEC	0	0	0	0	1
10		Interpersonal skills – Listening and Speaking	EEC	0	0	2	2	1
		TOTAL		-	0	-	32/34	26

SEMESTER VI

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
THEORY								
1		Data Visualization	PC	3	0	0	3	3
2		Fundamentals of Natural Language Processing	PC	3	0	0	3	3
3		Open Elective – I	OE	3	0	0	3	3

4		Professional Elective III	PE	-	0	-	-	3
5		Professional Elective IV	PE	-	0	-	-	3
6		Professional Elective V	PE	-	0	-	-	3
7		Professional Elective VI	PE	-	0	-	-	3
PRATICALS								
7		Data Visualization Laboratory	PC	0	0	3	3	1
8		Natural Language Processing Laboratory	PC	0	0	3	3	1
9		Professional Communication	EEC	0	0	2	2	1
		TOTAL		-	0	-	31/33	24

SEMESTER VII

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
THEORY								
1		Human Values and Professional Ethics	HS	2	0	0	2	2
2		Management Elective	HS	3	0	0	3	3
3		Open Elective – II	OE	3	0	0	3	3
4		Open Elective – III	OE	3	0	0	3	3
5		Open Elective – IV	OE	3	0	0	3	3
PRATICALS								
6		Summer internship/Mini Project	EEC	0	0	0	0	1
		TOTAL		14	0	0	14	15

SEMESTER VIII

Sl. No	Course Code	Course Name	Category	Credits				
				L	T	P	Contact Periods	C
1		Project Work	EEC	0	0	20	20	10
		TOTAL		0	0	20	20	10

BOS 005.03

Dr.A.Meenakshi discussed in detail about list of verticals offered for R2021 Regulation

Verticals and List of courses

Sl. No.	Vertical 1 Data Analytics (optional for Minor)	Vertical 2 Software Engineering and Application Development (optional for Minor)	Vertical 3 Cloud Computing and Data Centre Technologies
1	Data Analysis and Decision Making	Software Engineering with UML Design	Cloud Computing
2	Recommender Systems	Software Testing Automation	Virtualization
3	Image and Video Analytics	Web Application Development using Django	Cloud Services Management
4	Soft Computing	Full Stack Development	Data Center Management
5	Social Network Analysis	Multi Platform Application Development using Flutter	Devops
6	Information Retrieval Techniques	Agile Methodologies	Security and Privacy in Cloud
7	Knowledge Engineering	C # and . Net Fundamentals	Principles of Fog Computing

☐ Theory integrated Laboratory course   **Course is in line with NPTEL/Swayam**

Sl. No.	Vertical 4 Cyber Security and Data Privacy	Vertical 5 Creative Media	Vertical 6 Emerging Technologies	Vertical 7 Cognitive Science
1	Ethical Hacking	Computer Graphics	Mobile and Pervasive Computing	Socio - Cognitive and Affective Computing
2	Cyber Forensics	Multimedia Data Compression and Storage	Parallel and Distributed Computing	Computer Vision
3	Information Security	UI/UX Design	Computational Statistics	Robotic Process Automation
4	Cryptocurrency and Block Chain Technologies	Digital Marketing	Business Analytics	Sentiment analysis
5	Intrusion Detection Systems	Game Design and Development	High Performance Computing for Big Data	Human Computer Interaction
6	Modern Cryptography	Visual Effects	Augmented Reality and Virtual Reality	Fundamentals of Cognitive Science
7	Security Governance and Risk Compliance	Multimedia and Animation	Quantum Computing	Bio Informatics

☐ Theory integrated Laboratory course   **Course is in line with NPTEL/Swayam**

BOS 005.04
HONOURS AND MINOR DEGREE
Dr.A.Meenakshi discussed in detail about honours and minor degree - R2021 Regulation

Honours Degree	Minor Degree
The student should select **6 courses Offered in same Department verticals and earn 18 credits**	The student should select **6 courses Offered from other department verticals offered for minor degree or institute level courses offered as minor degree and earn 18 credits**
Eligibility : upto 4th Semester, the CGPA >7.5 with out any backlog	Eligibility : upto 4th Semester, the CGPA >7.5 with out any backlog
Offered from 5th semester onwards	Offered from 5th semester onwards
The student may or may not select the course from same verticals	The student should undergo 6 courses from same verticals offered as minor either from Institute level common minor verticals or other Department minor verticals.

BOS 005.05
Dr.A.Meenakshi presented the list of open elective courses offered to other department students in the curriculum R2021.

Open Electives – Offered to other departments

S. No	Course Code	Course Name	Credits			
			L	T	P	C
1.	I & II	Artificial Intelligence and Machine learning	3	0	0	3
2.	III	Graphics Programming	3	0	0	3
3.	IV	Game programming	3	0	0	3

BOS 005.06

Approval of Value Added courses:

• Dr.A.Meenakshi discussed about the process that we followed for conducting Value Added Courses.

• She also discussed about the role of three member's committee and presented the list of value added courses offered for the second year and third year students for this academic year.

Value Added Courses Conducted – II Year students

Name of the VAC course	Name of Company	Name of the Trainer(s)	No. of Students
Redhat Linux	School of Linux, Madurai	Mr.S.Suresh Kannan & K.Muthukumar	40
Machine Learning with Scikit-Learn, Keras and Tensorflow	Quantanics TechServ Pvt. Ltd., Madurai.	Mr.Farhadh Manaz and Mr.K.Vasanth Junior AI Developer	29
Spring Boot	Silicon Software Services, Chennai	Mr.S.Rajendran, Ms.Domini Neya	55
Django Framework	Lamdatech Softics, Virudhunagar	Mr.S.Balaji Ms.V.Rajeshwari	25

Value Added Courses Conducted – III Year students

Name of the VAC course	Name of Company	Name of the Trainer(s)	No. of Students
MEAN Stack	VEI Technologies Pvt. Ltd, Chennai.	Dr.B.Ezhilavan, Managing Director, Ms.Shobana, Software Developer,	35
MERN Stack	Lamdatech Softics, Virudhunagar	Mr.S.Balaji, Trainer Mr.M.Prakash, Trainer	40
Data Visualization using Tableau	Brainswig Edutech Pvt., Ltd, Chennai	Dr.R.Dinesh Babu Managing Director	40
Devops	SMI Infotech Sol. Pvt Ltd Mr.Sanjay, Trainer, SMI Infotech Sol. Pvt Ltd	Mr.G.S.Raman, Training and upskilling Trainer,	36

Dr.A.Meenakshi presented R2020 IV year (7th and 8th Semester) UG Curriculum, B.Tech (Artificial Intelligence and Data Science) detailed syllabus.

R2020 Syllabus for B.Tech AI & DS (VII Sem to VIII Sem)

SEMESTER VII

Sl. No	Course Code	Course Name	Category	L	T	P	Contact Periods	C
THEORY								
1		Data Visualization	pc	3	0	0	3	3
2		Natural Language Processing	PC	3	0	0	3	3
3		Full Stack Development	PC	2	0	2	4	3
4		Professional Elective – V	PE	3	0	0	3	3
5		Professional Elective – VI	PE	3	0	0	3	3
6		Open Elective – II	OE	3	0	0	3	3
PRATICALS								
7		Data Visualization Laboratory	PC	0	0	4	4	2
8		Natural Language Processing Laboratory	PC	0	0	4	4	2
9		Mini project	EEC	0	0	4	4	2
		TOTAL		17	0	14	31	24

SEMESTER VIII

Sl. No	Course Code	Course Name	Category	L	T	P	Contact Periods	C
THEORY								
1		Online course II	OL	0	2	0	2	2
PRACTICALS								
		Project work	EEC	0	0	16	16	8
		TOTAL		0	2	16	18	10

Professional Elective Courses (Elective – V) – Semester VII

Sl. No.	Course Code	Course Name	Credits				
			L	T	P	Contact Periods	C
1.	CS1634	Augmented Reality and Virtual Reality	3	0	0	3	3
2.	AD1731	Business Intelligence	3	0	0	3	3
3.	CS1632	Game Design and Development	2	0	2	4	3
4.	CS1733	Principles of Cyber Security	3	0	0	3	3
5.	CS1731	Software Project Management	3	0	0	3	3

(Elective – VI) – Semester VII

Sl. No.	Course Code	Course Name	Credits				
			L	T	P	Contact Periods	C
6.	CS1732	2D & 3D Techniques for Graphics Modeling and Simulation	3	0	0	3	3
7.	AD1732	Statistical Tools for Data Science Engineers	2	0	2	4	3
8.	AD1733	Application of Robotics	3	0	0	3	3
9.	AD1734	Enterprise Application Development	2	0	2	4	3
10.	CS1734	Risk Modeling and Assessment	3	0	0	3	3
11.	AD1735	Virtualization and Cloud Computing	2	0	2	4	3

OPEN ELECTIVE II

S. No	Course Code	Course Name	Credits			
			L	T	P	C
1.		Artificial Intelligence and Machine learning	3	0	0	3

The following suggestions were given by the BOS Members

- Dr. R. B. V. Subramaanyan suggested to include as Cognitive computing rather than cognitive science.
- Dr. Sabu M. Thampi suggested to include Github projects, Linkedin account, Hackathon from first year onwards.
- Dr. Sabu M. Thampi suggested to reduce the syllabus content for the vast subject.

- Dr.R.Venkatesan suggested to give the course outcome in a short manner, no need to elaborate the contents.
- Dr.Sabu M.Thampi suggested to give Feature Engineering as a separate subject.
- Dr.P.Chitra suggested to revisit all the CO's in the syllabus.

RESOLVED TO APPROVE the R2020 curriculum and detailed syllabi for VII & VIII Semester of B.Tech (AI & DS), Detailed syllabus of R2021 curriculum and detailed syllabi for I to VIII Semester of B.Tech (AI & DS).

The meeting ended with the vote of thanks by Dr. A. Anandh, Associate Professor, Department of CSE, Kamaraj College of Engineering and Technology, Virudhunagar.

BoS-Coordinator.

(Dr. A. Meenakshi)

BoS Chairman & HoD - CSE