

# **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)**



**SIXTH BOARD OF STUDIES**

**MEETING MINUTES**



**Department of Computer Science and Engineering**  
**B.E COMPUTER SCIENCE AND ENGINEERING**  
**Sixth BoS Meeting Minutes**


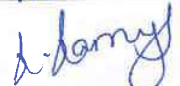





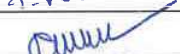






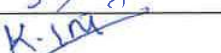
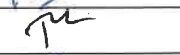





Date : 10.03.2023  
Time : 10.00 am to 1.30 pm  
Venue : CSE Conference Hall-I  
Link (hybrid mode) :

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_YzEyMzIIMGQINDNiMC00Nzk3LTg0NzYtYjYzYWE2OTRIMTU4%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%22ac02f526-fd9e-460b-af56-6558c03f6a7a%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YzEyMzIIMGQINDNiMC00Nzk3LTg0NzYtYjYzYWE2OTRIMTU4%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%22ac02f526-fd9e-460b-af56-6558c03f6a7a%22%7d)

The following members were present:

S. No.	Name of the Expert	Designation	Capacity
1	Dr.P. Chitra	Professor & Head Department of Computer Applications, Thiagarajar College of Engineering, Madurai. Email : pccse@tce.edu Mobile : Phone No:99449 76549	Anna University Nominee
2	Dr. G. R. Gangadharan	Associate Professor Department of Computer Applications, National Institute of Technology, Tiruchirapalli -620015. Email: ganga@nitt.edu Mobile : 77998 33300	Academic Council Nominee
3	Dr.D. Jeya Mala	Associate Professor School of Computer Science Engineering Vellore Institute of Technology, Chennai Email : jeyamala.d@vit.ac.in Mobile : 99948 36867	Academic Council Nominee

4	Mr.R. Anandha Murugan	Chief Technology Officer Pruvity HR Solutions Private Limited Anna Nagar, Madurai. Email: anandhamurugan.r@promptdxb.com Mobile : 86673 98310	Industrial Expert
5	Mr.S. Venkatesh 2009-2013 Batch	Device Solution Engineer Exxonmobil, Bengaluru. Email: venkatesh.ashok16@gmail.com Mobile : 96293 49329	Alumni

Internal faculty Members of BoS			
S. No.	Name of the Faculty	Designation	Signature
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. AT & DS) Programme Co-ordinator	
4.	Dr.G.Nirmala	Assistant Professor / CSE	
5.	Dr.G.Mahalakshmi	Assistant Professor / CSE	
6.	Dr.G.Uma Maheshwari	Assistant Professor / CSE	
7.	Mr.V.Rajesh Kannan	Assistant Professor / CSE	
8.	Mrs.P.Kavitha	Assistant Professor / CSE	
9.	Mrs.S.Athilakshmi	Assistant Professor / CSE	
10.	Mr.B.Muthukrishnavinayagam	Assistant Professor / CSE	
11.	Mrs.K.Muthulakshmi	Assistant Professor / CSE	
12.	Mr.J.John Livingston	Assistant Professor / CSE	
13.	Mr.D. Asir	Assistant Professor / CSE	
14.	Ms.S.Hemaswathi	Assistant Professor / CSE	
15.	Mrs.X.Ignatius Selvarani	Assistant Professor / CSE	
16.	Ms.S.Janani	Assistant Professor / CSE	
17.	Mrs.K.Leelarani	Assistant Professor / CSE	
18.	Mr.M.Rajasekaran	Assistant Professor / CSE	
19.	Ms.G.Vijayalalitha	Assistant Professor / CSE	
20.	Ms.S.Jothi Lakshmi	Assistant Professor / CSE	
21.	Ms.S.Priyaa	Assistant Professor / CSE	

22.	Dr.R.Muthuselvi	Professor/ AI & DS	R. Muthuselvi
23.	Dr. P. Praveen Kumar	Associate Professor / AI & DS	P. Praveen Kumar
24.	Mrs.R.Indhuja	Assistant Professor / AI & DS	R. Indhuja
25.	Mrs.K.Indumathi	Assistant Professor / AI & DS	K. Indumathi
26.	Mrs.B.Santhi Priya	Assistant Professor / AI & DS	B. Santhi Priya
27.	Ms. T.Rajashree	Assistant Professor / AI & DS	T. Rajashree
28.	Mrs. J. Lavanya	Assistant Professor / AI & DS	J. Lavanya
29.	Ms. S. Shopika	Assistant Professor / AI & DS	S. Shopika
30.	Mrs.V.Sangeetha	Assistant Professor / AI & DS	V. Sangeetha

#### 006.01.00 : Welcome address by HoD

Dr. A. Meenakshi, HoD - Department of Computer Science and Engineering welcomed all the members of Board of Studies and Faculty members of CSE Department to the 6<sup>th</sup> BOS meeting.

#### 006.02.00 : Introduction of BoS members

Dr.A.Meenakshi introduced the following new panel of BOS members.

- Dr.P. Chitra, Anna University Nominee
- Dr. G. R. Gangadharan, Academic Council Nominee
- Dr.D. Jeya Mala, Academic Council Nominee
- Mr.R. Anandha Murugan, Industrial Expert
- Mr.S. Venkatesh, Alumni

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
1	Suggested to offer the course Internet Programming in semester IV instead of semester V.	Tried a lot to incorporate the Internet Programming paper in previous semester. But it is very difficult to move to previous semester since we are having more laboratory based components course in previous semester.

2	Suggested to reframe the course outcomes using measurable keywords.	Necessary steps and directions have been given to all the syllabus framing faculty members. As per the direction, the syllabus were framed, scrutinized and finalized
3	Suggested to provide more Industry related new technologies in the curriculum.	Provided more new technology related courses in Professional Electives in the verticals. Based on the suggestions given, the value added course was offered to the students by industry experts. In each course two faculty members were also got trained

The BOS members approved the minutes of 5<sup>th</sup> BOS meeting.

#### **06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL**

HoD presented the curriculum and Dr.R.Ramya presented the syllabi of R2021 - V and VI semester courses including the verticals and minor degree courses offered by Department of Computer Science and Engineering.

#### **006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

Semester V						
S. No.	Course Title	Category	Periods Per Week			Credits
			L	T	P	
THEORY						
1	Networking Essentials	PC	3	0	0	3
2	Internet Programming	PC	3	0	0	3
3	Introduction to Internet of Things	PC	3	0	0	3
4	Machine Learning Techniques	PC	2	0	2	3
5	Professional Elective – I	PE	-	-	-	3
6	Professional Elective - II	PE	-	-	-	3
PRACTICALS						
7	Internet of Things Laboratory	PC	0	0	4	2
8	Computer Networks Laboratory	PC	0	0	4	2
9	Internet Programming Lab	PC	0	0	4	2
10	Summer Internship /Mini project	EEC	0	0	0	1
Total Credits			11	0	14	25

**Semester VI**

S. No.	Course Title	Category	Periods Per Week			Credits
			L	T	P	
THEORY						
1	Cryptography and Network Security	PC	3	0	0	3
2	Theory of Computation and Compiler Design	PC	2	0	2	3
3	Professional Elective III	PE	-	-	-	3
4	Professional Elective IV	PE	-	-	-	3
5	Professional Elective V	PE	-	-	-	3
6	Professional Elective VI	PE	-	-	-	3
7	Open Elective I	OE	3	0	0	3
PRACTICALS						
8	Security Laboratory	PC	0	0	4	2
9	Professional Communication	EEC	0	0	2	1
Total Credits			8	0	8	24

**Verticals**

Verticals /Courses	Artificial Intelligence and Data Analytics	Software Application Development	Cyber Physical systems	Creative Media
1	Robotic Process Automation	Agile Project Development with Scrum	<u>Ethical Hacking</u>	Multimedia Systems
2	<u>Deep Learning</u>	<u>Software Testing and Quality Assurance</u>	Principles of Cyber Security	Computer Graphics and Imaging
3	<u>Image Analytics and Computer Vision</u>	Django Rest Framework	Essentials of Devops	Game Design Techniques
4	Big Data Systems	Full Stack Development	<u>Block Chain Technologies</u>	2D & 3D Techniques for Graphics Modeling and Simulation

Verticals /Courses	Artificial Intelligence and Data Analytics	Software Application Development	Cyber Physical systems	Creative Media
5	<u>Natural Language Processing Essentials</u>	Application Development using Flutter	<u>Virtualization and Cloud Computing</u>	Visual Effects
6	Information Retrieval Techniques	<b>User Interface Design</b>	Multicore Architecture	Emerging Advancements in Augmented Reality and Virtual Reality
7	<b>Data Visualization using Tableau</b>	<b>C# and . Net Fundamentals</b>	Distributed Systems	<u>Digital Marketing Essentials</u>

- Underline refers to offered course is in line with NPTEL/Swayam
- Bold refers to offered course is Theory based Laboratory

#### Minor Verticals – Computer Technology

Sl. No.	Course Name	Contact Periods	L	T	P	Credits
1	Fundamentals of Data Structures	4	2	0	2	3
2	Database Essentials	4	2	0	2	3
3	Java Basics (IT)	4	2	0	2	3
4	Introduction to Data Science	3	3	0	0	3
5	Artificial Intelligence and Machine learning	3	3	0	0	3
6	Cloud Computing and its Applications (IT)	3	3	0	0	3

#### Institution level Verticals (Minor Degree)

S. No.	Verticals	Offering Department
1	Fintech and Block Chain	CSE Department
2	Entrepreneurship	Mechanical Department
3	Environment and Sustainability	Civil (i/c) & Chemistry Department



4	Business data Analytics	IT department
5	Public Administration	Placement cell (i/c) & English department

#### Minor Verticals - Fintech and Blockchain

Sl. No.	Course Name	L	T	P	Credits
1	Engineering Economics and Financial Management	3	0	0	3
2	Banking, Financial Services and Insurance	3	0	0	3
3	Fundamentals of Blockchain	2	0	2	4
4	Applications of Blockchain	3	0	0	3
5	Digital Marketing	3	0	0	3
6	Logistics and Supply Chain Management	3	0	0	3

The following are the suggestions given by BoS members on the curriculum.

V Semester	
Name of the Course	Suggestions from BoS members
Networking Essentials	BOS members provided the consent for the syllabus.
Internet Programming	Mr.R. Anandha Murugan suggested to replace WSDL content and suggested to include cloud and JSON concepts.
Introduction to Internet of Things	Dr.D. Jeya Mala suggested to include case studies and MIOT (Medical IOT) in unit-5.
Machine Learning Techniques	Dr.P. Chitra suggested to replace the apply level keyword in the course outcome and to include latest version of books.
Internet of Things Laboratory	Dr.D. Jeya Mala suggested to replace the CO1 and CO2 statements and suggested to frame the CO statements specifically.
Computer Networks Laboratory	Mr.S. Venkatesh, suggested to give SDWAN as an assignment.
Internet Programming Lab	Dr.D. Jeya Mala suggested to include the word Backend connectivity in the CO3 statement.
Summer Internship /Mini project	Mr.R. Anandha Murugan suggested to start the Internship from II year.
VI Semester	
Cryptography and Network Security	Mr.S. Venkatesh suggested to include zero trust architecture in the syllabus.
Theory of Computation and Compiler Design	Dr.P. Chitra and Dr.D. Jeya Mala suggested to frame the syllabus and course outcomes for Theory of Computation subject also.

Security Laboratory	Dr.D. Jeya Mala suggested to include scenario based questions as a list of experiments.
<b>Vertical : Artificial Intelligence and Data Analytics</b>	
Robotic Process Automation	BOS members provided the consent for the syllabus.
Deep Learning	Dr.D. Jeya Mala and Dr.P. Chitra suggested to frame the course outcomes and to include the scenario based questions for the list of experiments.
Image Analytics and Computer Vision	Dr.D. Jeya Mala suggested to include data annotation concept in the list of experiments.
Big Data Systems	BOS members provided the consent for the syllabus.
Natural Language Processing Essentials	Dr.D. Jeya Mala suggested to give detailed syllabus for exploring corpora concept in laboratory and suggested to include sign language.
Information Retrieval Techniques	BOS members provided the consent for the syllabus.
Data Visualization using Tableau	Mr.S. Venkatesh suggested to frame syllabus based on Power BI for data visualization instead of Tableau. Mr.R. Anandha Murugan suggested to replace the title of the subject. Mr.R. Anandha Murugan suggested to explore more statistical tools to add them in the syllabus. Dr.D. Jeya Mala informed that the word 'T' is missing in the List of Experiments.
<b>Vertical: Software Application Development</b>	
Agile Project Development with Scrum	Mr.R. Anandha Murugan suggested to include tools other than scrum, versioning topics and to incorporate the last unit as Devops in the syllabus.
Software Testing and Quality Assurance	Mr.R. Anandha Murugan suggested to include Selenium tool as one unit and Google extension and suggested to include it in unit-5 as Flutter.
Django Rest Framework	Mr.R. Anandha Murugan suggested to introduce the concept of flask tool before the introduction of Django. Mr.S. Venkatesh suggested to change title as Rest frame work for Business applications.
Full Stack Development	Dr.D. Jeya Mala and Mr.R. Anandha Murugan suggested to include API and socket call concepts in the unit-5 of the syllabus.
Application Development using Flutter	Mr.R. Anandha Murugan suggested to change the syllabus and look for running applications in web, Android and iOS. Mr.S. Venkatesh suggested to refer LinkedIn courses.
User Interface Design	Dr.D. Jeya Mala suggested UI UX design as the subject name. Mr.R. Anandha Murugan Suggested to include the concept of Figma in the syllabus.



C# and . Net Fundamentals	Mr.R. Anandha Murugan suggested to remove the concepts of ADO.net and provide more opportunity to learn the concepts of ASP.net
<b>Vertical: Cyber Physical systems</b>	
Ethical Hacking	BOS members provided the consent for the syllabus.
Principles of Cyber Security	BOS members provided the consent for the syllabus.
Essentials of Devops	Dr.D. Jeya Mala suggested that the Essentials of Devops should not be kept under cyber physical systems domain. Mr.S. Venkatesh suggested to change the title as Devops for Infrastructure or have title as Devops for Cloud and suggested to include the topic Teraform in the syllabus.
Block Chain Technologies	Mr.S. Venkatesh and Dr.D. Jeya Mala suggested to remove the cryptocurrency topic in the syllabus and suggested to focus on more on fundamentals of block chain.
Virtualization and Cloud Computing	Mr.S. Venkatesh suggested to include cloud service providers, costing techniques topic in the syllabus and suggested to refer the list of experiments mentioned in Microsoft Azure and Google cloud.
Multicore Architecture	BOS members provided the consent for the syllabus
Distributed Systems	Mr.S. Venkatesh suggested to include the content Delivery Network in the syllabus.
<b>Vertical: Creative Media</b>	
Multimedia Systems	Dr.D. Jeya Mala suggested to change the level of course outcomes as K3.
Computer Graphics and Imaging	Dr.D. Jeya Mala and Mr.R. Anandha Murugan suggested to change the subject title as Image Processing and suggested to include Drone technologies.
Game Design Techniques	Dr.D. Jeya Mala suggested to revise all the Course Outcomes and appreciated the list of experiments for the Game design subject.
2D & 3D Techniques for Graphics Modeling and Simulation	Dr.D. Jeya Mala suggested to change the subject title as Graphics Modeling and Simulation.
Visual Effects	Dr.D. Jeya Mala suggested to revise the Course outcomes at K3 level.
Emerging Advancements in Augmented Reality and Virtual Reality	Dr.D. Jeya Mala suggested to include the topic XR in the last unit of the syllabus.
Digital Marketing Essentials	BOS members provided the consent for the syllabus.
<b>Minor Verticals – Computer Technology</b>	
Fundamentals of Data Structures	BOS members provided the consent for the syllabus
Database Essentials	BOS members provided the consent for the syllabus

Fundamentals of Java Programming (IT)	Offered in IT department
Introduction to Data Science	BOS members provided the consent for the syllabus
Artificial Intelligence and Machine learning	BOS members provided the consent for the syllabus
Cloud Computing and its Applications (IT)	Offered in IT department
<b>Minor Verticals - Fintech and Block chain</b>	
Engineering Economics and Financial Management	BOS members provided the consent for the syllabus
Banking, Financial Services and Insurance	Mr.S. Venkatesh suggested to include the concept of payment gateway and its processing.
Fundamentals of Blockchain	Mr.S. Venkatesh suggested to include security concepts, smart contracts and its types in the first unit. Dr.D. Jeya Mala Suggested to reduce the concept of bitcoin in the second unit.
Applications of Blockchain	Dr.D. Jeya Mala suggested to change the subject name as Block chain security in fundamentals. She also suggested that instead of “Applications of Blockchain”, “Introduction to Fintech” can be included and to change syllabus accordingly.
Digital Marketing	BOS members provided the consent for the syllabus
Logistics and Supply Chain Management	BOS members provided the consent for the syllabus
<b>R2020- Semester-VII</b>	
Cloud Computing	Mr.S. Venkatesh suggested to include the concept of cloud migration and on-premises in the syllabus.
Cryptography and Network Security	BOS members provided the consent for the syllabus
Total Quality Management	BOS members provided the consent for the syllabus
Cryptography and Network Security Laboratory	Dr.D. Jeya Mala suggested to give scenario based questions for the list of experiment.
Cloud Computing laboratory	Mr.R. Anandha Murugan suggested to reframe the syllabus.

**006.04.02 : Common courses in the core / verticals across other departments**

Name of the Course	Common to	Suggestions from BoS members
Internet Programming	AD	Mr.R. Anandha Murugan suggested to replace WSDL content and suggested to include cloud and JSON concepts.
Internet Programming Lab	AD	Dr.D. Jeya Mala suggested to include the word Backend connectivity in the CO3 statement.

Robotic Process Automation	AD	BOS members provided the consent for the syllabus.
Software Testing and Quality Assurance	AD	Mr.R. Anandha Murugan suggested to include Selenium tool as one unit and Google extension and suggested to include it in unit-5 as Flutter.
Image Analytics and Computer Vision	AD	Dr.D. Jeya Mala suggested to include data annotation concept in the list of experiments.
Django Rest Framework	AD	Mr.R. Anandha Murugan suggested to introduce the concept of flask tool before the introduction of Django. Mr.S. Venkatesh suggested to change title as Rest frame work for Business applications.
Essentials of Devops	AD	Dr.D. Jeya Mala suggested that the Essentials of Devops should not be kept under cyber physical systems domain. Mr.S. Venkatesh suggested to change the title as Devops for Infrastructure or have title as Devops for Cloud and suggested to include the topic Teraform in the syllabus.
Big Data Systems	AD	BOS members provided the consent for the syllabus
Block Chain Technologies	AD	Mr.S. Venkatesh and Dr.D. Jeya Mala suggested to remove the cryptocurrency topic in the syllabus and suggested to focus on more on fundamentals of block chain.
Natural Language Processing - Essentials	AD	Dr.D. Jeya Mala suggested to give detailed syllabus for exploring corpora concept in laboratory and suggested to include sign language.
Application Development using Flutter	AD	Mr.R. Anandha Murugan suggested to change the syllabus and look for running applications in web, Android and iOS. Mr.S. Venkatesh suggested to refer LinkedIn courses.
Virtualization and Cloud Computing	AD	Mr.S. Venkatesh suggested to include cloud service providers, costing techniques topic in the syllabus and suggested to refer the list of experiments mentioned in Microsoft Azure and Google cloud.
Information Retrieval Techniques	AD	BOS members provided the consent for the syllabus.
User Interface Design	AD	Dr.D. Jeya Mala suggested to include UI/UX design for the subject name. Mr.R. Anandha Murugan suggested to include the concept of Figma in the syllabus.
Multicore Architecture	AD	BOS members provided the consent for the syllabus.
Data Visualization using Tableau	AD	Mr.S. Venkatesh suggested to frame syllabus based on Power BI for data visualization instead of Tableau.

		Mr.R. Anandha Murugan suggested to replace the title of the subject. Mr.R. Anandha Murugan suggested to explore more statistical tools to add them in the syllabus. Dr.D. Jeya Mala informed that the word 'T' is missing in the List of Experiments.
C# and . Net Fundamentals	AD	Mr.R. Anandha Murugan suggested to remove the concepts of ADO.net and provide more opportunity to learn the concepts of ASP.net
Distributed Systems	AD	Mr.S. Venkatesh suggested to include the content Delivery Network in the syllabus.
Digital Marketing Essentials	AD	BOS members provided the consent for the syllabus.

#### 006.04.03 : List of Open Elective courses offered

##### Open Elective I

Name of the Course	Offered to	Suggestions from BoS members
Fundamentals of Software Engineering	MECH, BT, MTR, CIVIL, EEE, ECE	BOS members provided the consent for the syllabus

##### Open Elective III

Name of the Course	Offered to	Suggestions from BoS members
Object Oriented Analysis and Design	MECH, BT, MTR, CIVIL, EEE, ECE	BOS member suggested to include UML word in the syllabus
Introduction to Networking		BOS members provided the consent for the syllabus

##### Open Elective IV

Name of the Course	Offered to	Suggestions from BoS members
Problem Solving Techniques	MECH, BT, MTR, CIVIL, EEE, ECE	BOS members provided the consent for the syllabus
Software Testing		BOS members provided the consent for the syllabus

**006.04.04 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Deep Learning	Deep Learning
Computer Vision and Image Processing - Fundamentals and Applications	Image Analytics and Computer Vision
Natural Language Processing	Natural Language Processing Essentials
Software Testing	Software Testing and Quality Assurance
Block Chain and its Applications	Block Chain Technologies
Cloud Computing	Virtualization and Cloud Computing
Introduction to Marketing Essentials	Digital Marketing Essentials

- BOS members approved the NPTEL courses that will be offered for the students those who opt for Honours / Minor degree as an alternative.

**006.04.05 : Tentative final year curriculum of R2021**

**Semester VII**

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
THEORY						
1	Human Values and Professional Ethics	HS	2	0	0	2
2	Management Elective	HS	3	0	0	3
3	Open Elective – II	OE	3	0	0	3
4	Open Elective – III	OE	3	0	0	3
5	Open Elective – IV	OE	3	0	0	3
PRACTICALS						
6	Summer Internship / Mini project	EEC	0	0	0	1
Total Credits			14	0	0	15

**Semester-VIII**

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
1	Project work	EEC	0	0	20	10
Total Credits			0	0	20	10

- BOS members approved the syllabus.

**006.05.00 : ITEMS FOR RATIFICATION**

006.05.01 : Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
CS2202 Object Oriented Programming using Java - R2021	Based on the curriculum feedback received from the students, the syllabus is reduced.
CS1771 Cloud Computing - R2020	BOS members suggested to include the concept of cloud migration, on-premises in the syllabus.
Cloud Computing laboratory – R2020	BOS members suggested to reframe the syllabus.

**006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

S. No.	Course Id	Course Title	Offered Institute	No. of Students Registered	No. of Students attended	No. of Students passed	No. of Students failed	Pass Percentage
1	noc22-cs87	Cloud Computing	IITKGP	22	22	18	4	81.82
2	noc22-cs96	Introduction To Internet Of Things	IITKGP	35	35	32	3	91.43
3	noc22-hs76	Soft Skills	IITR	50	49	42	7	84.00
4	noc22-cs122	The Joy of Computing using Python	IIT Ropar	44	43	37	6	84.09

No. of Students passed	131
No. of Students failed	20
No. of Students got Elite+Gold+Topper	2
No. of Students got Elite+Silver+Topper	7
No. of Students got Elite+Silver	32
No. of Students got Elite	77
No. of Students Successfully completed	13
No. of Students with no certificate	18



- BOS member suggested to include amendments for the students who failed in the NPTEL exam.
- BOS member suggested to offer the test in online mode
- Encouraged the students to attend the same course in the current semester if it is a rerun course.
- If the student failed course is not a rerun course, encouraged the students to find another suitable course.
- Motivated them to do better in the exam
- Revise the assignment questions that were done through 12 week course.
- NPTEL mentors is assigned to monitor the progress of the assignment submission.

#### **006.05.03 : Value Added Courses offered if any**

**The courses that were conducted in 2021-2022 are**

<b>Name of the VAC Course</b>	<b>Name of the Company</b>	<b>No. of Students</b>
Redhat Linux	School of Linux, Madurai	40
Machine Learning with Scikit-Learn, Keras and Tensorflow	Quantanics TechServ Pvt. Ltd., Madurai.	29
Spring Boot	Silicon Software Services, Chennai	55
Django Framework	Lamdatech Softics, Virudhunagar	27
AWS cloud	School of Linux Madurai	30
Flutter	Networkz Systems, Madurai	30
Fundamentals of Block Chain and Cryptocurrency	Incrix Techlutions LLP, Chennai	35
MEAN Stack	VEI Technologies Pvt. Ltd, Chennai.	35
MERN Stack	Lamdatech Softics, Virudhunagar	40
Data Visualization using Tableau	Brainswig Edutech Pvt., Ltd, Chennai	40
Devops	SMI Infotech Solutions. Pvt Ltd	36
Ethical Hacking	HebeSec Technologies Pvt. Ltd, Chennai	35

Advanced Java Programming	VEI Technologies Pvt. Ltd, Chennai.	44
Microsoft Azure Fundamentals	SMI Infotech Solutions. Pvt Ltd	36
Data Analytics using R	Brainswig EduTech Pvt. Ltd. Chennai	36
Django Frameworks	Lamdatech Softics, Virudhunagar	36

- BOS member suggested to run the value added courses from ICT Academy.

#### 006.05.04 : Curriculum feedback and action taken if any

- Based on the curriculum feedback received from the students, the syllabus of R2021 Object Oriented Programming using Java is reduced.

#### 006.06.00: Information

The following details are also discussed

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	HoD presented the new amendment given by Anna University for Honours, specialization and minors Degree
006.06.02	Pass Percentage of students	HoD presented the Pass percentage for year wise and course wise in the meeting.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	-
006.06.04	NBA eSAR / status and information	HoD happily shared the date for audit of the compliance report.
006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	HoD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021 and its evaluation procedure.

#### 006.07.00 : Any other Item :

##### General Suggestions:

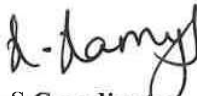
1. BOS member suggested that computer science faculty members may handle Design Thinking subject that helps to design models for various problems.
2. BOS member suggested to include tutorial hours for Artificial Intelligence subject.




3. BOS member suggested to order the verticals based on the basic, advanced and application level of the syllabus.
4. BOS members suggested to include security concepts in Block chain for the Institutional level verticals.
5. BOS members suggested to include the word block chain in the electives offered in the Institutional level verticals.
6. BOS member suggested to provide LinkedIn courses in addition to Swayam courses.
7. BOS member suggested to include analyze (K4) level of outcomes and suggested to set questions at K4 level for the examinations.
8. BOS member suggested to frame last course outcome as K4 level.
9. BOS member suggested to include recent version of text books.
10. BOS member suggested to give more hours for doing mini project for the lab courses.

**006.08.00 : Vote of Thanks**

- The meeting ended with Vote of Thanks by Dr.A.Anandh, Associate Professor, Department of Computer Science and Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

  
**BoS Coordinator**  
**(Dr.R.Ramya)**

  
**BoS Chairman**  
**(Dr.A.Meenakshi)**  
**HoD - CSE**


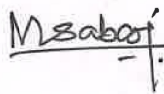



**Department of Electronics and Communication Engineering**

**Sixth BoS Meeting Minutes**

Date : 11.03.2023

Time : 02:00PM

Venue : VLSI Laboratory, Department of ECE

S.No	Name of the Expert	Designation	Capacity	Signature
1	Dr.E.S.Gopi, Ph.D.,	Associate Professor/ECE National Institute of Technology, Tiruchirappalli, Tamil Nadu	Anna University Nominee	
2	Dr. M. Sabarimalai Manikandan Ph.D.,	Associate Professor, Department of Electrical Engineering, Indian Institute of Technology Palakkad	Academic Council Nominee	
3	Dr A Kannammal, Ph.D.,	Associate Professor/ ECE PSG College of Technology, Avinashi Rd, Peelamedu - 641004, Coimbatore	Academic Council Nominee	
4	Mr.M.Chinnathambi, M.E.,	Technical Lead Viasat India, Global Infocity, Module 1&2,5th Floor, Block C, No.40, MGR Salai, Perungudi- 600 097, Chennai.	Industrial Expert	
5	Ms.A.Anto Amala, M.E.,	Associate Staff Engineer, Samsung Semiconductor India Research, Laxmi Sagar Layout, Mahadevapura, Bengaluru, Karnataka 560048	Alumni	



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Internal faculty Members of BoS			
S.No.	Name of the Faculty	Designation	Signature
1.	Dr.R.Suresh Babu	Professor & Head	R.S. — Sen
2.	Dr.T.Pandiselvi	Associate Professor	T.P. Pandiselvi
3.	Dr.N.M.Mary Sindhuja	Associate Professor	N.M. Sindhuja
4.	Dr.T.Prathiba	Assistant Professor	T. Prathiba
5.	Mrs.C.Nagavani	Assistant Professor	C. Nagavani
6.	Mrs.S.Nisha Rani	Assistant Professor	S. Nisha Rani
7.	Mr.P.Aravind	Assistant Professor	P. Aravind
8.	Mr.R.Ashok	Assistant Professor	R. Ashok
9.	Mrs.M.Stella Mercy	Assistant Professor	M. Stella Mercy
10.	Mr.S.Alwyn Rajiv	Assistant Professor	S. Alwyn Rajiv
11.	Mrs.P.Ramalakshmi	Assistant Professor	P. Ramalakshmi
12.	Mr.R.Rajprabu	Assistant Professor	R. Rajprabu

#### 006.01.00 : Welcome address by HoD

- Dr.R.Suresh Babu, Professor & Head welcomed all the BoS members.

#### 006.02.00 : Introduction of BoS members and new Academic Council Nominee

- Dr.R.Suresh Babu, introduced all the BoS Members to the gathering.

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
1.	Dr. D. Sriram Kumar Ph.D. gave suggestions on framing R2020-Optical communication course syllabus. He insisted to remove Unit V- Optical Networks which is a separate course. He suggested to reduce the syllabus in Unit II. He also suggested to give more number of experiments in laboratories & project work.	As per his suggestion, in R2020 and R2021, Unit V is changed as optical communication systems. The contents in Unit II were reduced. As per his suggestions, in R2021 number of experiments is increased by increasing Theory cum Laboratory courses.

2.	Dr. D. Sriram Kumar Ph.D. insisted to connect industry with guest lecture for management related courses.	<p>Many guest lectures were conducted for management related courses</p> <p>a. "Supply Chain Management" on 21.01.2023. Resource Person: Mr. P.Raju, Former DGM, BPL Medical Technologies.</p> <p>b. "Entrepreneurship and Skill Development Program" on 23.09.2022. Resource Person: Mr.M.Koushik Venkatraman, Mahatma Gandhi National Fellow, Under Ministry of Skill Development and Entrepreneurship.</p> <p>c. "Never Give up ur dream" on 17.9.2022 Resource person Mr.R.K.SureshKumar, AGM, BSNL, Madurai</p> <p>4. "Entrepreneurship Training Program MAD" (MAD - Man Against Demand) on 29.08.2022. Resource person: JCI. SEN. Binu Jacob, Provisional National Trainer</p>
3.	Dr. D. Sriram Kumar Ph.D. suggested to include software based experiments for Optical, Microwave and Wireless.	LABVIEW and MATLAB based experiments are included in Advanced Communication Laboratory
4.	Dr. D. Sriram Kumar Ph.D. implied to introduce NS3 in Advanced Communication laboratory	Included experiments based on NS3 in Advanced Communication Laboratory
5.	Dr. D. Sriram Kumar Ph.D. insisted to remove Microwave Communication course which is suitable for PG course. He suggested to include one more text book in Multimedia Communication course.	Removed Microwave Communication course. Included one more text book in Multimedia Communication course.
6.	Dr. D. Sriram Kumar Ph.D. gave suggestion for Unit V in Wireless Networks. Since the unit titled 4G & Beyond, Introduction to future Wireless Networks topic can be included which may deal with 5G/6G networks.	Introduction to future Wireless Networks topic has been included in Wireless Networks course.



7.	Dr. D. Sriram Kumar Ph.D. insisted that Intellectual Property Rights course may be included.	Intellectual Property Rights course is included.
8.	Dr. D. Sriram Kumar Ph.D. insisted in Principles of Cryptography course, include 2 units on Steganography and change the title of the course as Cryptography & Steganography.	Steganography is included and the title of the course Principles of Cryptography is changed as Principles of Cryptography & Steganography.
9.	Mr. M. Chinnathambi, M.E., insisted to include topics RSA, EEC, open SSL algorithm in Principles of Cryptography course.	RSA, EEC, open SSL algorithm is included in Principles of Cryptography course.
10.	Dr. D. Sriram Kumar Ph.D. suggested to include SDMA in Satellite Communication. He also insisted to include applications in V unit of all the courses. He also insisted to combine the Basics of MEMS and NEMS course and BioMEMS course as a single course.	Included SDMA in Satellite Communication course. Applications are included in all the courses. Basics of MEMS and NEMS course is changed as BioMEMS.
11.	Dr. D. Sriram Kumar Ph.D. insisted to remove the course Photonic Networks from open elective courses. Instead of that Electronic Packaging may be included and arrange industry people to teach Electronic Packaging course.	Removed the course Photonic Networks from open elective courses. Electronic Packaging course is included.
12.	Dr. E. S. Gopi, Ph.D., suggested to include prerequisites for open elective courses in Unit I if it is not mentioned.	Basics are included in all the Open Elective courses in Unit I
13.	Dr. E. S. Gopi, Ph.D., insisted to include online courses in R2021.	In all the verticals, 2 online courses (NPTEL) are included

➤ BoS members approved the 5<sup>th</sup> BoS Meeting Minutes and Action taken.

#### 06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL

- The Hod presented the curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by department of ECE.

#### 006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor

- Dr.E.S.Gopi, Ph.D., suggested to include prerequisites for each subjects in the Professional elective list.
- Dr.E.S.Gopi, Ph.D., insisted to have some of the courses as industry based and partially it can be handled by the experts from industry.
- Dr.E.S.Gopi, Ph.D., also suggested to have Data Analytics as a common course for all the departments.
- Dr. M. Sabarimalai Manikandan Ph.D., insisted to give Open ended projects across the departments.

#### V Semester – Core Courses

Name of the Course	Suggestions from BoS members
Wireless Communication	Approved the course and syllabus
Electromagnetic Fields and Transmission Lines	Approved the course and syllabus
VLSI Design and Technology	Approved the course and syllabus
VLSI Design Laboratory	Approved the course and syllabus
Advanced Communication Laboratory	Approved the course and syllabus

#### VI Semester – Core Courses

Name of the Course	Suggestions from BoS members
Embedded and Real Time Systems	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., suggested to include Microprocessor as 1 unit in Embedded and modify the course name as Microprocessor and Embedded Systems

Control Systems Engineering	Dr.E.S.Gopi, Ph.D., insisted to combine control systems with Signals and Systems. Include the course Statistical Theory of Communication which may include Detection, Estimation and Information Coding. Dr.T.Prathiba suggested to bring the course Artificial Intelligence and Machine Learning in VI Semester. Move the course Statistical Theory of Communication in VII Semester.
Embedded Laboratory	Dr.E.S.Gopi, Ph.D., and Dr.M.Sabarimalai Manikandan Ph.D., suggested to include Microprocessor experiments and modify the course title as Microprocessor and Embedded Systems laboratory

#### Professional Elective Courses (Verticals)

Name of the Course	Suggestions from BoS members
<b>Vertical I: Semiconductor Chip Design and Testing</b>	
Advanced Logic Design	Dr.E.S.Gopi, Ph.D., insisted to insisted to change the course as Digital VLSI Design and Technology
ASIC Design	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., have suggested to change the course as Analog VLSI Design
System Verilog	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., have insisted to change the title of the course as SoC Design and Verification
VLSI Testing and Design for Testability	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., have suggested to change the course as VLSI Architecture for Signal Processing and Machine Learning
Low power VLSI design	Approved the course and syllabus
IC Manufacturing and Packaging	Approved the course and syllabus
Semiconductor Test Engineering	Approved the course and syllabus



<b>Vertical II: Signal Processing</b>	
Speech Processing	Dr.E.S.Gopi, Ph.D., suggested to include the Acoustics concepts also. Hence the course name is changed as Acoustics & Speech Processing
Digital Image Processing	Approved the course and syllabus
DSP Architecture and Programming	Dr.E.S.Gopi, Ph.D., insisted to remove this course. Instead he suggested to include Pattern recognition and Computational Intelligence course.
Advanced Digital Signal Processing	Approved the course and syllabus
Multimedia Compression Techniques	Dr. M. Sabarimalai Manikandan Ph.D., insisted to remove this course. Instead he suggested to include Deep Learning course.
RADAR Signal Processing	Dr. M. Sabarimalai Manikandan Ph.D., suggested to include SONAR topics along with RADAR. So, the course name is changed to RADAR & SONAR Signal Processing
Computer Vision	Approved the course and syllabus
<b>Vertical III: RF and Wireless Technologies</b>	
Antenna Design	Approved the course and syllabus
Radio Frequency Integrated Circuits	Approved the course and syllabus
Microwave Engineering	Approved the course and syllabus
Electromagnetic Interference and Compatibility	Approved the course and syllabus
Optical Communication	Approved the course and syllabus
Cognitive Radio	Approved the course and syllabus
Ad hoc and Wireless Sensor Networks	Approved the course and syllabus
<b>Vertical IV: Sensor Technologies and IoT</b>	
Microprocessor and Microcontroller	Dr. M. Sabarimalai Manikandan Ph.D., insisted to remove this course. Instead he suggested to include Sensors and Control Systems course.

Bio-sensors and Instrumentation	Dr.E.S.Gopi, Ph.D., insisted to remove this course. Instead he suggested to include MEMS & Nanoelectronics course.
Internet of Things	Approved the course and syllabus
Data Visualization in IoT	Dr.E.S.Gopi, Ph.D., suggested to change the title of the course as Data Analytics and Visualization.
RFID and Sensor Networks	Dr. M. Sabarimalai Manikandan Ph.D., suggested to remove the course RFID and include the topics of RFID and sensors in Internet of Things Course. Instead, basics of Wireless Technologies course may be included with various wireless technologies used for Sensor Technologies.
Communication Protocol and Network Security for IoT	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course as Device and Data Security
Industrial IoT	Approved the course and syllabus

#### **Minor Degree in ECE**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Basic Electronics and its Applications	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course as Analog Devices and Circuits.
Digital Logic Design	Approved the course and syllabus
Principles of Communication	Approved the course and syllabus
Machine Learning and Embedded Systems	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., verified the syllabus and insisted that machine learning and Embedded systems are two different courses and it is a dumped syllabus. Focus only on Machine Learning and the course name may be changed as Introduction to Machine Learning.
Sensors and IoT	Approved the course and syllabus
Electronic Product Design using PCB	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course as Electronic System Design

**006.04.02 : List of Open Elective 1 courses offered**

Name of the Course	Offered to	Suggestions from BoS members
IoT Concepts and Applications	EEE, MECH, Civil, MTRE and BT	Approved the course and syllabus

**006.04.03 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Digital Image Processing (12 weeks)	Digital Image Processing
Computer Vision (12 weeks)	Computer Vision
Deep Learning (12 weeks)	Introduction to Deep Learning
Microprocessors and Microcontrollers (12 Weeks)	Microprocessor and Microcontroller
Introduction To Industry 4.0 And Industrial Internet Of Things (12 weeks)	Industrial IoT
Digital Electronic Circuits / Digital System Design (12 weeks)	Digital Logic Design
Introduction to Machine Learning (12 Weeks)	Introduction to Machine Learning

- All the BoS members approved the above mentioned NPTEL courses for the equivalent professional elective courses.
- Dr.E.S.Gopi, Ph.D., insisted the following regarding NPTEL
- NPTEL Course must be listed separately.
- In R2020, Online course is a core course. If NPTEL is the online course, then in the transcript it may be printed as NPTEL course or the NPTEL course name (Which is chosen by the student).
- If a student fails in NPTEL, it should not be considered as arrear if he compensates with subjects handled by the department.
- Mentor role is very important in NPTEL course.

**006.04.04 : Tentative final year curriculum of R2021****Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>							
1	Human Values and Ethics	HSM	2	2	0	0	2
2	Management – Elective	HSM	3	3	0	0	3
3	Statistical Theory of Communication	PC	3	3	0	0	3
4	Open Elective – II	OE	3	3	0	0	3
5	Open Elective – III	OE	3	3	0	0	3
6	Open Elective – IV	OE	3	3	0	0	3
<b>PRACTICAL</b>							
7	Summer internship	EE	0	0	0	0	1
<b>TOTAL</b>			<b>17</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>18</b>

**Semester VIII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICAL</b>							
1	Project Work	EE	20	0	0	20	10
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>

**006.05.00 : ITEMS FOR RATIFICATION****006.05.01 : NPTEL Examination results**

S. No	Cours e Id	Course Title	Offered Institut e	No. of Students Register ed	No. of Students attended	No. of Student s passed	No. of Student s failed	Pass Percenta ge
1	noc22- hs76	Soft Skills	IIT, Roorkee	58	58	48	10	82.75%
2	noc22- cs96	Introduc tion to Internet of Things	IIT, Kharagp ur	10	10	10	--	100%

**Students Achievements in NPTEL****NPTEL Course on Introduction to Internet of Things**

Elite + Silver	2 Students
Elite	7 Students
Successfully Completed	1 Students



### NPTEL Course on Soft Skills

Elite + Silver + 5% Topper	1 Student
Elite + Silver	5 Students
Elite	30 Students
Successfully Completed	12 Students

- Action Plan for the students who did not receive certificate
  - 10 students have registered two NPTEL courses- PoM & IoT & 20 students have registered any one of the NPTEL courses (POM or IOT) for this semester (2022-2023 EVEN).
  - Three hours are allotted in the regular time table to monitor the assignment submissions.
  - Premia II PG student have registered the NPTEL course Communication Networks.
- BoS Members gave ratification for the NPTEL courses.

### 006.05.02 : Value Added Courses offered

The following Value Added courses for II year students (R2021) and III Year students (R2020) were conducted.

S. No.	Course Name	Resource Person	Participants	Date
1.	Integrated Full stack web development with IoT Networks	Incrix Techlutions ltd, Kovilpatti	II ECE (2021-2022)	22.02.2022 to 26.02.2022
2.	Embedded Systems Applications in Internet of Things (IoT)	Mr.M.Selvaraju, Director, Hands-on Technologies, Coimbatore	30 III/ECE students, 3 III/EIE students	25.08.2022 to 30.08.2022
3	Machine Learning & AI	Mr.A.Kesavan, CEO, Quantanics Techserv Pvt ltd, Madurai	31 III/ECE Students	25.08.2022 to 30.08.2022
4.	Artificial intelligence using Python	Mr. Naresh, Manish from Pantech E-learning Pvt. Ltd.	29 Students II year ECE students	4.01.2023 to 10.01.2023
5.	Internet of Things Using Arduino and Cloud	Mr. Mohan from Pantech E-learning Pvt Ltd	30 Students II year ECE students	4.01.2023 to 10.01.2023

- BoS members gave ratification for the above mentioned Value added courses conducted.

**006.05.03 : Curriculum feedback and action taken if any**

- Collecting the curriculum feedback from the students and action plan will be taken later.

**006.06.00: Information about the (Points Discussed in the following)**

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	The HOD Presented the new amendments given by Anna University. i. Honours/Honours with specialization/ Minor Degree ii. Include two Audit courses – Heritage Tamil, Tamils and Technology for R2021. All the BoS members accepted the amendments

i. Honours/Honours with specialization/ Minor Degree

Criteria	Honours with Specialization	Honours	Minor in other specialization
Eligibility	7.5 CGPA upto III Semester	7.5 CGPA upto III Semester	7.5 CGPA upto III Semester
Additional Credit	18 Credits (6 Courses)	18 Credits (6 Courses)	18 Credits (6 Courses)
Semester	5 to 7 Semester	5 to 7 Semester	5 to 7 Semester
Programme	Same Programme	Same Programme	Other Programme or any one of the institution level Verticals
Professional Elective	Same Vertical	Different Vertical	Same Vertical
Eligibility for Honours / Minor	Pass all the courses in the first attempt	Pass all the courses in the first attempt	Pass all the courses with in the time Period

ii. Audit courses – Heritage Tamil, Tamils and Technology

S.No.	Course	Batch 2022-2023	Batch 2023-2024 onwards	Credit
		Semester	Semester	
1	தமிழர் மரபு \ Heritage Tamils	II	I	1
2	தமிழரும் தொழில்நுட்பமும் \ Tamils and Technology	III	II	1

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.02	Pass Percentage of students	<p>The HOD Presented the Pass percentage yearwise and course wise for the Nov/Dec, 2022 End Semester Examination.</p> <p>II ECE – 76.67%</p> <p>III ECE – 85.25%</p> <p>IV ECE A – 95%</p> <p>IV ECE B – 95%</p>
006.06.03	Value Added Courses offered/Planned for the academic year: 2023 - 2024	<p>The HOD Presented the Value added course planned for the academic year 2023-2024</p> <ol style="list-style-type: none"> <li>1. Integrated Full stack web development with IoT Networks – 2<sup>nd</sup> Year</li> <li>2. Hands on Training in Digital Design using E-Box – 3<sup>rd</sup> Year</li> </ol> <p>All the BoS Members approved the Value Added Courses.</p>
006.06.04	NBA eSAR / status and information	<p>The HOD Happily shared the compliance report of ECE Department is submitted on 30.01.2023 and the NBA Compliance audit is scheduled on 09.04.2023.</p> <p>HOD happily shared the information on increase in intake due to the demand for ECE programme from 60 to 120 from the academic year 2023-2024. All the BoS members gave approval to increase the intake.</p>
006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	<p>The HOD shared the statistical data of the student internship/ Inplant training details for R2020 &amp; R2021</p> <ul style="list-style-type: none"> <li>- In IV ECE 25 students are in Internship with stipends (R2017).</li> <li>- All the 61 students of III ECE have completed (R2020).</li> <li>- All the 60 Students of II ECE have completed (R2021).</li> </ul>
006.06.06	Department Achievements	<p>The HOD presented the following</p> <ul style="list-style-type: none"> <li>- Students' prize winning in various project competitions at various institutions like Maulana Azad National Institute of Technology, Bhopal, Tamil Nadu Science Forum, Bannari Amman Institute of Technology, Mepco Schlenk Engineering College, Kalasalingam Academy of Research and Education etc., Co-curricular Achievements</li> <li>- Students' prize winning in Extra-curricular activities.</li> <li>- 74% of students got Placement in various core and IT companies.</li> <li>- Faculty Achievements in getting awards, Industrial visits, DST, TNSCST, SEED Money proposals, funded proposals applied, Journal and conference publications, Acted as resource persons in various institutions.</li> <li>- Two Faculty members got promoted as Associate Professor.</li> </ul>

**006.07.00 : Any other Item**

- Next BoS Meeting is tentatively scheduled during September 2023.

**006.08.00 : Vote of Thanks**

- The meeting ended with the Vote of Thanks by Dr.T.Prathiba, Assistant Professor, Department of Electronics and Communication Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.



**BoS Coordinator**  
**S.Nisha Rani, AP/ECE**



**BoS Chairman**  
**Dr.R.Suresh Babu**  
**HoD / ECE**



**Department of Information Technology**

**Sixth BoS Meeting Minutes**

Date : 17.03.2023

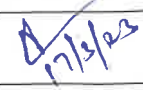
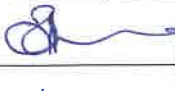

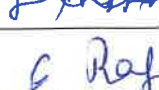

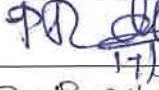

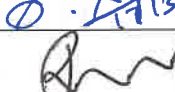
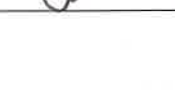

Time : 10:30 a.m. to 01:15 p.m.

Venue : IT Conference Hall (Academic Block IV)

Link (hybrid mode) : [meet.google.com/umf-tvio-frg](https://meet.google.com/umf-tvio-frg)

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr. P. Chitra	Professor, Department of Computer Science and Engineering, Thiagarajar College of Engineering, Madurai.	Anna University Nominee
2	Dr. S. Sankari	Professor, Department of Information Technology Sri Sai Ram Engineering College, West Tambaram, Chennai.	Academic Council Nominee
3	Dr. Rajeswari Sridhar	Associate Professor, Department of Computer Science and Engineering, National Institute of Technology, Tiruchirappalli - 620015	Academic Council Nominee
4	Mr. E. Hari Prasad	Sr. Technical Trainer, Acronotics, Bangalore.	Industrial Expert
5	Mr. P. Venkatesh	Managing Director, Cloudb Software Solutions Private Limited, Virudhunagar.	Alumni

Internal faculty Members of BoS			
S.No	Name of the Faculty	Designation	Signature
1	Dr. E. Vakaimalar	Associate Professor & Head	
2	Dr. R. Arthy	Assistant Professor	
3	Ms. V. Deepa Priya	Assistant Professor	
4	Mr. D. Vendhan	Assistant Professor	
5	Mr. C. Rajkannan	Assistant Professor	
6	Ms. P. Kaviya	Assistant Professor	
7	Ms. P. Priyadharshini	Assistant Professor	
8	Mr. R. Raymond	Assistant Professor	
9	Mr. S. Arun Prasad	Assistant Professor	
10	Mr. G. H. Ram Ganesh	Assistant Professor	

#### 006.01.00 : Welcome address by HoD

- Dr. E. Vakaimalar, Associate Professor and Head welcomed the Board of Studies members.

#### 006.02.00 : Introduction of BoS members and new Academic Council Nominee

- Dr. R. Arthy, Assistant Professor and BoS Coordinator introduced the Board of Studies members.
  - Dr. P. Chitra, Anna University Nominee
  - Dr. S. Sankari, Academic Council Nominee
  - Dr. Rajeswari Sridhar, Academic Council Nominee
  - Mr. E. Hari Prasad, Industrial Expert
  - Mr. P. Venkatesh, Alumni Expert

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
1	Verticals can be limited to 5	Verticals have been reduced to 3.
2	Courses in Verticals and Open Elective	Courses in Verticals and Open

	should not be same	Elective are not same
3	Mini Project title has to be changed	It has been changed as Project Development

- The head of the department presented the approval of 5<sup>th</sup> BoS meeting.
- She reported that the IV year syllabus of R2020 was approved by the members.
- She also projected that the IV semester syllabus of R2021 was approved by the BoS members during 5<sup>th</sup> BoS meeting.

#### 06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL

- The Hod presented the curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by Department of Information Technology.

#### 006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor

##### V Semester

Name of the Course	Suggestions from BoS members
Computer Networks	Approved
Algorithm Design and Analysis	Dr. Rajeswari and Dr. S. Sankari suggested to reframe the topics in Unit IV based on textbook by "Introduction to Algorithm" by Cormen.
Full Stack Web Development	Approved
Computational Intelligence	Dr. Rajeswari suggested the subject title as Artificial Intelligence and advised elaborate the Planning and Learning concepts rather than expert system.
Computer Networks Laboratory	Approved
Full Stack Web Development Laboratory	Mr. P. Venkatesh suggested the practical session for deployment of web application.

##### VI Semester

Name of the Course	Suggestions from BoS members
Cryptography	Approved
Android Application Development Laboratory	Mr. Hari Prasad suggested to take the laboratory course with Kotlin programming.

### Vertical I – Networks and Security

Name of the Course	Suggestions from BoS members
Network Security Essentials	Approved
Cloud Computing	Mr. Hari Prasad advised to have Azure web service and rethink about S3.
Internet of Things: Principles and Paradigm	Approved
Software Defined Networks	Approved
Cyber Forensics Investigation	Approved
DevOps Frameworks	Approved
Blockchain Technologies and its Applications	Approved

### Vertical II – Product Development

Name of the Course	Suggestions from BoS members
Software Architecture and UML Design	Approved
Agile Methodologies	Mr. P. Venkatesh and Mr. E. Hari Prasath suggested including the Jira software for agile project management.
Essentials of .NET Framework	Approved
Virtual Reality Systems	Approved
Game Design and Development	Approved Mr. Hari Prasad advised to look into the platform for game development.
Web Application Development using Django Framework	Approved
User Experience Design	Dr. P. Chitra and Dr. S. Sankari suggested to have few units for User Interface Design.

### Vertical III – Data Science

Name of the Course	Suggestions from BoS members
Computer Vision and Image Processing	<ul style="list-style-type: none"> <li>• Dr. P. Chitra suggested listing the laboratory exercises in detail.</li> <li>• The BoS members also advised to relook the course title in combining Computer Vision and Image Processing.</li> <li>• The Head of the department explained that the course is theory cum laboratory and both concepts are required for the students to excel in this field.</li> </ul>
Big Data Analytics	Approved
Machine Learning and Deep Learning Techniques	Approved.
Natural Language Processing	Approved.
Recommender Systems	Approved.
Intelligent Optimization Techniques	Dr. P. Chitra advised to check for the coherence of the subject in this domain.
Data Visualization Techniques	Approved

### Minor Degree – Department Level Courses

Name of the Course	Suggestions from BoS members
Fundamentals of Data Structures	Syllabus has been discussed in the CSE BoS for approval.
Database Essentials	
Java Basics	The syllabus is approved by the BoS members but they suggested to change the name of the subject.
Introduction to Data Science	Syllabus has been discussed in the CSE BoS for approval.
Artificial Intelligence and Machine Learning	
Cloud Computing and its Applications	Approved

- Dr. Rajeswari suggested including Operating System and Computer Networks in minor degree (department level).

### Minor Degree – Institution Level Courses

Name of the Course	Suggestions from BoS members
Management Information System	Approved
Introduction to Business Analytics	Approved
Bigdata Analytics for Business	Approved
Machine Learning for Business Analytics	Approved
Data Visualization	Approved
Marketing Analytics	Approved

**006.04.02 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Introduction to Internet of Things Prof. Sudip Misra   IIT Kharagpur   12 Weeks	Internet of Things: Principles and Paradigm
Blockchain and its Application Prof. Sandip Chakraborty, Prof. Shamik Sural   IIT Kharagpur   12 Weeks	Blockchain Technologies and its Applications
Computer Vision Prof. Jayanta Mukhopadhyay   IIT Kharagpur   12 Weeks	Computer Vision and Image Processing
Natural Language Processing Prof. Pawan Goyal   IIT Kharagpur   12 Weeks	Natural Language Processing

- Head of the Department presented the NPTEL courses and its equivalent professional elective courses.
- Dr. S. Sankari advised to check the relevance of the courses.



**006.04.03 : Tentative final year curriculum of R2021****Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>							
1	Human Values And Professional Ethics	HS	2	2	0	0	2
2	Management Elective	HS	3	3	0	0	3
3	Open Elective II*	OE	3	3	0	0	3
4	Open Elective III*	OE	3	3	0	0	3
5	Open Elective IV*	OE	3	3	0	0	3
<b>PRACTICAL</b>							
6	Summer Internship / Project Development	EEC	0	0	0	0	1
<b>TOTAL</b>				<b>14</b>	<b>0</b>	<b>0</b>	<b>15</b>

**SEMESTER VIII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICALS</b>							
1	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>

**OPEN ELECTIVES II****(Offered to departments except CSE, AIDS, IT and ECE)**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	Augmented Reality and Virtual Reality	OE	3	3	0	0	3

**OPEN ELECTIVES III**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	Computer Security	OE	3	3	0	0	3

**OPEN ELECTIVES IV**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
1	Web Design Basics	OE	3	3	0	0	3

- The BoS members suggested having practical hours to do the project in semester VII.
- BoS members approved the curriculum of R2021 IV year.
- Dr. S. Sankari advised to have few more subjects for open elective and list down the courses as Open elective not in specific as open elective III or open elective IV.

#### **006.05.00 : ITEMS FOR RATIFICATION**

##### **006.05.01 : Changes or corrections in the existing curriculum of R2020 and R2021**

- The existing curriculum of R2020 and R2021 has been approved by the BoS members.

##### **006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

- The NPTEL exam results of the academic year 2022-2023 ODD were discussed.
- The Head of the Department Dr. E.Vakaimalar, presented that the 100% pass was obtained in Principles of Management and Software Testing.
- The Joy of Computing course has 93% and two students have failed in the course.
- She also recorded that both the students can register the same course again to complete it.
- The BoS members approved the action plan.

##### **006.05.03 : Value Added Courses**

- The Head of the department reported that 59 students of II IT had undergone the value added course on “Web Application Development using JSP and Web Services” from 05.01.2023 to 10.01.2023.

#### **006.06.00: Information about the (Points Discussed in the following)**

<b>Item No.</b>	<b>Description</b>	<b>Suggestions / Comments from the BoS Members</b>
006.06.01	Anna University New Amendment (Honours / Honours in same	The HOD presented the new amendment given by Anna University.

	discipline / Minor)	<ul style="list-style-type: none"> <li>➤ B.Tech. (Honours) in the same discipline</li> <li>➤ B.Tech. (Honours)</li> <li>➤ B.Tech. Minor in other specialization</li> <li>➤ 1 credit for Heritage of Tamils and Tamils and Technology</li> </ul>
006.06.02	Pass Percentage of students	<p>The HoD presented the Pass percentage yearwise and course wise.</p> <p>BoS members appreciated the progress of the student.</p>
006.06.03	Value Added Courses offered/Planned for the academic year: 2023 - 2024	<p>The HoD Presented the Value added course offered during the academic year 2022-2023.</p> <p>The value added course for the next academic year will be mailed and will get the consent from the BoS members through mail.</p>
006.06.04	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	<p>The HoD shared the statistical data of the student internship / Inplant training details for R2020 &amp; R2021.</p> <ul style="list-style-type: none"> <li>➤ 35 students of III year IT attended the internship during the academic year 2022-2023 ODD.</li> </ul>


#### 006.07.00 : Any other Item

- Dr. S. Sankari suggested having courses with tutorials.
- She also advised naming the theory cum laboratory course as laboratory. For example, Cryptography with Laboratory.
- The BoS members suggested having two internal examination and one model examination for theory cum laboratory courses. The end semester examination for the course can be based on the decision of the course instructor.
- The BoS members guided us to have on course outcome at K3 level for the possible courses.
- They insisted not to have two different course outcomes for theory cum laboratory course.
- Dr. S. Sankari advised to have free hours for students to improve their skill through additional courses or project.

**006.08.00 : Vote of Thanks**

- The meeting ended with the Vote of Thanks by Ms. P. Kaviya, Assistant Professor, Department of Information Technology, Kamaraj College of Engineering and Technology, Virudhunagar.

  
BoS Coordinators  
(Dr. R. Arthy & Ms. P. Kaviya)

  
BoS Chairman  
(Dr.E.Vakaimalar)  
HoD/IT



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

S.P.G.Chidambara Nadar - C.Nagamal Campus  
S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

## Department of Electrical and Electronics Engineering

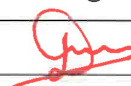

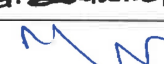
### Sixth BoS Meeting Minutes

Date : 11.03.2023  
Time : 10.00 am  
Venue : PSS lab, EEE Department

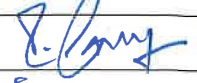
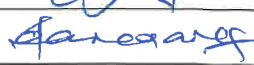

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr.K.Selvi	Professor, EEE Thiagarajar College of Engineering, Madurai.	Anna University Nominee
2	Dr.S.Senthil Kumar	Associate Professor, EEE National Institute of Technology, Tiruchirappalli.	Academic Council Nominee
3	Dr.S.Albert Alexander	Associate Professor, School of Electrical Engineering, Department of Energy and Power Electronics, VIT, Vellore.	Academic Council Nominee
4	Mr.S.Sivakumar	Project Manager, M/S Green Solar Technology, Madurai.	Industrial Expert
5	Ms.S.Swathika	Associate Engineer, Randstad Technology, Caterpillar India Private Limited, Chennai	Alumni

### Internal faculty Members of BoS

S.No	Name of the Faculty	Designation	Signature
1.	Dr.D.Prince Winston	Professor & HoD/EEE	
2.	Dr.S.Kalyani	Professor	-
3.	Dr.M .Sudalaimani	Associate Professor	-
4.	Dr. B. Guru Karthik Babu	Assistant Professor	
5.	Dr. G.Sakthivel	Assistant Professor	G. Sakthivel.
6.	Dr.D.Mariappan	Assistant Professor	



7.	Mr. R.Ganesan	Assistant Professor	
8.	Mr. K.Ganesan	Assistant Professor	
9.	Mr. S.Jegan	Assistant Professor	
10.	Mr.T.Hari Prasath	Assistant Professor	—

#### 006.01.00 : Welcome address by HoD

- The HoD gave the warm welcome to all the external and Internal members of the 6<sup>th</sup> BoS meeting

#### 006.02.00 : Introduction of BoS members and new Academic Council Nominee

- The HoD introduced the external BoS Members and internal faculty members in the meeting.

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
அறிவியல் தமிழ் / Scientific Thoughts in Tamil	Dr. Sishaj P Simon enquired about the course code for this course. Dr.D.Prince Winston said that it would be decided later.	Course code for all the courses were allotted by Dean Academic and CoE office.
	Dr. K. Selvi enquired about the faculty members to handle this course. Dr.D.Prince Winston said that the training has been given to faculty members to handle this course.	The course scientific tamil is handled by one of our faculty members
Transmission and Distribution	Dr. Sishaj P Simon asked about the course name Transmission and Distribution and suggested to have “Transmission and Distribution of Electrical Energy”. Dr.D.Prince Winston said that it would be considered.	No changes were made in the title of the course.
Courses in Verticals	Dr. S. Jeevanantham enquired about the different verticals. He asked whether these verticals are common for Professional electives, Honors and Minors degree. Dr.D.Prince Winston said that it is common for Professional electives, Honors and Minors degree apart from the separate institutional level vertical for minor degree.	The different verticals have been framed for Honours and minor degree in emerging Technologies.

Dr. K. Selvi asked about the credits allotted for all the courses listed in the verticals. She also enquired about the courses for Honors degree.	All the courses in the verticals are 3 credit courses.
Dr. S. Jeevanantham suggested to include basic core courses of Electrical Engineering in the minor verticals and much care should be given as this is offered for the other programme students. Dr.D. Prince Winston said that it would be considered.	In minor degree vertical, basic courses were included.
Dr. S. Jeevanantham suggested to include two more rows and include courses addressing the design aspects, so that the students opting for honours degree can be justified. Dr.D. Prince Winston said that it would be considered.	In each vertical 7 courses are considered including design related courses as per the directions from Dean Academic office.
Dr. S. Jeevanantham suggested to swap the courses Design of Electrical Machines and Multilevel Power Converter. Dr.D. Prince Winston said that it will be modified.	The courses were swapped as recommended.
Dr. S. Jeevanantham enquired about the department target (students count) for registering in Honors and Minors degree. Dr.D. Prince Winston explained that it is >7.5 CGPA up to 4 <sup>th</sup> Semester.	The students those who secure $\geq 7.5$ CGPA up to 3 <sup>rd</sup> semester are eligible to register for Honors and Minors degree. However for Honours degree No history of arrears is mandatory
Dr. S. Jeevanantham suggested to lower the CGPA threshold for the minor degree and can be started from 4 <sup>th</sup> semester onwards. Dr.D. Prince Winston said that it would be considered.	CGPA threshold is fixed at $\geq 7.5$ CGPA as per the recommendation from academic council.
Dr. Sishaj P Simon and Dr. K. Selvi suggested to have separate verticals for circuit and non-circuit branches including basic core courses also and can be separately given to choose Electrical as Minor degree. Dr.D. Prince Winston said that it would be considered.	As per the common protocol given by the Dean Academics office a separate vertical is offered for minor degree, which includes basic courses related to EEE.

	Dr. K. Selvi enquired about from which batch this curriculum is going to be adopted. Dr.D. Prince Winston said that it is adopted from 2021 batch onwards.	Students who have been admitted from AY 2021-22 onwards follow the regulation R2021..
DC Machines and Transformers	Dr. K. Selvi enquired about Unit 2 & 3 title and suggested to rework. Also she suggested to swap unit 4 & 5. Dr.S.Kalyani said that it would be considered.	The modifications was done and the syllabus was updated
Linear Integrated Circuit	Dr. Sishaj P Simon enquired about the knowledge level of the COs. Dr.S.Kalyani said that it will be updated.	The knowledge levels were updated.
Digital Logic circuits	Dr. Sishaj P Simon suggested to rework on the COS and knowledge level. Dr.S.Kalyani said that it will be updated.	The CO statements and knowledge levels were updated.
	Dr. K. Selvi enquired about the norms for fixing knowledge level for a particular course. Also suggested to use the recent edition in the text and reference books. Dr.S.Kalyani said that there is no hard and fast rule to decide. Based on the nature of the course it will be decided.	The knowledge level were fixed based on the nature of the course (Theory, Problem oriented practical, Project)
Power System Analysis	Dr. Sishaj P Simon, suggested to include recent edition in text and reference books. Dr.S.Kalyani said that it will be updated.	The textbooks were updated with recent edition for all the courses.
	Dr. K. Selvi enquired about the activities in the syllabus. Dr.S.Kalyani explained that it is the kind of activities that the students have undergo for the particular courses.	The activities that the students have to undergo for the particular courses for better understanding.
Control System	Dr. Sishaj P Simon enquired about the textbooks and suggested to rework. Dr.S.Kalyani said that it will be updated.	The textbooks were updated with recent edition for all the courses.
DC Machines and Transformers Laboratory	Dr. K. Selvi suggested to swap load test an OC, SC test on transformers. Study experiments can be done separately. Also suggested to modify the order of experiments. Dr.S.Kalyani said that it will be updated.	The modifications have been carried out in the syllabus as suggested.



Linear and Digital intergrade circuits Laboratory	Dr. Sishaj P Simon suggested to rework on the COs and Knowledge level. Dr.S.Kalyani said that it will be updated.	The CO statements and Knowledge levels have been updated accordingly.
Control and Instrumentation laboratory	Dr. K. Selvi suggested splitting the experiment in the instrumentation part. Dr.S.Kalyani said that it will be updated.	The experiments related to instrumentation part were separated as suggested.

- The Members of 6<sup>th</sup> BoS meeting approved the previous meeting minutes and the action taken report.

#### **06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL**

- Dr.B.Gurukarthik Babu, Dr.G.Sakthivel and Dr.D.Mariappan presented the curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by department of Electrical and Electronics Engineering.

#### **006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

General Comments given by the experts

- The sequence of courses in all the domains need to be checked for prerequisite.
- Activities mentioned in the syllabus should be properly recorded for all the courses during TLP..
- The contents of the syllabus can be minimized for all courses.
- The number of text books for each course can be fixed and it should be a standard one.
- Curriculum of State Universities, reputed institutions can be referred as they are having syllabus based on industry expectations.
- The CO statement has to be in accordance with the knowledge level for all the courses.

### V Semester

Name of the Course	Suggestions from BoS members
AC Machines	Dr. K.Selvi suggested that, Minimum K3 level for CO statements to be used. The contents are too many in all the units. Need to be redefined. Dr. S. Senthil Kumar Suggested that, the text book has to be changed. Need to consider text book by PC Sen, Stephan Chappman and fitzgerald
Protection and Switchgear	Dr. S. Albert Alexander suggested that, CO statement has to be changed according to the knowledge level. Dr. K.Selvi suggested that, three stepped protection has to be changed as Three stepped 'distance' protection. Unit 5: ELCB need to be included Dr. S. Senthil Kumar Suggested that, SS Rao and B Ram can be swapped between text and reference books. NIT Trichy syllabus can be referred for updates.
Microprocessors and Microcontrollers	Dr. K.Selvi suggested that, CO4 should be at K3 level CO5 need to redefined based on the knowledge level. Suggested to have atleast one or two CO statements at K3 level for all the courses. Dr. S. Senthil Kumar Suggested that, text book 1 should be checked for latest edition
Microprocessors and Microcontrollers Laboratory	Dr. K.Selvi suggested that, Enquired about the availability of Arduino boards in the laboratory.
AC Machines Laboratory	Dr. S. Senthil Kumar Suggested that, ASA method need to be removed in Regulation of Alternator.

### VI Semester

Name of the Course	Suggestions from BoS members
Power Electronics	Dr. S. Albert Alexander suggested that, preamble need to be maximum of two lines for all the courses. Remove Power or mention Power Diode Power Electronic Devices should be mentioned in proper order Dr. S. Albert Alexander and Dr. S. Senthil Kumar suggested that, It should be specified only as Applications wherever relevant. Specific topics in application can be avoided. Dr. S. Albert Alexander suggested that, Unit 2: Firing scheme need to be removed as it is already there in Unit 1. Unit 3: The contents are too many. Need to be refined. Unit 4: Space vector modulation need to be removed.



	Dr. S. Senthil Kumar suggested that, Ned Mohan should be added in Text book, PS Bhimbira should be moved to reference book. For all courses NPTEL/Swayam course link can be added as reference
Power System Operation and Control	Dr.K.Selvi and Dr. S. Senthil Kumar suggested that, Unit 4: The contents are too many. Need to be minimized. Dr. S. Senthil Kumar suggested that, Text book 2: can be moved to reference book. In text and reference books, recent editions need to be included
Power Electronics Laboratory	Dr.K.Selvi suggested that, Any one device can be mentioned in Ex: 2, 3. Ex: 4, 10, 12 can be combined as one experiment
Power System Simulation Laboratory	Dr.K.Selvi suggested that, Ex: 10 can be removed

### Vertical 1 (Renewable Energy)

The course of similar kind can be grouped and the courses like Power Plant Engineering, High Voltage Engineering can be reworked.

Name of the Course	Suggestions from BoS members
Power Plant Engineering	Dr. S. Senthil Kumar suggested that, the content repetition can be checked with the 2nd semester physics for non-conventional sources Dr. S. Albert Alexander suggested that, Unit 4: RES need to be rearranged in a sequence. Mr.S.Sivakumar suggested that, Tariff can be given based on the consumers.
High Voltage Engineering	Dr. S. Albert Alexander suggested that, the course can be removed from this vertical and moved to appropriate vertical.
Utilization and Conservation of Electrical Energy	Dr. K.Selvi suggested that, knowledge level need to be checked for all Cos. Unit 5: Cable sizing can be included. Ms.S.Swathika suggested that, Lighting arresters can be included.
Wind Energy conversion System	Dr. S. Senthil Kumar suggested that,
Power Electronics for Renewable Energy Systems	Dr. S. Albert Alexander suggested that, the syllabus has to be modified focusing on converter types and design for various RES. Such as Unit 2: PE for solar Unit 3: PE for Wind Dr. K.Selvi suggested that, MPPT can be included as a separate unit. Mr.S.Sivakumar suggested that, solar tracking system can to be included.

Solar and Energy Storage Technology	Dr. S. Senthil Kumar suggested that, the syllabus need to be redefined Topic should not be repeated with the other courses
Design and Modelling of Renewable Energy Systems	Dr. S. Albert Alexander suggested that, syllabus should be modified as Design, Installation and commissioning of Renewable Energy Systems.

### Vertical 2 (Converters and Drives)

The course of similar kind can be grouped and the title can be E-mobility

Advance courses in Control systems can be included

Name of the Course	Suggestions from BoS members
Special Electrical Machines	Expert members approved the syllabus
Multilevel Power Converter	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, the course can be removed as it is a higher level course for UG students.
Solid State Drives	Dr.S.Senthil Kumar suggested that,Unit 3 slip power recovery drives can be changed as Slip power recovery schemes, Unit 4: Applications need to be mentioned specifically.
SMPS and UPS	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, the course can be removed
Modern Power Converters	Dr. S. Albert Alexander suggested that,Suggested to change this course as 'PWM techniques'
Digital Signal Processing	Dr.K.Selvi and Dr.S.Senthil Kumar suggested that,No need to mention the classification type of all the signals and systems. The contents are too many. Need to be refined. Standard text book has to be included.
Analysis of Electrical Machines	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, contents of this syllabus is of PG level. The course DEM can be included instead of this course.

### Vertical 3 (Smart Grid)

Name of the Course	Suggestions from BoS members
Distributed Generation and Microgrid	Expert members approved the syllabus
Smart Grid	Expert members approved the syllabus
Soft Computing Techniques	Expert members approved the syllabus
Power Quality	Expert members approved the syllabus
Hybrid Electric Vehicle	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, this course can be moved to Vertical-2

Electric Vehicles and Energy Management	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, this course can be moved to Vertical-2
Design of Electrical Vehicle Charging System	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, this course can be moved to Vertical-2 The contents are theory only. The parameters of design concepts have to be included. Dr. S. Sivakumar suggested that, calculation related to battery charging and discharging can be included

### Minor – Vertical

The name of the Minor vertical can be Power and Energy

Minimum prerequisite courses, unique courses in the benefit of the students, It should not be conventional one.

Name of the Course	Suggestions from BoS members
Electric Circuits	Dr.K.Selvi and Dr.S.Senthil Kumar suggested that, Unit 1: Method of analysis can be removed. Unit 2: The order of the theorem can be modified. Unit3: 'their' can be removed Unit5: Can be reworked The syllabus can be given in lighter way. Need to be reworked. This course can be removed
Electrical Machines	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, Auto transformer can be removed. Special electrical machines. This course can be removed
Green Energy Technologies	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, the syllabus has to can be reworked
Power Converters and Applications	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, the syllabus has to be reworked or This course can be removed
Semiconductor Devices and Applications	Dr. S. Albert Alexander and Dr.S.Senthil Kumar suggested that, the syllabus has to be reworked or This course can be removed
Sensors and Instrumentation	Dr.K.Selvi suggested that, the syllabus has to be reworked or minimizd

### 006.04.02 : Common courses in the verticals across other departments

Name of the Course	Common to	Suggestions from BoS members
Nil		



**006.04.03 : List of Open Elective 1 courses offered**

Name of the Course	Offered to	Suggestions from BoS members
Renewable Energy Sources	All Department	Syllabus Approved
Industrial Safety Management	All Department	Syllabus Approved

**006.04.04 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

- HoD presented the list of NPTEL courses which will be offered to the UG students who are opting for Honours / Minor degree. He also explained that the courses offered by the NPTEL/Swayam can be considered as equivalence for the additional courses in vertical for honours/minors degree, subject to the approval of the three member committee.

**006.04.05 : Tentative final year curriculum of R2021****Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTAC T PERIODS	L	T	P	C
<b>THEORY</b>							
1	Renewable Energy Systems	PC	3	3	0	0	3
2	Human Values and Professional Ethics	HS	2	2	0	0	2
3	Elective - Management	HS	3	3	0	0	3
4	Open Elective II	OE	4	2	0	2	3
5	Open Elective III	OE	3	3	0	0	3
6	Open Elective IV	OE	3	3	0	0	3
<b>PRACTICAL</b>							
7	Renewable Energy Systems Laboratory	PC	4	0	0	4	2
8	Mini Project / Internship	EEC	4	0	0	4	2
<b>TOTAL</b>			<b>26</b>	<b>16</b>	<b>0</b>	<b>10</b>	<b>21</b>

### Semester VIII

S.NO.	COURSE TITLE	CATE GORY	CON TAC T PERIODS	L	T	P	C
<b>PRACTICAL</b>							
7	Project Work / Internship	EEC	20	0	0	20	10
<b>TOTAL</b>			20	0	0	20	10

➤ The members approved the tentative courses in the 7th and 8th Semester

#### 006.05.00 : ITEMS FOR RATIFICATION

006.05.01 : Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
EM2201 - Practical Course on Electronic Product Development – R2021	EM2201 - Practical Course on Electronic Product Development – R2021
Contact Period: 3 LTPC – 0 1 2 2	Contact Period: 2 LTPC – 0 0 2 1

**Suggestions:** The word “product” cannot be justified. The course title can be given as Electrical Workshop and the above said credit can be taken in to account.

**Action Taken:** As the course code and name is already registered in the CoE office, no modification in the course name can be done presently. However, the suggestions for revising course name can be considered in future regulation. Currently, the LTPC has been changed as mentioned above.

**006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

Course Id	Course Name	Duration	Offered by	Course Instructor
noc22-hs76	Soft Skills	12 weeks	IITR	Prof.Binod Mishra



The student pass percentage: 75 %. The students those who have not successfully completed the above NPTEL course, have to register for some other courses offered by NPTEL and have to earn the specified credits in order to become eligible for the award of B.E. degree.

**006.05.03 : Value Added Courses offered if any**

S.No.	Course Name	Duration	Offered Company	Year
1	IoT and machine learning	6 days [04.01.2023 to 11.01.2023]	Quantanics Techserv Pvt. Ltd., Madurai	II
2	Machine Learning and Artificial Intelligence	6 days [01.09.2022 to 07.09.2022]	Quantanics Techserv Pvt. Ltd., Madurai	III

- The members appreciated that the recent technologies were taught through value added course.

**006.05.04 : Curriculum feedback and action taken if any**

- The recent technologies and the concepts were included in the syllabi based on the curriculum feedback received from the students.

**006.06.00: Information about the department**

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	HoD presented the new amendment given by Anna University
006.06.02	Pass Percentage of students	HoD presented the Pass percentage yearwise and course wise
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	HoD presented the Value added course planned for the academic year:
006.06.04	NBA eSAR / status and information	HoD happily shared the eSAR of Department is submitted on

006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	HoD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021
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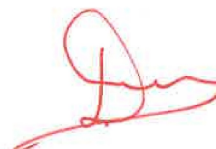
**006.07.00 : Any other Item**

**006.08.00 : Vote of Thanks**

- The meeting ended with the Vote of Thanks by K. Ganesan, Assistant Professor, Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.



**BoS Coordinator  
K. GANESAN**



**BoS Chairman  
Dr. D. Prince Winston  
HoD / EEE**

## Department of Bioechnology

### Sixth BoS Meeting Minutes

Date : 10-03-2023












Time : 10.00 AM

Venue : Bioinformatics Laboratory, Dept of Biotechnology, KCET

Link (hybrid mode) : -

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr. S. Venkatesan	Professor & Head, Department of Petrochemical Technology, Bharathidasan Institute of Technology (BIT) Campus, Tiruchirappalli- 620 024	Anna University Nominee
2	Dr. P. Suresh Kumar	Professor & Head, Department Of Biotechnology, University College Of Engineering, Bharathidasan Institute Of Technology Campus, Tiruchirappalli	Academic Council Nominee
3	Dr. R. Balakrishnaraja	Associate Professor and Head, Department Of Biotechnology, Bannari Amman Institute of Technology, Sathyamangalam	Academic Council Nominee
4	Mr. S. Seshan	Management Representative, The Peninsular Exports Company, Virudhunagar	Industrial Expert
5	Dr. Ilanila I.P.	Assistant Professor, School of Biotechnology, National Institute of Technology Calicut, Kerala	Alumni

Internal faculty Members of BoS			
S.No	Name of the Faculty	Designation	Signature
1	Dr. R. Shyam Kumar	Professor and Head	
2	Dr. R. Baskaran	Associate Professor	
3	Dr. K. Geetha	Associate Professor	
4	Dr. S. Karthikumar	Associate Professor	
5	Mr. S. Manibalan	Assistant Professor	
6	Dr. A. Ronaldo Anuf	Assistant Professor	
7	Dr. D. Pradiba	Assistant Professor	
8	Er. R. Amuthalakshmi	Assistant Professor	
9	Er. K. Chitradevi	Assistant Professor	
10	Er. Karl Joseph Samuel	Assistant Professor	
11	Er. A. Ganga	Assistant Professor	

#### 006.01.00 : Welcome address by HoD

- Dr R Shyam Kumar, Prof and Head, Dept. of BT delivered the welcome address.

#### 006.02.00 : Introduction of BoS members and new Academic Council Nominee

- Dr R Shyam Kumar, Prof and Head, Dept. of BT introduced the members of BoS to each other and to the staff members of the department.

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
1.	Summer Internship - students can visit any industry/ institute/ other educational organization/ research centre/ entrepreneurship activity	The proposed suggestion was accepted and included

2.	Project work may include Industry oriented Project/ Internship and the rubrics need to be framed for evaluating the same	Institute level Committee framed for monitoring and evaluating Project/ Internships
3.	Provision of the list of equivalent NPTEL courses for the subjects in the verticals	“Three-member committee” – will provide equivalent courses for NPTEL Exam.
4.	Scope for practical classes/ site visit in theory courses.	Activities are planned along with the syllabus
5.	“Fluid Mechanics and Heat transfer operations” is too heavy for a biotechnology student and few parts in the syllabus may be removed	Unit 5 – Radiation topic - removed and replaced by Evaporators concepts.

- All the BoS members approved the minutes of the 5<sup>th</sup> BoS meeting

#### **06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL**

- The HoD presented the curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals offered by the Department of Biotechnology and the minutes are as follows

#### **006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

##### **V Semester**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Bioinformatics	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee enquired whether Laboratory component is included for Bioinformatics.</li> <li>➤ Dr. A. Ronaldo Anuf, BoS Coordinator informed that a Bioinformatics lab course is included in the Seventh semester.</li> </ul>
Genetic Engineering	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee, asked if Gene tagging topic is present in the syllabus</li> <li>➤ Dr. K. Geetha, Subject expert said that Gene tagging is a hidden topic which will be covered while handling Unit-5 Concepts.</li> <li>➤ He also suggested to include updated text, reference books and e – book links in the syllabus</li> </ul>

Mass Transfer Operation	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to include recent book editions in text and reference books.</li> <li>➤ Dr. S. Venkatesan, Anna Univeristy Nominee suggested latest version of Separation process principles by Seader and Henry for this course</li> </ul>
Enzyme Engineering Laboratory	<ul style="list-style-type: none"> <li>➤ Dr. I.P. Ilanila enquired whether the syllabus is overlapping with any other laboratory courses</li> <li>➤ Dr. A. Ronaldo Anuf, BoS Co Ordinator explained that care has been taken to design the courses in such a way that there is no overlapping of topics between different courses.</li> <li>➤ Dr. S. Venkatesan, Anna Univeristy Nominee enquired whether the syllabus was aligned with the infrastructure available in the department and the BoS cordinator answered it positively.</li> <li>➤ All the members of the board accepted the syllabus without any modification</li> </ul>
Molecular Biology and Genetic Engineering Laboratory	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee enquired whether it is possible to conduct isolation of genomic DNA from Plant, animal and Microbial sources in the given time.</li> <li>➤ Dr. K. Geetha, Subject Expert explained that all the three experiments will be performed and also that this has successfully been done in the past. All the members accepted the same</li> <li>➤ He also suggested to include updated text, reference books and e – book links in the syllabus.</li> </ul>

#### VI Semester

Name of the Course	Suggestions from BoS members
<b>Immunology</b>	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification and also appreciated that the text books and reference books suggested were good.</li> </ul>
<b>Bioprocess Engineering Principles</b>	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to change the title of Second unit.</li> <li>➤ Dr. Balakrishnaraja, Academic Council Nominee suggested to include the topic “Media design and optimization simulation using MATLAB” in the syllabus. He also insisted to reframe the title of second unit.</li> </ul>
<b>Immunology Laboratory</b>	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification.</li> <li>➤ Members enquired the availabilty of animal handling facility in the department. The subject</li> </ul>



	Expert informed the committee that animal handling experiments are performed as demonstration experiments using videos.
<b>Bioprocess Laboratory</b>	<ul style="list-style-type: none"> <li>➤ Dr. R. Balakrishnaraja, Academic Council nominee suggested to include advanced methods of K<sub>La</sub> determination in the syllabus.</li> <li>➤ He also suggested to include Simulation studies using MATLAB in the course.</li> </ul>

### Vertical I – Industrial Biotechnology

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Unit Operations	<ul style="list-style-type: none"> <li>➤ Dr. S. Venkatesan, Anna University Nominee asked to remove this paper and instead include Intellectual Property Rights course.</li> </ul>
Applied Chemical Reaction Engineering	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification.</li> <li>➤ Dr. S. Venkatesan, Anna University Nominee enquired whether the syllabus covers both homogenous and heterogeneous system.</li> <li>➤ The subject expert explained that both the systems were included in the course.</li> </ul>
Bioreactor Design and Scale up process	<ul style="list-style-type: none"> <li>➤ Dr. P. Suresh Kumar, Academic Council Nominee pointed out that the topic OUR/OTR has been already repeated in the Bioprocess Engineering principles paper.</li> <li>➤ Dr. S. Venkatesan, Anna University Nominee justified the above statement and told that it is acceptable to include in this syllabus, as the basics needs to be brushed up.</li> </ul>
Bioanalytical Techniques and Instrumentation	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification</li> </ul>
Nanobiotechnology	<ul style="list-style-type: none"> <li>➤ Dr. I. P. Ilanila pointed out that there is repetition in the microscopy topic.</li> <li>➤ Er. A. Ganga explained that both the topics are unique in the respective papers and the justification was accepted by the experts.</li> </ul>
Algal Technology	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification</li> </ul>
Environmental Biotechnology	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification</li> </ul>

### Vertical II – Food and Agrosiences

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
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Plant Tissue Culture and Transformation Techniques	➤ All the members of the board accepted the syllabus without any modification
Post Harvest Technology	➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to change the course title. ➤ The suggestion was accepted by the subject expert
Agricultural Waste management	➤ All the members of the board accepted the syllabus without any modification
Food Process Engineering	➤ All the members of the board accepted the syllabus without any modification
Principles of Food Preservation	➤ All the members of the board accepted the syllabus without any modification
Food Quality Testing and Evaluation	➤ All the members of the board accepted the syllabus without any modification
Food Safety Laws and Regulation	➤ Mr. S. Seshan, Industrial Expert suggested to include International Regulatory affairs, regulations such as USFDA in the syllabus.

### Vertical III – Medical Biotechnology

Name of the Course	Suggestions from BoS members
Neurobiology and Cognitive Sciences	➤ All the members of the board accepted the syllabus without any modification
Animal Biotechnology	➤ All the members of the board accepted the syllabus without any modification
Tissue Engineering	➤ All the members of the board accepted the syllabus without any modification
Clinical Trials and Health Care Policies in Biotechnology	➤ All the members of the board accepted the syllabus without any modification
Biopharmaceuticals and Biosimilars	➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to update the current syllabus with reference to Anna University syllabus ➤ The subject expert accepted the same.
Cancer Biology	➤ All the members of the board accepted the syllabus without any modification
Lifestyle Diseases	➤ All the members of the board accepted the syllabus without any modification

### Vertical IV – Computational Biotechnology

Name of the Course	Suggestions from BoS members
Protein Structure, Function and Engineering	➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to change the course title.
Metabolic Engineering	➤ All the members of the board accepted the syllabus without any modification
Genomics and Proteomics	➤ All the members of the board accepted the syllabus without any modification

Computer Aided Drug Design	➤ All the members of the board accepted the syllabus without any modification
Data Mining and Machine Learning Techniques for Bioinformatics	➤ All the members of the board accepted the syllabus without any modification
Molecular Modelling	➤ All the members of the board accepted the syllabus without any modification
Programming for Bioinformatics Applications	➤ Dr. P. Suresh Kumar, Academic Council Nominee suggested to change the course title. ➤ The Subject Expert explained that the course covers three different programming tools in Bioinformatics Applications and hence the same title can be retained. ➤ The members of the Board accepted the same.

**006.04.02 :** The HOD informed that the Department is not presently offering Common courses in the verticals across other departments. The members enquired about the interest of the students in these courses. The Head of the Department explained that there is lack of prerequisite to biotechnology based courses among the other engineering branch students and therefore they might find the courses difficult.

**006.04.03 : List of Open Elective 1 courses offered**

Name of the Course	Offered to	Suggestions from BoS members
Basics of Bioinformatics	CSE, IT, AI, ECE	All the Bos Members Consented – no changes suggested

**006.04.04 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

**List out the NPTEL Course Name corresponding to its equivalent Professional elective course**

NPTEL COURSE	Equivalent Professional elective course
Chemical Reaction Engineering I	Applied Chemical Reaction Engineering
Animal Biotechnology	Animal Biotechnology
Environmental Biotechnology	Environmental Biotechnology
Fundamentals of Food Process Engineering	Food Process Engineering

Post Harvest Operations and Processing of Fruits, Vegetables, Spices and Plantation Crop Products	Post Harvest Technology
Novel Technologies for Food Processing and Shelf Life Extension	Principles of Food Preservation
Computer Aided Drug Design	Computer Aided Drug Design

#### 006.04.05 : Tentative final year curriculum of R2021

##### Semester VII

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>							
1	Downstream Processing	PC	3	3	0	0	3
2	Human Values and Professional Ethics	HS	2	2	0	0	2
3	Management Elective	HS	3	3	0	0	3
4	Open Elective – II*	OE	3	3	0	0	3
5	Open Elective – III*	OE	3	3	0	0	3
6	Open Elective – IV*	OE	3	3	0	0	3
<b>PRACTICAL</b>							
7	Downstream Processing Laboratory	PC	4	0	0	4	2
8	Computational Biology Laboratory	PC	3	0	0	3	1
9	Summer Internship II	EM	0	0	0	0	1
<b>TOTAL</b>				17	0	7	21

\*Course from the Curriculum of other UG programmes.

##### Semester VIII

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICAL</b>							
1	Project Work	EM	20	0	0	20	10
<b>TOTAL</b>				0	0	20	10

- Mr. S. Seshan, Industrial Expert enquired whether the Biotechnology related management electives are offered by the department.
- The BoS coordinator explained that a separate management elective course is being offered at the institution level during Semester VII

#### 006.05.00 : ITEMS FOR RATIFICATION

**006.05.01 : Changes or corrections in the existing curriculum of R2020 and R2021**

<b>Existing</b>	<b>Corrections required and specify the reasons</b>
<u>Course Code &amp; Name &amp; Regulation</u>	Nil
<u>Course Code &amp; Name &amp; Regulation</u>	Nil
<u>Credit Adjustment</u>	Nil
<u>Course Code &amp; Name &amp; Regulation</u>	Nil

**006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

- The Head of the department presented the results of NPTEL examination performed in the previous semesters and all the BoS experts appreciated the results.
- Dr Venkatesan, Anna University Nominee suggested that the students who have failed should be given another chance to repeat the same NPTEL course again.
- The HoD explained the procedure followed by KCET COE (Controller of Examinations) to the members and the experts accepted it.

**006.05.03 : Value Added Courses offered if any**

- Mr. S. Seshan enquired about the Management related value added courses (GLP, GMP) offered by the department and he also suggested to include the such courses as it would improve the job oppurtunities
- All the BoS members accepted his suggestion without any concern.
- The BoS co - ordinator sought the ratification of the Value added course on Clinical trials and Pharmacovigilance and all the BoS experts accepted the content without any concern.
- Dr. R. Balakrishnaraja, Academic council nominee suggested to change the title of the Computer Aided Drug Designing (CADD) course and also suggested that the course is not apt for R2021 as it is already included in the curriculum

- Dr.S.Venkatesan, Anna University Nominee suggested to include the VAC as a part of the curriculum itself. All the BoS experts accepted his suggestion and they also suggested to offer the VAC as lab cum theory courses in future.
- Dr.S.Venkatesan, Anna University Nominee also suggested to introduce VAC as skill development programs for people in near by villages, as this could fetch them employment opportunities

006.05.04 : Curriculum feedback and action taken if any

- HoD presented the feedback which was accepted by all the members.

**006.06.00: Information about the (Points Discussed in the following)**

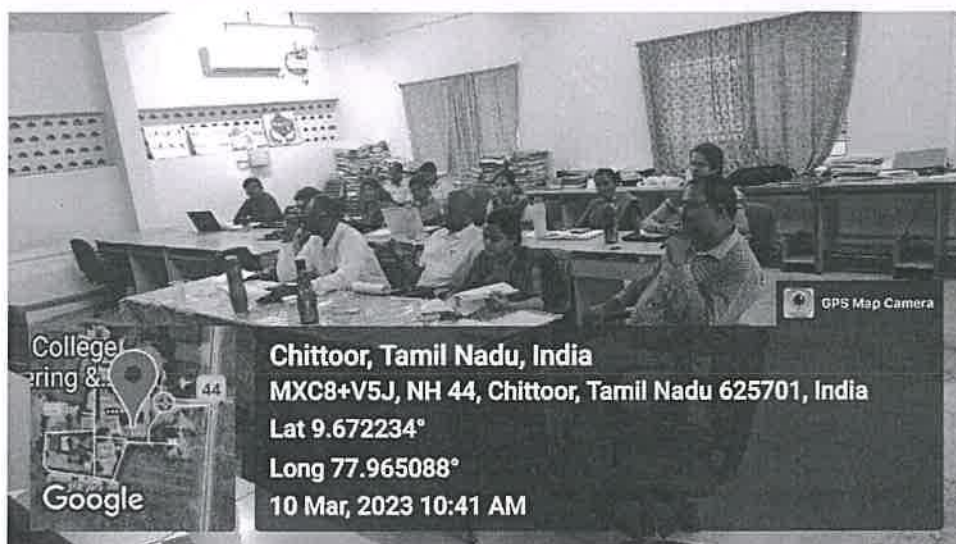
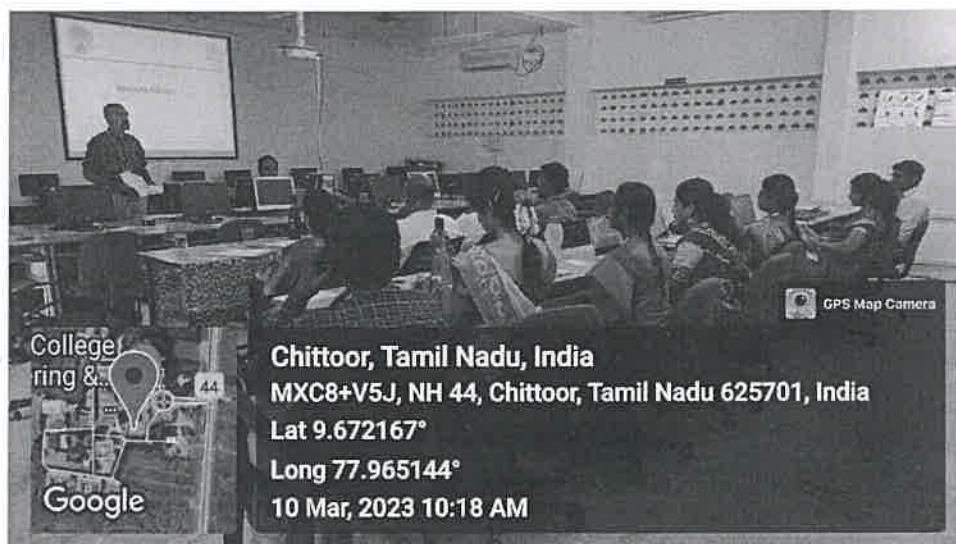
Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	The HOD Presented the new amendment given by Anna University to the BoS experts.
006.06.02	Pass Percentage of students	The HOD Presented the Pass percentage yearwise and course wise & all the BoS Experts appreciated the results.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	The HOD Presented the Value-added course planned for the academic year and the suggestions given by the BoS experts were minuted in 006.05.03
006.06.04	NBA eSAR / status and information	The HOD shared the eSAR of Department is submitted on 22/12/2022
006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	The HOD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021 to the experts and all the BoS experts appreciated it.

**006.07.00 : Any other Item**

- Dr. P. Suresh Kumar, Academic Council Nominee enquired whether Tamil courses were included in the syllabus and is there any credit for this course.
- The HOD informed that currently no credits are given for the Tamils' and Heritage course and it is included in the 3 and 4<sup>th</sup> semesters



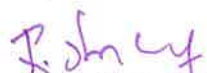
- BoS Coordinator informed about the latest amendments to include the above course in the 1<sup>st</sup> and 2<sup>nd</sup> semester. The courses are provided with one credit
- The HoD presented the achievements of students in extracurricular and cocurricular events. The members appreciated the achievements and encouraged for more participations in future.



#### 006.08.00 : Vote of Thanks

- The meeting ended with the Vote of Thanks proposed by Dr.A.Ronaldo Anuf, Assistant Professor, Department of Biotechnology, Kamaraj College of Engineering and Technology, Virudhunagar.

  
**BoS Coordinator**  
**(Dr.A.Ronaldo Anuf)**

  
**BoS Chairman**  
**(Dr.R.Shyam Kumar)**  
**HoD / BT.**

**Department of Mechanical Engineering**

**Sixth BoS Meeting Minutes**

Date : 11.03.2023


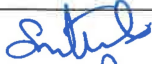
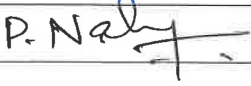
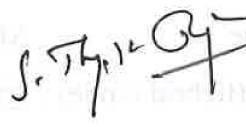



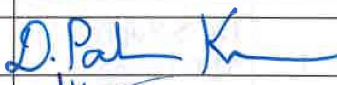


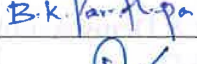



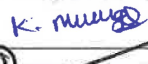


Time : 10.00 am to 1.00 pm

Venue : Mechanical CAD Lab

Link (hybrid mode) : <https://tinyurl.com/yckvxyy8>

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr. S.Supriya, M.E.(Engg. Design),MISTE,Ph.D.	Professor (CAS) & Head of the Department, Government College of Engineering Tirunelveli – Tamilnadu	Anna University Nominee
2	Dr.S.Denis Ashok, M.E., Ph.D.	Professor Higher Academic Grade, Design & Automation Department, School of Mechanical Engineering, Vellore Institute of Technology, Vellore – 632014.	Academic Council Nominee
3	Dr. V.Anandakrishnan, M.E., Ph.D.	Professor , Production Engineering, National Institute of Technology, Tiruchirapalli	Academic Council Nominee
4	Mr.N.Vijayakumar, M.E	Deputy General Manager, Mahindra Research Valley, Mahindra & Mahindra, Chennai	Industrial Expert
5	Mr.P.Maniraj, M.E	Software Engineer, Altair Engineering India Pvt Ltd., Chennai	Alumni

Internal faculty Members of BoS			
S. No	Name of the Faculty	Designation	Signature
1	Dr. S. S. Saravanakumar	Associate Professor & Head / MECH – Convener	
2	Dr.S.Senthil	Professor & Principal (i/c) / Mech	
3	Dr. P. Narayanasamy	Associate Professor / MECH	
4	Dr.S.Thangakasirajan	Associate Dean Academics & Assistant Professor / MECH UG Programme Coordinator	
5	Dr.B.Prabhu	Assistant Professor / MECH	
6	Dr. M. Prithiviraj	Assistant Professor / MECH	
7	Dr. B. Balavairavan	Assistant Professor / MECH BoS Coordinator	
8	Mr. D. Palani Kumar	Assistant Professor / MECH	
9	Mr. N. R. Madhan	Assistant Professor / MECH	
10	Mr.R.Sakthivelmurugan	Assistant Professor / MECH	
11	Mr. B. K. Parrthipan	Assistant Professor / MECH	
12	Mr. S. Devaraj	Assistant Professor / MECH	
13	Mr. T. Suresh	Assistant Professor / MECH	
14	Mr. A. Sankara Narayana Murthy	Assistant Professor / MECH	
15	Mr. K. Murugananthan	Assistant Professor / MECH	
16	Mr. P. Senthamarai Kannan	Assistant Professor / MECH	
17	Mr. S. Muthu Natarajan	Assistant Professor / MECH	

#### 006.01.00 : Welcome address by HoD

- Dr.S.S.Saravanakumar, HOD (Department of Mechanical Engineering) welcomed all the expert members of the Board of studies and Faculty members of the Department of the Mechanical Engineering to the 6<sup>th</sup> BOS meeting.



#### **006.02.00 : Introduction of BoS members and new Academic Council Nominee**

- HOD/Mech recorded his appreciation to all the experts members of BoS for their suggestions and valuable inputs in framing the curriculum and syllabi. He expressed his special thanks to Dr. S.C. Vettivel, Ph.D., Associate Professor/Mechanical Engineering, Chandigarh College of Engineering and Technology, Chandigarh, Anna University Nominee for his unanimous support in framing the Mechanical Engineering curriculum and syllabi of KCET. His tenure was completed now. He also welcomed the new Academic council nominee Dr.S.Denis Ashok, M.E., Ph.D. Professor Higher Academic Grade, Design & Automation Department, Vellore Institute of Technology, Vellore. He also welcomed the Industrial expert Mr.N.Vijayakumar, Deputy GM, Mahindra & Mahindra, Chennai and alumni Mr.P.Maniraj, Software Engineer, Altair Engg. India Pvt Ltd, Chennai to the 6<sup>th</sup> BoS meeting.

#### **006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken**

- Dr.B.Balavairavan gave a brief presentation the minutes of the 5<sup>th</sup> BoS held on September 17, 2022 submitted for approval and action taken report. The following listed corrections are carried out in R2020 final year UG curriculum as per BoS members suggestions :

<b>Item No.</b>	<b>Suggestions of BoS Members in 5<sup>th</sup> BoS Meeting</b>	<b>Action Taken</b>
<b>BOS 005.05</b>	Dr.V.Anandakrishnan suggested to give the equal weightage for all units in terms of hour allocation and also CO4 to be modified for the subject Lean Manufacturing.	As per the suggestion, the Corrections were incorporated in the course ME1743 - Lean Manufacturing.
<b>BOS 005.05</b>	Dr.V.Anandakrishnan insisted to change the Unit IV title as Testing of Polymer Composite Materials instead of Testing of Composite Materials for the subject Composite Materials.	As per the suggestion, the Corrections were incorporated in the course ME1736 - Composite Materials.
<b>BOS 005.05</b>	Dr. S.C. Vettivel insisted to add the microwave assisted topic in Unit II for the subject Composite Materials	

<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to remove the word selection from Unit I for the subject Process planning and Cost estimation.	As per the suggestion, the Corrections were incorporated in the course ME1739 - Process Planning and Cost Estimation.
<b>BOS 005.05</b>	Dr. S.C. Vettivel insisted to change the Unit I title as Process planning methods instead of that Process planning methods and its activities for the subject Process planning and Cost estimation.	As per the suggestion, the Corrections were incorporated in the course ME1739 - Process Planning and Cost Estimation
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to rearrange the lab exercises and also one of the lab exercise name to be modified as Energy meter monitoring instead of that Energy meter monitoring for theft detection for the subject Automation and IoT laboratory	As per the suggestion, the Corrections were incorporated in the course ME 1711 - Automation & IOT Laboratory.
<b>BOS 005.05</b>	Er.K.Vijayabharathi insisted to include the SCADA study exercise in Automation and IoT lab	As per the suggestion, the Corrections were incorporated in the course ME 1711 - Automation & IOT Laboratory.
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested that Machine vision for robots topic to be included in Unit IV for the subject Robotics	As per the suggestion, the Corrections were incorporated in the course ME 1702 – Robotics.
<b>BOS 005.05</b>	Dr.A.Anandakrishnan insisted to follow the new edition textbook for the subject Concepts of Engineering Design	As per the suggestion, the Corrections were incorporated in the course ME 1731 - Concepts of Engineering Design.
<b>BOS 005.05</b>	Dr.A.Anandakrishnan insisted to modify the Unit V title as Development of IoT Solutions instead of that Introduction to IoT and Development with Arduino, Raspberry PI for the subject Mechatronics and IoT	As per the suggestion, the Corrections were incorporated in the course ME1732 - Mechatronics and IoT.



<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to reframe the contents of Unit V for the subject Mechatronics and IoT	As per the suggestion, the Corrections were incorporated in the course ME1732 - Mechatronics and IoT.
<b>BOS 005.05</b>	Er.K.Vijayabharathi insisted to include the ISO standard topics in Waste Management and Energy Recovery subject.	As per the suggestion, the Corrections were incorporated in the course ME1735 - Waste management and energy recovery.
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested that, in CO1 the word interpret to be modified as Demonstrate for the subject Technical Seminar	As per the suggestion, the Corrections were incorporated in the course ME 1721 - Technical Seminar.
<b>BOS 005.05</b>	Dr.A.Anandakrishnan and Er.Vijayabharathi suggested that, the topic start up to be included in Unit V for the subject Entrepreneurship Development	As per the suggestion, the Corrections were incorporated in the course ME1741 - Entrepreneurship Development
<b>BOS 005.05</b>	All BoS experts are suggested that, objectives should be written in bulletin format for the subjects Entrepreneurship Development.	As per the suggestion, the Corrections were incorporated in the course ME1741 - Entrepreneurship Development
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to modify the topic as Performance measures for various organizations instead of that performance measures Washington accord and Blooms taxonomy for the subject Total Quality Management.	As per the suggestion, the Corrections were incorporated in the course GE1671 - Total Quality Management
<b>BOS 005.05</b>	Er.K.Vijayabharathi insisted to modify the word as authorities instead of that agencies for the subject Total Quality Management.	
<b>BOS 005.05</b>	Er.K.Vijayabharathi suggested to modify the topics as Supply chain models and Stakeholder Management in Unit V instead of that Customer Relationship Management for the subject Supply Chain Management.	As per the suggestion, the Corrections were incorporated in the course ME1740 - Supply Chain Management

<b>BOS 005.05</b>	Er.K.Vijayabharathi suggested to modify the topics as Supply chain models and Stakeholder Management in Unit V instead of that Customer Relationship Management for the subject Supply Chain Management.	
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to modify the Unit V title as Case Studies instead of that Advances in Robotics in the Era of Industry 4.0 for the subject Introduction to Industry 4.0	As per the suggestion, the Corrections were incorporated in the course ME1742 - Introduction to Industry 4.0
<b>BOS 005.05</b>	Dr.A.Anandakrishnan insisted that, CO4 and Objective 3 to be modified for the subject 3D Printing and Design.	As per the suggestion, the Corrections were incorporated in the course OME761 - 3-D Printing and Design
<b>BOS 005.05</b>	Dr.A.Anandakrishnan suggested to give the equal weightage for all units in terms of hour allocation and also to split the Unit II as Two separate units for the subject 3D Printing and Design	The suggested modification carried out in OME761 - 3D Printing and Design Subject
<b>BOS 005.05</b>	Dr.A.Anandakrishnan insisted that, Unit V contents to be rearranged for the subject 3D Printing and Design.	

- All the corrections suggested by the members are carried out in the curriculum and syllabus of R2020 (Final year courses) and R2021 (II year).
- The members of the BoS resolved and approved the minutes of 5<sup>th</sup> BoS meeting.

#### **06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL**

- The BoS coordinator presented the III year UG Mechanical Engineering curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by Department of Mechanical Engineering.

**006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

<b>V Semester</b>	
<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Design of Machine Elements	Dr.S.Supriya suggested to reduce the credit for the course from 4 to 3. All the BoS members approved the syllabus contents.
Fluid Power Automation #	Dr.S.Denis Ashok insisted to add Introduction to PLC programming topic in Unit IV.
Metrology and Measurements #	All the BoS members approved the syllabus contents.
CAD and 3D Printing Laboratory	Mr.P.Maniraj insisted to include Introduction of CAD as the theory portions in CAD lab as first exercise. Dr.S.Denis Ashok insisted to change the CO. So that the theory portion of CAD should be covered.
IC Engine and Steam Laboratory	All the BoS members approved the syllabus contents.

**# Theory cum lab course**

**VI Semester**

Heat and Mass Transfer	Mr.P.Maniraj insisted that, the topic Heat transfer techniques in electronic circuits to be included.
Computer Aided Analysis and CNC laboratory	All the BoS members approved the syllabus contents.
Heat Transfer and R&AC Laboratory	Dr.V.Anandakrishnan insisted to modify the laboratory title as Heat transfer, Refrigeration and Air Conditioning Laboratory instead of that Heat Transfer and R&AC Laboratory.
Design Project and Prototyping	All the BoS members approved the syllabus contents.

**VERTICAL 1 - ADVANCED PRODUCT DESIGN**

- Er.N.R.Madhan AP/Mech presented all the courses in the vertical 1**

New Product Development	All the BoS members approved the syllabus contents.
Reverse Engineering	Dr.S.Denis Ashok insisted to rearrange the contents of Unit II.
Piping Design	All the BoS members approved the syllabus content and minimize the CAD concepts.
Drone Technology	Dr.S.Denis Ashok insisted that, the topics localization and Track optimizations to be included and also suggested that, to expand the Unit -V contents.
Design For X	Dr.S.Denis Ashok insisted to show the word quality as explicitly in Unit IV. Mr.P.Maniraj suggested to add the students presentation as one of the activities.



	Mr.N.Vijayakumar insisted to modify the course title as Introduction to Design for X.
CAD/CAE	Mr.P.Maniraj suggested to add the topic vectors in moving body in Unit I.
Product life Cycle Management	Dr.S.Denis Ashok insisted to modify the unit II title as PLM/PDM Functions and Attributes instead of PLM/PDM Functions and Features

## VERTICAL 2 - DIGITAL MANUFACTURING

- **Dr.P.Narayanasamy ASP/Mech presented all the courses in the vertical 2**

Modern Robotics	All the BoS members approved the syllabus contents.
Automation for Manufacturing	All the BoS members approved the syllabus contents.
Robots and Systems in smart Manufacturing	All the BoS members approved the syllabus contents.
Additive Manufacturing	All the BoS members approved the syllabus contents.
Digital Manufacturing and IoT	Dr.V.Anandakrishnan insisted that, the topics plant simulation, process simulation and product simulation to be included in either in Unit I or Unit V.
Industry 4.0 in Manufacturing	Dr.S.Denis Ashok insisted that, the topic communication protocols to be included.
Processing and characterization of Composite Materials	Mr.N.Vijayakumar insisted that, the topic sustainable manufacturing to be included.

## VERTICAL 3 - E-VEHICLES AND ENERGY SYSTEMS

- **Dr.B.Prabhu AP/Mech /Mech presented all the courses in the vertical 3**

Conventional and Electric vehicles	All the BoS members approved the syllabus contents.
Electric vehicle design	All the BoS members approved the syllabus contents.
Battery management system for Electric vehicles	Dr.V.Anandakrishnan is insisted to modify the topic as Battery Technology instead of that Advanced Batteries.
Thermal management of batteries and fuel cells	All the BoS members approved the syllabus contents.
Vehicle health monitoring, maintenance and safety	All the BoS members approved the syllabus contents.
Bioenergy conversion technologies	All the BoS members approved the syllabus contents.
Energy audit and Management	Mr.N.Vijayakumar suggested that, the topic Standards of auditing to be included.

## VERTICAL 4 - PROGRAMMING FOR MECHANICAL ENGINEERING APPLICATIONS

- **Mr.R.Sakthivelmurugan AP/Mech presented all the courses in the vertical 4**

Data structures and Algorithms	Dr. S.Supriya and Dr.S.Denis Ashok strongly expressed that prerequisite for this subject is missing in lower semester courses, so remove this paper and Include the IoT and Industry 4.0 concepts. Dr.V.Anandakrishnan is insisted that, The software R may be included.
Java for Engineers	Dr. S.Supriya suggested to check the difficulty level or otherwise try for different course. Dr.S.Denis Ashok suggested that, The course Computational fluid dynamics could be added instead of Java for Engineers.
Python for Mechanical Engineers#	Dr.S.Denis Ashok suggested that, activities part to be checked and modified
MATLAB for Mechanical Engineers#	Dr.S.Denis Ashok suggested that, the course title to be modified. He also insisted that do not give the name of the software tools as subject name. Mr.P.Maniraj insisted to include one exercise with respect to Newton Raphson Method.
Machine Learning for Engineers	All the BoS members approved the syllabus contents.
Programming for Robotics and CNC machines	Dr.S.Denis Ashok insisted to go through the Gazebo software for this course.
Arduino coding for Engineers	Dr.S.Denis Ashok suggested to change the course title as Embedded System Programming.

- All the BoS members insisted that vertical 4 may be offered under the title of emerging trends in mechanical engineering and syllabus content also need to be designed meticulously for mechanical engineering applications.
- Mr.R.Sakthivel Murugan resolved that the vertical name and courses in the vertical will be modified with due approval from Principal and same will be sent to all BoS member through Email for suggestions and approval.

## VERTICALS FOR MINOR DEGREE – OFFERED BY MECHANICAL ENGG DEPARTMENT 3D Printing

- **Dr.B.Balavairavan AP/Mech presented the subjects in the Minor Degree**

Introduction to Product Design	All the BoS members approved the syllabus contents.
3D Printing Technology	Dr.S.Denis Ashok suggested to change the course title as 3D Printing and Design.
Design for Additive Manufacturing	All the BoS members approved the syllabus contents.
Reverse Engineering	Dr.S.Denis Ashok insisted to change the contents of Unit II.



Business value enhancement with Additive Manufacturing	Dr.S.Denis Ashok insisted to check the usefulness of the course.
Standards, quality control and Inspection	Dr.S.Denis Ashok suggested to change the course title as standards and Quality attributes of 3D-Printing. Mr.P.Maniraj insisted that, the topic data format to be elaborated.

**VERTICALS FOR MINOR DEGREE – Institute level  
Entrepreneurship**

- **Mr.B.K.Parrthipan AP/Mech presented the subjects in the Minor Degree (Institute level)**

Foundations of Entrepreneurship	All the BoS members approved the syllabus contents.
Team Building & Leadership Management for Business	All the BoS members approved the syllabus contents.
Engineering Economics and Cost Analysis	All the BoS members approved the syllabus contents.
Creativity & Innovation in Entrepreneurship	All the BoS members approved the syllabus contents.
Principles of Marketing Management for Business	All the BoS members approved the syllabus contents.
Financial Markets and Services	Mr.P.Maniraj suggested to add the topics Block chain and Digital assets.

**006.04.02 : Common courses in the verticals across other departments**

Name of the Course	Common to	Suggestions from BoS members
Drone Technologies	Mechanical and MTR	Dr.S.Denis Ashok insisted that, the topics localization and Track optimizations to be included and also suggested to modify the CO5 contents.

**006.04.03 : List of Open Elective 1 courses offered**

Name of the Course	Offered to	Suggestions from BoS members
Creative Thinking	CSE/IT/ECE/EEE/BT/AD / CIVIL/PT	All the BoS members approved the syllabus contents.
World Class Manufacturing	CSE/IT/ECE/EEE/BT/AD / CIVIL/PT	Already approved syllabus in 5th BoS Meeting held on 17.09.2022
Industrial Safety	CSE/IT/ECE/EEE/BT/AD / CIVIL/PT	

**006.04.04 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Robotics: Basics and Selected Advanced Concepts	Modern Robotics
Programming In Java	Java for Engineers
Introduction to Industry 4.0 And Industrial Internet of Things	Industry 4.0
An Introduction to Artificial Intelligence	Artificial Intelligence for Mechanical Engineers
MATLAB Programming for Numerical Computation	MATLAB for Mechanical Engineers#
Introduction to Machine Learning	Machine Learning for Engineers
Data structures	Data structures and Algorithms

- The BoS members suggested to check the difficulty level of courses on students perspective.

**006.04.05 : Tentative final year curriculum of R2021**

**Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>							
1	Mechatronics and IoT	PC	3	3	0	0	3
2	Computer Integrated Manufacturing	PC	3	3	0	0	3
3	Total Quality Management	HS	3	3	0	0	3
4	Human values and professional ethics	HS	3	3	0	0	3
5	Open Elective 2	OE	3	3	0	0	3
6	Open Elective – 3	OE	3	3	0	0	3
	Open Elective - 4	OE	3	3	0	0	3
<b>PRACTICAL</b>							
7	Mechatronics and IoT Laboratory	PC	3	0	0	3	1
8	Summer internship	EM	0	0	0	0	1
<b>TOTAL</b>			24	21	0	3	23

**Semester VIII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICAL</b>							
1	Project work	EM	20	0	0	20	10
<b>Total</b>			20	0	0	20	10

- BoS members approved the proposed IV year R2021 Curriculum.

#### 006.05.00 : ITEMS FOR RATIFICATION

Dr.B.Balavairavan AP/Mech discussed about the list of items needed ratification from the BoS members.

006.05.01: Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required	Reason
<b>R2021</b>		
ME2252 - Manufacturing Technology- II	Swapping of Unit- II to Unit -III	Alignment mistake
ME2257 - Manufacturing Technology Laboratory	In equipment list Sheet Metal Forming Tools And Equipment is repeated two times - Repetition of equipment list need to be removed	Typographical error
ME2254 - Theory of Machines	<b>Activities mentioned in the existing syllabus</b>  Students shall be exposed to the different machine parts, starters and the drive in the college premises.  <b>The modified activities need to be ratified</b> Students can work in groups to design and build a simple mechanism using everyday materials like cardboard, string, and popsicle sticks. This activity can help students understand the principles of simple machines and how they can be used to make work easier.	Modified the activities conducted in the class.

- The BoS members ratified and approved the same



**006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

**List of Courses enrolled and pass % by Students – V semester**

Sl.No	Name of the NPTEL course	No of students enrolled	No of students passed	Pass %
1.	Engineering Metrology	32	25	78.12%
2.	Fundamentals of AI	15	5	33.33%
Total		47	30	63.82% (Student pass %)

**List of Courses enrolled by Students – VI semester**

Sl.No	Name of the NPTEL course	No of students enrolled
1.	Computer Integrated Manufacturing	17
2.	Non- Conventional Energy Resource	21

**Action taken for the students who did not receive certificate:**

The failure students advised to secure 6 credits from NPTEL courses before the completion of his 7<sup>th</sup> semester

The BoS members suggested to monitor continuously the student to clear NPTEL examination.

**006.05.03 : Value Added Courses offered if any**

Dr. B.Balavairavan informed to BoS members that the following value added courses offered for Mechanical Engineering students and the ratification needed to include the credits earned by students from value added courses as over and above credits.

Sl.No.	Name of the Course	Year	Offered by	Date	No of Students	No of hours
1	NX-CAD for Beginners	III/Mech	CoE- Manufacturing, NITT	23.08.2022 to 28.08.2022	48	46
2	CNC Coding with live Demo	II/Mech	CIPET, Madurai	04.01.2023 to 07.01.2023	20	23
3	IoT	II/Mech	Quantanics Techserv (P) Ltd, Madurai	04.01.2023 to 09.01.2023	23	20

All the BoS members ratified and approved the same.

**006.06.00: Information about the (Points Discussed in the following)**

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	Dr.S.Thangakasirajan, AP/Mech Presented the new amendment given by Anna University. He also insisted that the same is going to be implemented in KCET R2021 regulations.
006.06.02	Pass Percentage of students	Dr.B.Balavairavan, AP/Mech Presented the Pass percentage year wise and course wise. Bos members appreciated the same.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	Mr.N.R.Madhan, AP/Mech Presented the Value added course planned for the academic year 2022 - 2023. BoS members suggested some value added courses for next academic year: Labview, Computational fluid dynamics, Image processing and coding, Deep learning in Metallurgy, NX CAD, CATIA and Solidworks.



006.06.04	NBA eSAR / status and information	The BoS coordinator shared that the eSAR of Department of Mechanical Engineering is submitted successfully on 23.12.2022.
006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	<p>Dr.B.Balavairavan, AP/Mech shared the statistical data of the student internship/ Inplant training details for R2020 &amp; R2021.</p> <p>The BoS members appreciated the same and suggested to involve industry in partial delivery of lectures and create excellence centre in the department.</p>

**006.07.00 : Any other Item**

Nil

**006.08.00 : Vote of Thanks**

- The meeting ended with the Vote of Thanks by Dr. P.Narayanasamy, Associate Professor, Department of Mechanical Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

  
 BoS Coordinator  
 (Dr.B.Balavairavan)  
 AP / MECH

  
 BoS Chairman  
 (Dr.S.S.Saravanakumar)  
 HoD / MECH.



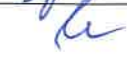
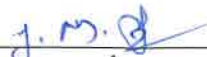
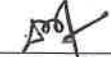



**Department of Civil Engineering**

**Sixth BoS Meeting Minutes**

Date : 11.03.2023  
Time : 11.00 am to 12.30 pm  
Venue : CADD Lab

S.No	Name of the Expert	Designation	Capacity
1	<b>Dr. S. Arul Mary</b>	Professor, Department of Civil Engineering, Thiagarajar College of Engineering, Madurai	Anna University Nominee
2	<b>Dr.K.Muthukumaran</b>	Professor, Department of Civil Engineering, National Institute of Technology, Tiruchirappalli	Academic Council Nominee
3	<b>Dr.C.Sivanesan,</b>	Professor & Head, Department of Civil Engineering, ACCET, Karaikudi	Academic Council Nominee
4	<b>Er.S.Viswanathan,</b>	Structural and Project Management Consultant, Viswanathan Associates, Madurai	Industrial Expert
5	<b>Er.J.Jeyapraveen,</b>	Proprietor, JPJ Construction, Madurai	Alumni

The following members were present:

Internal faculty Members of BoS			
S.No	Name of the Faculty	Designation	Signature
1.	Dr.R.Lakshmi	Professor and Head / CIVIL, Chairman of BoS – CIVIL	
2.	Dr N.Jegan Durai	Assistant Professor / CIVIL Department BoS Coordinator	
3.	Dr. S.P.Murali Kannan	Assistant Professor / CIVIL	
4.	Mr.P.Ponkarthikeyan (Ph.D.,)	Assistant Professor / CIVIL	
5.	Mr.D.Velumani (Ph.D.,)	Assistant Professor / CIVIL	
6.	Mr.M.Subahar (Ph.D.,)	Assistant Professor / CIVIL	
7.	Mr.K.Hariharan	Assistant Professor / CIVIL	
8.	Ms.B.S.Nivethitha	Assistant Professor / CIVIL	

#### 006.01.00 : Welcome address by HoD

- Dr.R.Lakshmi (Head of the Department) Department of Civil Engineering welcomed the gathering.

#### 006.02.00 : Introduction of BoS members and new Academic Council Nominee

- Dr.R.Lakshmi, gave brief introduction about the BoS members, new Academic Council Nominee and faculty members from the Department of Civil Engineering, and Briefed the programme agenda

#### 006.03.00 : Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
1.	Prefabricated structures to be included in the Structural Systems and Design verticals instead of Steel concrete composites.	Prefabricated Structures is included in Structures and Construction Practices Vertical
2.	Urban planning and Development & Smart cities – Courses and syllabus should be taken care about the similarities.	Smart Cities course alone included in Geo informatics and Transportation vertical
3.	Carbon rating to be included in Green building syllabus	It is Included in Energy Efficient Buildings subject.
4	Training programme on ArcGIS, QGIS to be planned	Training on Arc GIS software is included in the list of value added courses for the next academic year

- HOD/CIVIL gave a brief presentation about the review of the Minutes of the 5<sup>th</sup> BoS meeting. Recommendations of the committee and relevant implications were presented to the committee. 5<sup>th</sup> BoS recommendations were reviewed and accepted by the committee.

#### 06.04.00 : ITEMS FOR DISCUSSION AND APPROVAL

- The BoS Coordinator Dr.N.Jegan Durai, Presented the curriculum and syllabi of R2021 and listed the subjects of 5<sup>th</sup> and 6<sup>th</sup> semester courses including the verticals offered by department of Civil Engineering.

#### 006.04.01 : Proposed Curriculum and Syllabi for V and VI semester Verticals

##### V Semester

Name of the Course	Suggestions from BoS members
Design of Reinforced Concrete Structural Elements	Approved by the BOS members.
Geotechnical Engineering – II	Approved by the BOS members.
Structural Analysis	Recommended to include rolling loads in Structural analysis prior to the analysis of cable stayed bridges.
Environmental Engineering Laboratory	Approved by the BOS members.
Hydraulic Engineering Laboratory	Approved by the BOS members.
Summer Internship	Approved by the BOS members.

##### VI Semester

Name of the Course	Suggestions from BoS members
Design of Steel Structural Elements	<ul style="list-style-type: none"> <li>Dr.S.Arulmary shared information about the INSTAG materials which are freely available for student reference. Solved problems of that module can be used to train the students. <a href="http://www.steel-instag.org">www.steel-instag.org</a> and teaching resources has 45 chapters which can be included in reference.</li> <li>In reference section Standard welding code, connection code should be added.</li> </ul>
Highway and Railway Engineering	Approved by the BOS members.
Concrete and Highway Engineering Laboratory	Approved by the BOS members.
Structural Design and Detailing	<ul style="list-style-type: none"> <li>Committee suggested that Structural Design and</li> </ul>

<b>Laboratory</b>	<p>Details Lab to be shifted to 7th semester since along with design of steel structures theory course, students may feel difficult to study this lab practice during the same semester.</p> <ul style="list-style-type: none"> <li>• Design and detailing options using Staad Pro, AutoCAD, Excel sheets or Manually should be given as the practice and choice based on the experiment shall be appropriately used.</li> </ul>
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### Vertical 1: Structures and Construction Practices

Name of the Course	Suggestions from BoS members
<b>Construction Equipment and Machinery</b>	Approved by the BOS members.
<b>Construction Management with BIM Applications</b>	<ul style="list-style-type: none"> <li>• Committee suggested shifting of this course to vertical 4 replacing Project Management with BIM.</li> <li>• Include Seismic Design in Vertical 1 replacing BIM. Universal Name should be coined, so that it will be useful for students aspiring job in abroad.</li> <li>• Expert suggested to include Eigenvalues analysis to estimate natural frequency, mode shape, in Dynamics syllabus at least 2 DoF system.</li> </ul>
<b>Forensic Engineering</b>	<ul style="list-style-type: none"> <li>• Course Name should be renamed including retrofitting and rehabilitation.</li> <li>• Add more contents in repair rehabilitation and separate new topic for retrofitting.</li> </ul>
<b>Pipeline Engineering and Safety Management</b>	<ul style="list-style-type: none"> <li>• Committee suggested that topics on design of Fire fighting, fire safety &amp; MEP to be included in the syllabus.</li> </ul>
<b>Prefabricated Structures</b>	<ul style="list-style-type: none"> <li>• Committee suggested that code provision specifications in syllabus w.r.to code provision for Joints in 3<sup>rd</sup> unit and beam to column ratio. Design problem is not compulsory</li> </ul>
<b>Prestressed Concrete Structures</b>	Approved by the BOS members.
<b>Special Concrete Development and Application</b>	Approved by the BOS members.

### Vertical 2: Environmental and Water Resources Engineering

Name of the Course	Suggestions from BoS members
<b>Air pollution and control engineering</b>	Approved by the BOS members.
<b>Climatology for Built Environment</b>	Approved by the BOS members.
<b>Environmental Impact Assessment</b>	Approved by the BOS members.



<b>Ground Improvement Techniques</b>	Approved by the BOS members.
<b>Hydrology and Water resources Engineering</b>	Approved by the BOS members.
<b>Municipal Solid Waste Management</b>	Approved by the BOS members.

### **Vertical 3: Geoinformatics and Transportation**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
<b>Airport and Harbour Engineering</b>	Approved by the BOS members.
<b>Intelligent Transport Systems</b>	Approved by the BOS members.
<b>Remote Sensing and GIS Techniques</b>	<ul style="list-style-type: none"> <li>Remote sensing tools, free demo and IT application in the field to be discussed. Capacity building for such specialized courses by faculty members is suggested</li> </ul>
<b>Satellite Image Processing</b>	Approved by the BOS members.
<b>Smart Cities</b>	Approved by the BOS members.
<b>Total Station, GPS And Drone Surveying</b>	Approved by the BOS members.
<b>Traffic Engineering and Management</b>	<ul style="list-style-type: none"> <li>Include Introduction to ITS in 5<sup>th</sup> unit in Traffic Engineering. Remove Khanna and Jestu book.</li> <li>In the reference include Highway traffic analysis book SALTER &amp; HOUNSEL. Other text books are ok.</li> </ul>

### **Vertical 4: Computer Applications in Structures**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
<b>Building Information Modeling Techniques</b>	More than one software including REVIT Architecture to be added in the syllabus
<b>Computer Aided Structural Analysis</b>	Approved by the BOS members.
<b>Digitalized Construction Lab</b>	Approved by the BOS members.
<b>Energy Efficient Buildings</b>	Approved by the BOS members.
<b>Introduction to Finite Element Method</b>	Approved by the BOS members.
<b>Project Management with BIM</b>	Approved by the BOS members.
<b>Sensor Applications in Structural Health Monitoring</b>	Approved by the BOS members.

- Knowledge level to be improved to K3 level for selected topics of the professional elective courses.
- Faculty should train themselves and teach a simple problem both in conventional and using Tool.

**006.04.02 : List of Open Elective 1 courses offered**

Name of the Course	Offered to	Suggestions from BoS members
Biomass Conservation And Bio refinery	AI&DS, BT,CSE, ECE, EEE, IT, MECH, MTR	Approved by the BOS members.
Sustainable Construction		Approved by the BOS members.
Wastewater Treatment		Approved by the BOS members.

**006.04.03 : List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Development and Application of Special Concrete	Special Concrete Development and Application
Air Pollution and Control	Air Pollution and Control Engineering
Municipal Solid Waste Management	Municipal Solid Waste Management

- BOS Members accepted the list of NPTEL Courses (equivalence) offered for the students as alternative to professional elective/ Honours/Minor degree.

**006.04.04 : Tentative final year curriculum of R2021**

**Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTA T PERIODS	L	T	P	C
<b>THEORY</b>							
1	Irrigation Engineering	PC	3	3	0	0	3
2	Open Elective – 2	OE	3	3	0	0	3
3	Open Elective – 3	OE	3	3	0	0	3
4	Open Elective – 4	OE	3	3	0	0	3
5	Human values and professional ethics	HS	3	2	0	0	3
6	Management Courses	HS	3	3	0	0	3
<b>PRACTICAL</b>							
7	Estimation and Quantity surveying Lab	PC	2	0	0	2	1

8	Summer internship	EM	0	0	0	0	1
<b>TOTAL</b>				17	0	2	20

### Semester VIII

S.NO.	COURSE TITLE	CATE GORY	CONTAC T PERIODS	L	T	P	C
<b>PRACTICAL</b>							
1	Project work / Internship	PC	20	0	0	20	10

- BoS Coordinator presented R2021 final year tentative curriculum.
- Estimation and Quantity surveying Lab can be shifted to semester – VI and Rate analysis need to be included.
- One credit course can be included for understanding the concepts which was missing in the Professional core or Elective course.

### 006.05.00 : ITEMS FOR RATIFICATION

006.05.01 : Changes in the existing curriculum of R2021

Existing	Corrections required and specify the reasons
<u>Credit Adjustment</u>	
Tamil and Technologies, Credit – 0	Tamil and Technologies, Credit – 1
Heritage of Tamils, Credit – 0	Heritage of Tamils, Credit – 1

### 006.05.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates

- Third year Civil Engineering students have under gone Municipal Solid Waste Management Course during 2022 – 2023 (ODD), Out of 25 students, 2 students have secured Elite plus silver plus Topper, 5 students secured Elite, 8 students have successfully completed and 10 students have failed.
- 10 students those who have failed were registered for new course Air pollution and Control during 2022 – 2023 EVEN semester.

### 006.05.03 : Value Added Courses offered if any

- Based on the minutes of the previous BOS meeting conducted on 24.09.2022, Arc GIS Software course is included in the list of value added courses to be offered in the academic year 2023-24

#### 006.05.04 : Curriculum feedback and action taken if any

- The following feedback on curriculum and action taken report was presented by the BoS coordinator.

Feedback	Action taken
Alumni represented Need Experiential learning/Field Practices through Implant training or Internship	2 <sup>th</sup> week summer internship at the end of 4 <sup>th</sup> and 6 <sup>th</sup> semester is included in curriculum.
Employer represented students should be trained in Civil Engineering software	Few Professional elective courses and Value added Courses were designed with the Fundamental and application of Civil Engineering software.

#### 006.06.00: Information about the (Points Discussed in the following)


Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	The HOD Presented the new amendment given by Anna University
006.06.02	Pass Percentage of students	Pass percentage year wise and course wise was presented
006.06.03	Value Added Courses Planned for the academic year: 2023 – 2024	The details of Value added course planned for the academic year: <ul style="list-style-type: none"><li>• ArcGIS</li><li>• TEKLA Structure</li></ul>
006.06.04	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	The HOD shared the details of No. of student's undergone internship/ Inplant training.


#### 006.07.00 : Any other Item

- HOD/Civil shared the information about the Closure of PG Structural Engineering and shared the information about Final year students Placement details.

#### 006.08.00 : Vote of Thanks

- The meeting ended with the Vote of Thanks by Dr.R.Lakshmi, Professor and Head Department of Civil Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

  
BoS Coordinator  
(Dr.N.Jegan Durai)

  
BoS Chairman  
(Dr.R.Lakshmi)  
HoD / CIVIL

## Department of Mechatronics Engineering

### Sixth BoS Meeting Minutes



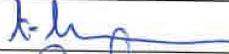



Date : 18-03-2023  
Time : 2.00 P.M – 4.00P.M  
Venue : SMC Lab  
Mode of Meeting : Physical- offline mode

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr. S. Supriya	Professor & Head, Department of Mechanical Engineering, Government College of Engineering College, Tirunelveli - 627007.	Anna University Nominee
2	Dr. N. Sivakumaran	Professor, Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli - 620015.	Academic Council Nominee
3	Dr. M. Suresh	Associate Professor, Department of Robotics and Automation Engineering, PSG College of Technology, Coimbatore – 641004.	Academic Council Nominee
4	Dr.R.Kesavamoorthy	Director, Meta Heuristic Corporate India Pvt. Ltd., ISRO Layout, Bangalore – 560078.	Industrial Expert



5	Mr. P. Rilwan Fayas	Senior Engineer & Team Lead Automotive Domain, TATA ELXSI, Tiruvanathapuram – 695581	Alumni
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Internal faculty Members of BoS			
S.No	Name of the Faculty	Designation	Signature
1.	Dr. K. Kannan, M.E., Ph.D.,	Professor & Head	
2.	Dr. S.Rajesh Babu M.E., Ph.D.,	Assistant Professor	
3.	Mr. A. Arul Kumar, M.E, (Ph.D.,)	Assistant Professor	
4.	Mr. P. Bala Sundar, M.E, (Ph.D.,)	Assistant Professor	
5.	Mr. S. David Blessley, M.E, (Ph.D.,)	Assistant Professor	
6.	Mr. A. Ganesan, M.E.,	Assistant Professor	

#### 006.01.00 :Welcome address by HoD

- Welcome address
- Dr.K.Kannan, Professor & HoD/MTRE gave welcome address to all the members of the Board of Studies.

#### 006.02.00 :Introduction of BoS members and new Academic Council Nominee

- BoS Members introduction
- Dr.K.Kannan, Professor & HoD/MTRE gave introduce the members of Board of Studies.

#### 006.03.00 :Approval of 5<sup>th</sup>BoSMeeting Minutes &Action taken

Item No.	Suggestions of BoS Members in 5 <sup>th</sup> BoS Meeting	Action Taken
BOS 005.02	BoS Members gave valuable suggestions in R2020 - IV Year curriculum and syllabus.	The Suggestions given by BoS Members were incorporated in the R2020 - IV Year curriculum and syllabus as per their recommendations.
BOS	The members advised the three members	As per the advice of BoS members

005.04	committee to choose the Value added courses as per Current trends and skills requirement for core industries.	the three members committee had chosen the Value Added Course on Robot Operating System (ROS) for II Year Students & Value Added Course on Internet of Things (IoT) for our III Year Students.
BOS 005.05	Dr.T.Asokan clarified about the faculty mentors for NPTEL Courses.	Mr.S.David Blessley, AP/MTRE has assigned us faculty mentor for the NPTEL Course on Engineering Metrology.
BOS 005.06	Modified Curriculum Framework R2021 – BoS Members asked our faculty members to take more concentration in framing the verticals and syllabus to Professional Elective Course Verticals.	The entire mechatronics curriculum is splitted in to different domains and domain incharges and subject wise subject experts were framed and framed the curriculum at most care.
	List of Open Elective papers offered by our department	All the members jointly approved the open elective courses to be offered.

- All the members appreciated our efforts taken towards implementing the suggestions given by the members.
- All the members jointly approved the Minutes of the Fifth Board of Studies meeting.

#### **06.04.00 :ITEMS FOR DISCUSSION AND APPROVAL**

- The HoD Dr.K.Kannan presented the curriculum and highlighted the important features of R2021.
- Members clarified about the honours degree and minor degree concepts.
- The HoD Dr.K.Kannan presented the syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by department of department of Mechatronics Engineering .

**006.04.01: Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

**V Semester**

Name of the Course	Suggestions from BoS members
Embedded Systems And Programming	<ul style="list-style-type: none"> <li>➤ Dr. N. Sivakumaran , Academic Council Nominee asked about the prerequisites for this subject in curriculum. Dr.K.Kannan clarified in IV Semester the Digital Electronics and Microprocessor course were included. Mmembers accepted it and appreciated for including industrial standard PIC Controller and RTOS Concepts.</li> <li>➤ Members jointly approved the syllabus and asked the subject experts to update the recent editions of text book.</li> </ul>
Kinematics And Dynamics Of Machinery	<ul style="list-style-type: none"> <li>➤ Dr. M. Suresh, Academic Council Nominee suggested that 9 hours is not sufficient to cover the Unit-II Kinematics Of Linkage And Cam Mechanisms. He also suggested to include tutorial hour if possible.</li> <li>➤ Dr. S. Supriya , Anna University Nominee suggested that the first unit Basics of Mechanisms will completed in 6 hours, hence for the Unit-II Kinematics Of Linkage And Cam Mechanisms 12 hours may be allotted.</li> <li>➤ The suggestions were accepted by all the members of the board and subject expert.</li> </ul>
Embedded Systems Laboratory	<ul style="list-style-type: none"> <li>➤ Dr. N. Sivakumaran , Academic Council Nominee, suggested list of experiments is high for one credit lab course. Also he suggested to update the text and reference books. Since the John B. Peatman, "Design with PIC Microcontrollers" Prentice Hall, 2003 is out of print.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Dr. S. Supriya , Anna University Nominee suggested to remove one inappropriate theory course in curriculum and asked to provide two credits for lab courses.</li> <li>➤ Mr. P. Rilwan Fayas, ALUMNI Nominee asked the board chairman to remove 8085 experiments.</li> <li>➤ He also suggested to focus on PIC or ARM controllers to meet the skills requirement of core industries.</li> </ul>
Theory Of Machines Laboratory	<ul style="list-style-type: none"> <li>➤ Dr.K.Kannan explained this lab course is common to mechanical and mechatronics engineering students. Dr. M. Suresh, Academic Council Nominee suggested that experiment with Cam &amp; Spring mass system is in Generic form.</li> <li>➤ He suggested to rename in specific like Calculate the jump speed etc..Dr.K.Kannan assured to member will convey this valuable point to mechanical board.</li> </ul>

#### VI Semester

Name of the Course	Suggestions from BoS members
Fluid Power Systems (Theory Cum Lab)	<ul style="list-style-type: none"> <li>➤ Dr. M. Suresh, Academic Council Nominee explained Hydraulics and Pneumatics Course is an hot core paper for our mechatronics engineering. He enquired the reason for merging these two courses.</li> <li>➤ The subject expert P.Balasundar explained the reasons for merging that all the members accepted it.</li> <li>➤ Dr. M. Suresh, Academic Council Nominee suggested to include modern trends like KV map method for pure mechatronics system in syllabus. Subject expert accepted it.</li> </ul>



	<p>➤ Dr. N. Sivakumaran , Academic Council</p> <p>Nominee asked the subject expert to rearrange the text book in such a manner Anthony Esposito and then Srinivasan.R as per our syllabus contents.</p>
Industrial Automation (Theory Cum Lab)	<p>➤ Dr. N. Sivakumaran , Academic Council</p> <p>Nominee suggested to include SCADA in syllabus.</p> <p>➤ Dr. M. Suresh, Academic Council Nominee suggested to reduce the Syllabus in Unit –IV Applications of PLC, Since the 6 hours is not sufficient.</p> <p>➤ Dr. N. Sivakumaran , Academic Council</p> <p>Nominee suggested to remove the Unit –V Overview of Intelligent Controls and asked to include SCADA and Communication Topologies since it is an hot area in industrial automation. The Subject expert accepted it.</p>
Robotics And Machine Vision System	<p>➤ Dr. N. Sivakumaran , Academic Council</p> <p>Nominee suggested to revise the syllabus as three units for robotics and two units for Machine vision system.</p> <p>➤ He also suggested to remove Selection Of Robots and Applications from Unit-IV and asked to include machine vision system. The subject expert accepted it.</p>
Computer Aided Design And Manufacturing Laboratory	<p>➤ Dr. M. Suresh, Academic Council Nominee enquired whether the syllabus has the provision for CNC Lathe interface.</p> <p>➤ Mr.S.David Blessley subject expert explained that the experiments will be performed and also that this has successfully done in the past with CNC Lathe interface infrastructure available in mechanical department. All the members accepted the same.</p>

	<ul style="list-style-type: none"> <li>➤ He also suggested to rename the experiments as follows. NC code generation for milling using any CAM package &amp; Machining</li> <li>NC code generation for turning using any CAM package &amp; Machining</li> <li>➤ Subject expert accepted it.</li> </ul>
Robotics And Machine Vision System Laboratory	<ul style="list-style-type: none"> <li>➤ Members enquired about the software packages available in our lab premises.</li> <li>➤ Dr.K.Kannan explained about the available softwares. Members suggested to use ADAMS Software for Robot Dynamics experiments.</li> <li>➤ Mr. P. Rilwan Fayas, ALUMNI Nominee enquired about the controllers availability for Machine Vision experiments. Also he suggested to focus on ATMEL controllers to meet the skills requirement of core industries.</li> <li>➤ Dr.K.Kannan, explained that we are having an training kits offered by RobotoAI Technologies, a start up company in PSG College of Engineering for Machine Vision system .All the members accepted it.</li> </ul>

### PROFESSIONAL ELECTIVE

#### VERTICAL 1 : ROBOTICS

Name of the Course	Suggestions from BoS members
Design of Robot Elements	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus and suggested to include Selection of Robots topic in syllabus.</li> </ul>
Robot Operating Systems	<ul style="list-style-type: none"> <li>➤ All the members of the board accepted the syllabus without any modification and also appreciated that the text books and reference books suggested were good.</li> </ul>

Autonomous Mobile Robots	➤ All the members of the board accepted the syllabus without any modification.
Collaborative Robotics	➤ All the members of the board accepted the syllabus without any modification.
Medical Robotics	➤ All the members of the board accepted the syllabus without any modification.
Humanoid Robotics	➤ All the members of the board accepted the syllabus without any modification.
Micro Robotics	➤ All the members of the board accepted the syllabus without any modification.

**PROFESSIONAL ELECTIVE**  
**VERTICAL 2 : AUTOMATION**

Name of the Course	Suggestions from BoS members
Total Integrated Automation	<ul style="list-style-type: none"> <li>➤ Dr. N. Sivakumaran , Academic Council Nominee suggested to revise the syllabus as below.</li> <li>➤ He Suggested to include Piping and Instrumentation concepts in this subject by removing Supervisory Control And Data Acquisition (SCADA) and Communication Protocols Of SCADA.</li> <li>➤ Since SCADA and Communication Protocols are need to be included in professional core course industrial automation.</li> </ul>
Digital Twin and Industry 5.0	➤ All the members of the board accepted the syllabus without any modification.
Virtual Instrumentation	➤ All the members of the board accepted the syllabus without any modification.
Industrial Networks Protocol	➤ Mr. P. Rilwan Fayas, ALUMNI Nominee suggested to include Over to Air (OTA) topic in syllabus. Subject expert accepted it and assured

	will include in wireless protocols unit.
Advanced Manufacturing	➤ Dr. M. Suresh, Academic Council Nominee suggested to include the topic maintenance and trouble shooting of CNC Machine. Subject expert accepted it.
Farm Automation	➤ All the members of the board accepted the syllabus without any modification.
Computer Aided Inspection and Testing	➤ All the members of the board accepted the syllabus without any modification.

### PROFESSIONAL ELECTIVE

#### VERTICAL 3: SMART MOBILITY SYSTEMS

Name of the Course	Suggestions from BoS members
Automobile Engineering	➤ All the members of the board accepted the syllabus without any modification.
Electric and Hybrid Vehicles	➤ All the members of the board accepted the syllabus without any modification.
Automotive Mechatronics	➤ Mr. P. Rilwan Fayas, ALUMNI Nominee and suggested to include Multicore ECU topic in syllabus before the AUTOSAR Concepts. Subject expert accepted it.
Avionics	➤ Mr. P. Rilwan Fayas, ALUMNI Nominee suggested to include DO Standards topic in syllabus. Subject expert accepted it.
Drone Technologies	➤ HoD Dr.K.Kannan, informed this is the common course offered to Mechatronics and Mechanical Engineering Students. All the members of the board accepted the syllabus without any modification.
Design of UAV Systems	➤ All the members of the board accepted the syllabus without any modification.
Intelligent Transportation Systems	➤ HoD Dr.K.Kannan, informed this is the common

	course offered to Mechatronics and Civil Engineering Students. All the members of the board accepted the syllabus without any modification.
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### MINOR DEGREE (Department Level)

#### VERTICALS: EMBEDDED SYSTEMS AND ROBOTICS

- The HoD informed that the department of Mechatronics engineering is offering minor degree in embedded systems and robotics and he also presented its verticals courses, syllabus.
- The members suggested for robotics part mechanics and dynamics and kinematics pre requisite is needed. So members asked to provide this prerequisite if circuit branch students chose this as an minor degree. Board chairman accepted it.

Name of the Course	Suggestions from BoS members
Embedded System Design for Robotics	➤ All the members of the board accepted the syllabus without any modification.
Arduino Programming	➤ All the members of the board accepted the syllabus without any modification.
Raspberrypi Programming	➤ All the members of the board accepted the syllabus without any modification.
Industrial Robotics	➤ All the members of the board accepted the syllabus without any modification.
Service and Field Robotics	➤ All the members of the board accepted the syllabus without any modification.
Robot Programming Using ROS	➤ All the members of the board accepted the syllabus without any modification.

- The HoD presented the Institutional Level minor degree offered to our mechatronics students and he also presented its verticals courses. He explained these minor degree and its verticals and syllabus were presented in the offering department BoS Meeting .



**MINOR DEGREE (Institutional Level)**

**VERTICAL 1 : Fintech and Block Chain**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Financial Management	➤ Nil
Fundamentals of Investment	➤ Nil
Banking, Financial Services and Insurance	➤ Nil
Introduction to Block chain and its Applications	➤ Nil
Fintech Personal Finance and Payments	➤ Nil
Introduction to Fintech	➤ Nil

**MINOR DEGREE (Institutional Level)**

**VERTICAL II : Entrepreneurship**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Foundations of Entrepreneurship	➤ Nil
Team Building & Leadership Management for Business	➤ Nil
Creativity & Innovation in Entrepreneurship	➤ Nil
Principles of Marketing Management for Business	➤ Nil
Human Resource Management for Entrepreneurs	➤ Nil
Financing New Business Ventures	➤ Nil

**MINOR DEGREE (Institutional Level)**

**VERTICAL III : Business Data Analytics**

<b>Name of the Course</b>	<b>Suggestions from BoS members</b>
Statistics for Management	➤ Nil
Data Mining for Business Intelligence	➤ Nil

Human Resource Analytics	➤ Nil
Marketing and Social Media Web Analytics	➤ Nil
Operation and Supply Chain Analytics	➤ Nil
Financial Analytics	➤ Nil

#### 006.04.02 :Common courses in the verticals across other departments

The HoD informed that the Department of Mechatronics Engineering is offering common courses in the verticals across other departments. The common courses are listed below

Name of the Course	Common to	Suggestions from BoS members
Drone Technologies	MTRE & MECH	➤ All the members of the board accepted the syllabus without any modification.

#### 006.04.03 :List of Open Elective courses offered

Name of the Course	Offered to	Suggestions from BoS members
Foundation of Robotics	CSE, ECE, EEE, IT, AI&DS	➤ All the members of the board accepted the syllabus without any modification.
Introduction to PLC Programming	CSE, ECE, EEE, IT, AI&DS	➤ Dr.S.Supriya, Anna University Nominee asked to revise the Course outcomes statements as per blooms level . Since able to able repeated. Subject expert accepted it.
Low Cost Automation	CSE, ECE, EEE, IT, AI&DS	➤ In unit V the term various vibratory is genric. Need to include specifically like linear and bowl feeder. Subject expert accepted it.
Sensors and Actuators	CSE, ECE, EEE, IT, AI&DS	➤ All the members of the board accepted the syllabus without any modification.

#### 006.04.04 :List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses

- Dr.K.Kannan, Listed out the NPTEL Course Name corresponding to its equivalent Professional elective course.

NPTEL COURSE	Equivalent Professional elective course
Wheeled Mobile Robots	Autonomous Mobile Robots

**006.04.05 :Tentative final year curriculum of R2021**

**Semester VII**

S.NO.	COURSE TITLE	CATE GORY	CONTA C T P E R I O D S	L	T	P	C
<b>THEORY</b>							
1	Design of Mechatronics System	PCC	3	3	0	0	3
2	Human values and Professional Ethics	HSMC	2	2	0	0	2
3	Management courses	HSMC	3	3	0	0	3
4	Open Elective – II*	OEC	3	3	0	0	3
5	Open Elective – III*	OEC	3	3	0	0	3
6	Open Elective – IV*	OEC	3	3	0	0	3
<b>PRACTICAL</b>							
7	Mini Project	EEC	3	0	0	3	1
<b>TOTAL</b>				<b>17</b>	<b>0</b>	<b>3</b>	<b>18</b>

➤ \*Course from the curriculum of other UG Programmes.

**Semester VIII**

S.NO.	COURSE TITLE	CATE GORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICAL</b>							
7	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>

➤ Dr.K.Kannan explained about that Management elective Course is being offered at the institutional level during semester VII.

**006.05.00 :ITEMS FOR RATIFICATION**

006.05.01 :Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
Course Code & Name & Regulation	➤ Nil

Course Code & Name & Regulation	➤ Nil
Credit Adjustment	➤ Due to the introduction of this Tamil Courses in Curriculum in R2021 first semester credits is 23 and second semester credits is 24. Members appreciated for including the tamil courses in curriculum as this courses provide an insight into the rich culture, heritage of the state and engineering techniques that were practices in Tamilnadu. Due to that total credits is changed as 166 to 168.
Course Code & Name & Regulation	➤ Nil

**006.05.02 :NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates**

- The Head of the Department Dr.K.Kannan presented the Performance of our students in NPTEL Exams all the BoS members appreciated our students performance in NPTEL.
- Members suggested that the students who have failed should be given another chance to repeat the same NPTEL course again.
- Dr.K.Kannan explained the procedure followed by KCET controller of Examination and the students having their current Semester exam & NPTEL exam on the same date, since the failed students are instructed to complete the course in the next semester and all the BoS members accepted it.

**06.05.03 Value Added Courses offered if any**

- In BoS 005.04 the BoS members advised the three members committee to choose the Value added courses as per current trends and skills requirement for core industries. As per that the three member committee chosen and offered

VAC on Internet of Things (IoT) for third year and Value Added Course on Robot Operating System (ROS) for II year. The BoS members accepted it without any concern.

- The members discussed about Value Added Course to be offered in future. The members suggested to offer Value added course in the field of Machine Learning/Deep Learning, as this could fetch them job opportunities.

**06.05.04 :Curriculum feedback and action taken if any**

- Dr.K.Kannan presented the curriculum feedback summary collected from various stakeholders which was accepted by all the BoS members.

**006.06.00:Information about the (Points Discussed in the following)**

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	➤ The HOD Presented the new amendment given by Anna University to the BOS Members.
006.06.02	Pass Percentage of students	➤ The HOD Presented the Pass percentage year wise and course wise. The members appreciated the IV Year and III Year Results. The members suggested to concentrate in II Year Results especially III Semester Results.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	➤ The HOD Presented the Value added course offered/ planned for the academic year and the members suggestions were noted in 006.05.03.
006.06.04	NBA eSAR / status and information	➤ The HOD happily shared the NBA Accreditation status of the department for three years from AY 2021-2022 to AY 2023-2024. The members appreciated the efforts taken towards the successful implementation of outcome based education.
006.06.05	Student Internship details (between	➤ The HOD shared the statistical data of



	5 <sup>th</sup> and 6 <sup>th</sup> meeting)	<p>the student internship/ Inplant training details for R2020 &amp; R2021 and all the BoS Members appreciated it.</p> <p>Industrialist Member</p> <p>Dr.R.Kesavamoorthy enquired about the evaluation process. Dr.K.Kannan briefed the evaluation process of Internship and credit transfer.</p>
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**006.07.00 :Any other Item**

- The HoD presented the Department achievements in placement, extra curricular and cocurricular activities of students. The BoS members appreciated the achievements and encouraged for higher salary package and more participations in future.
- Memebtrs discussed about the provision of offering the latest amendments regarding tamil courses , Heritage of Tamils was included in I Sem of R2021 and Tamils and Technology was included in II Sem of R2021 as per the request from Anna University via L.No.618/CAC/TC/2023.
- Members suggested to offer tamil courses in the upcoming semesters for the 2022-2023 admitted students.

**006.08.00 :Vote of Thanks**

- The meeting ended with the Vote of Thanks by A.Arulkumar, Assistant Professor, Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

  
 25/03/2023  
 BoS Coordinator  
 A.ARULKUMAR

  
 25/03/2023  
 BoS Chairman  
 Dr.K.Kannan  
 HoD/MTRE.



(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).

## Department of Computer Science and Engineering

### B. Tech. (Artificial Intelligence and Data Science)

#### Sixth BoS Meeting Minutes

Date : 10.03.2023

Time : 02.30 am to 04.00 pm

Venue : CSE Conference Hall-I

Link (hybrid mode) :

[https://teams.microsoft.com/l/meetup-](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzA1MjcyNjQtNzYwMi00YThtLTgwMmEtNmI2OWQyODI0MmEw%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%226522f154-1aeb-4296-be5c-d048a82f2cb0%22%7d)

[join/19%3ameeting\\_NzA1MjcyNjQtNzYwMi00YThtLTgwMmEtNmI2OWQyODI0](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzA1MjcyNjQtNzYwMi00YThtLTgwMmEtNmI2OWQyODI0MmEw%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%226522f154-1aeb-4296-be5c-d048a82f2cb0%22%7d)


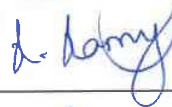
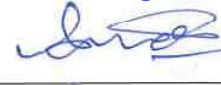



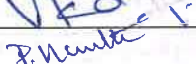
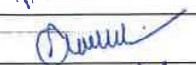


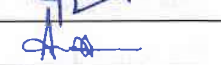
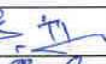
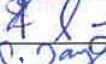




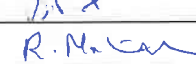
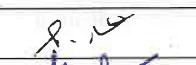








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[d048a82f2cb0%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzA1MjcyNjQtNzYwMi00YThtLTgwMmEtNmI2OWQyODI0MmEw%40thread.v2/0?context=%7b%22Tid%22%3a%222666d919-f1fc-4027-b9c5-212d4e95e68a%22%2c%22Oid%22%3a%226522f154-1aeb-4296-be5c-d048a82f2cb0%22%7d)

The following members were present:

S. No.	Name of the Expert	Designation	Capacity
1.	Dr. P. Chitra	Professor & Head, Department of Computer Applications, Thiagarajar College of Engineering, Madurai, Email : pccse@tce.edu Mobile : 9944976549	Anna University Nominee
2.	Dr. S.R. Balasundaram,	Professor, Department of Computer Applications, National Institute of Technology, Tiruchirapalli -620015. Email : blsundar@nitt.edu Mobile : 99942 91420	Academic Council Nominee
3.	Dr. N. Radha,	Associate Professor Department of Information Technology, SSN College of Engineering, Chennai Email : radhan@ssn.edu.in Mobile : 99443 95452	Academic Council Nominee
4.	Mr. U. Shunmugam,	Vice President-Products, Chainsys, Madurai - 625009. Email: shunmugam.udhayakumar@chainsys.com Mobile : 98411 63959	Industrial Expert
5.	Mr. S. Srinath,	Staff Test Engineer, Technicolor (Vantiva) Level 2 ASV suntech Park, Gandhi Nagar, Thoraipakkam, Chennai-600097. Email : srisri60@gmail.com Mobile : 98942 41794	Alumni Leave

Internal faculty Members of BoS			
S. No.	Name of the Faculty	Designation	Signature
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.Uma Maheshwari	Assistant Professor / CSE	
7.	Mr.V.Rajesh Kannan	Assistant Professor / CSE	
8.	Mrs.P.Kavitha	Assistant Professor / CSE	
9.	Mrs.S.Athilakshmi	Assistant Professor / CSE	
10.	Mr.B.Muthukrishnavinayagam	Assistant Professor / CSE	
11.	Mrs.K.Muthulakshmi	Assistant Professor / CSE	
12.	Mr.J.John Livingston	Assistant Professor / CSE	
13.	Mr.D. Asir	Assistant Professor / CSE	
14.	Ms.S.Hemaswathi	Assistant Professor / CSE	
15.	Mrs.X.Ignatius Selvarani	Assistant Professor / CSE	
16.	Ms.S.Janani	Assistant Professor / CSE	
17.	Mrs.K.Leclarani	Assistant Professor / CSE	
18.	Mr.M.Rajasekaran	Assistant Professor / CSE	
19.	Ms.G.Vijayalalitha	Assistant Professor / CSE	
20.	Ms.S.Jothi Lakshmi	Assistant Professor / CSE	
21.	Ms.S.Priyaa	Assistant Professor / CSE	
22.	Dr.R.Muthuselvi	Professor/ AI & DS	
23.	Dr. P. Praveen Kumar	Associate Professor / AI & DS	
24.	Mrs.R.Indhuja	Assistant Professor / AI & DS	
25.	Mrs.K.Indumathi	Assistant Professor / AI & DS	
26.	Mrs.B.Santhi Priya	Assistant Professor / AI & DS	
27.	Ms. T.Rajashree	Assistant Professor / AI & DS	
28.	Mrs. J. Lavanya	Assistant Professor / AI & DS	
29.	Ms. S. Shopika	Assistant Professor / AI & DS	

30.	Mrs.V.Sangeetha	Assistant Professor / AI & DS	
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#### **006.01.00: Welcome address by HoD**

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 6<sup>th</sup> BOS meeting

#### **006.02.00: Introduction of BoS members and new Academic Council Nominee**

- Dr.P. Chitra, Anna University Nominee
- Dr. S.R. Balasundaram, Academic Council Nominee
- Dr. N. Radha, Academic Council Nominee
- Mr. U. Shunmugam, Industrial Expert
- Mr. S. Srinath, Alumni

#### **006.03.00: Approval of 5<sup>th</sup> BoS Meeting Minutes & Action taken**

S. No	Suggestions given	Action Taken
1	Dr. Sabu M. Thampi suggested to include Github projects, LinkedIn account, Hackathon from first year onwards.	Through College level mobilization activity, every student was asked to open accounts in LinkedIn, Hackathon and push their project implementation codes in Github. Centre for competition was established at the College level to motivate the students to participate in various events.
2	Dr. Sabu M. Thampi suggested to reduce the syllabus contents for the vast subjects.	Necessary steps and directions have been given to all the syllabus framing faculty members. As per the direction, the syllabus were framed, scrutinized and finalized.
3	Dr.R.Venkatesan suggested to give the course outcome in a short manner, no need to elaborate the contents.	
4	Dr.P.Chitra suggested to revisit all the CO's in the syllabus.	

- **BoS members approved 5<sup>th</sup> BoS Meeting Minutes.**

#### **06.04.00: ITEMS FOR DISCUSSION AND APPROVAL**

HoD presented the curriculum and syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by Department of Computer Science and Engineering

**Semester V**

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
THEORY						
1	Fundamentals of Deep Learning	PC	3	0	0	3
2	Computer Networks and Security	PC	2	0	2	3
3	Internet Programming	PC	3	0	0	3
4	Big Data Systems	PC	2	0	2	3
5	Professional Elective – I	PE	-	-	-	3
6	Professional Elective - II	PE	-	-	-	3
PRACTICALS						
7	Deep Learning Laboratory	PC	0	0	4	2
8	Internet Programming Laboratory	PC	0	0	4	2
9	Summer Internship/Mini Project	EEC	0	0	0	1
10	Interpersonal skills – Listening and Speaking	EEC	0	0	2	1
Total Credits			-	-	-	24

**Semester VI**

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
THEORY						
1	Data Exploration and Visualization	PC	3	0	0	3
2	Fundamentals of Natural Language Processing	PC	3	0	0	3
3	Professional Elective III	PE	-	-	-	3
4	Professional Elective IV	PE	-	-	-	3
5	Professional Elective V	PE	-	-	-	3
6	Professional Elective VI	PE	-	-	-	3
7	Open Elective I	OE	3	0	0	3
PRACTICALS						
8	Data Visualization Laboratory	PC	0	0	4	2
9	Natural Language Processing Laboratory	PC	0	0	4	2
10	Professional Communication	EEC	0	0	2	1
Total Credits			-	-	-	26



**006.04.01: Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor**

Verticals / Courses	Cognitive Analytics	Software Application Development	Data Center Technologies
1	<b><u>Image Analytics and Computer Vision</u></b>	Agile Project Development with Scrum	<b>Essentials of Devops</b>
2	Business Intelligence	<u>Software Testing and Quality Assurance</u>	<u>Digital Marketing Essentials</u>
3	Human Computer Interaction	<b>Django Rest Framework</b>	<b><u>Virtualization and Cloud Computing</u></b>
4	Application of Robotics	<b>Full Stack Development</b>	Mobile Adhoc Networks
5	Social Network Analytics	<b>Application Development using Flutter</b>	Multicore Architecture
6	Information Retrieval Techniques	<b>User Interface Design</b>	Distributed Systems
7	Robotic Process Automation	<b>C # and .Net Fundamentals</b>	<u>Blockchain Technologies</u>

Underline - Offered course is in line with NPTEL/Swayam

Bold - Offered course is Theory based Laboratory.

**Minor Verticals – Computer Technology**

Sl. No.	Course Name	Contact Periods	L	T	P	Credits
1	Fundamentals of Data Structures	4	2	0	2	3
2	Database Essentials	4	2	0	2	3
3	Java Basics (IT)	4	2	0	2	3
4	Introduction to Data Science	3	3	0	0	3
5	Artificial Intelligence and Machine learning	3	3	0	0	3
6	Cloud Computing and its Applications (IT)	3	3	0	0	3

**Institution Level Verticals (Minor Degree)**

Verticals	Offering Department
1.Fintech and Blockchain	CSE Department
2. Entrepreneurship	Mechanical Department
3. Environment and Sustainability	Civil (i/c) & Chemistry Department
4. Business data Analytics	IT department
5. Public Administration	Placement cell (i/c) & English department

**Minor Verticals - Fintech and Blockchain**

Sl. No.	Course Name	L	T	P	Credits
1	Engineering Economics and Financial Management	3	0	0	3
2	Banking, Financial Services and Insurance	3	0	0	3
3	Fundamentals of Blockchain	2	0	2	4
4	Applications of Blockchain	3	0	0	3
5	Digital Marketing	3	0	0	3
6	Logistics and Supply Chain Management	3	0	0	3

The following suggestions given by BoS members on the curriculum.

V Semester	
Name of the Course	Suggestions from the BoS Members
Big Data Systems	BoS members provided the consent for the syllabus.
Computer Networks and Security	BoS members provided the consent for the syllabus.
Fundamentals of Deep Learning	BoS members provided the consent for the syllabus.
Deep Learning Laboratory	BoS members provided the consent for the syllabus.
Summer Internship/Mini Project	BoS members provided the consent for the syllabus.
VI Semester	
Data Exploration and Visualization	BoS members provided the consent for the syllabus.
Fundamentals of Natural Language Processing	BoS members provided the consent for the syllabus.
Data Visualization Laboratory	BoS members provided the consent for the syllabus.
Natural Language Processing Laboratory	BoS members provided the consent for the syllabus.

<b>Vertical: Cognitive Analytics</b>	
Business Intelligence	BOS members provided the consent for the syllabus.
Human Computer Interaction	BOS members provided the consent for the syllabus.
Application of Robotics	BOS members provided the consent for the syllabus.
Social Network Analytics	BOS members provided the consent for the syllabus.
<b>Vertical: Data Center Technologies</b>	
Mobile Adhoc Networks	BOS members provided the consent for the syllabus.
<b>Minor Verticals – Computer Technology</b>	
Fundamentals of Data Structures	BOS members provided the consent for the syllabus
Database Essentials	BOS members provided the consent for the syllabus
Fundamentals of Java Programming (IT)	Offered in IT department
Introduction to Data Science	BOS members provided the consent for the syllabus
Artificial Intelligence and Machine learning	BOS members provided the consent for the syllabus
Cloud Computing and its Applications (IT)	Offered in IT department
<b>Minor Verticals - Fintech and Block chain</b>	
Engineering Economics and Financial Management	BOS members provided the consent for the syllabus
Banking, Financial Services and Insurance	Mr.S. Venkatesh suggested to include the concept of <u>payment gateway</u> and its <u>processing</u> .
Fundamentals of Blockchain	Mr.S. Venkatesh suggested to include security concepts, smart contracts and its types in the first unit. Dr.D. Jeya Mala Suggested to reduce the <u>concept</u> of bitcoin in the second unit.
Applications of Blockchain	Dr.D. Jeya Mala suggested to change the subject name as Block chain security in fundamentals. She also suggested that instead of “Applications of Blockchain”, “Introduction to Fintech” can be included and to <u>change syllabus accordingly</u> .
Digital Marketing	BOS members provided the consent for the syllabus
Logistics and Supply Chain Management	BOS members provided the consent for the syllabus
<b>R2020 – Semester-VII</b>	
Data Visualization	BOS members provided the consent for the syllabus.
Natural Language Processing	BOS members provided the consent for the syllabus.
Full Stack Development	BOS members provided the consent for the syllabus.
Data Visualization Laboratory	BOS members provided the consent for the syllabus.
Natural Language Processing Laboratory	BOS members provided the consent for the syllabus.

**006.04.02: Common courses in the core / verticals across other departments**

Name of the Course	Common to	Suggestions from BoS members
Internet Programing	CSE	Since this is a common course, the CSE BOS members suggested to replace WSDL content with cloud and JSON concepts. The HoD agreed and modified the contents as per the suggestions given by the CSE BoS members. The AD BOS members given consent for the content changes as well as the syllabus.
Internet Programing Laboratory	CSE	Since this is a common course, the CSE BOS members suggested to include the term Back end connectivity in the CO3 statement. The HoD agreed and modified the contents as per the suggestions given by the CSE BoS members. The AD BOS members given consent for the content changes as well as the syllabus.
Image Analytics and Computer Vision	CSE	Since this is a common course, the CSE BOS members suggested BOS member suggested to include data annotation concept in the list of experiments. The HoD agreed and modified the content as per the suggestions given by the CSE BoS members. The AD BOS members given consent for the content changes as well as the syllabus.
Information Retrieval Techniques	CSE	BOS members provided the consent for the syllabus
Robotic Process Automation	CSE	BOS members provided the consent for the syllabus.
Agile Project Development with Scrum	CSE	The CSE BOS members suggested to include tools other than scrum, versioning topics and to incorporate the last unit as Devops in the syllabus. As this is a common course, HoD agreed to incorporate the suggestions and the ADS BOS members given consent for the content changes as well as the syllabus.

Software Testing and Quality Assurance	CSE	Since this is a common course, the CSE BOS members suggested to include Selenium tool as one unit and Google extension. The HoD agreed and modified the syllabus as per the suggestions given by the CSE BoS members. The AD BOS members given consent for the content changes as well as the syllabus.
Django Rest Framework	CSE	Since this is a common course, the CSE BOS members suggested to change the title as Rest frame work for Business applications. The HoD agreed and modified the title as Rest frame work for Business applications. AD BOS members suggested to introduce the concept of flask tool before the introduction of Django. The suggestions are included in the syllabus.
Full Stack Development	CSE	The CSE BOS members suggested to include API and socket call concepts in the last unit of the syllabus. As this is a common course, HoD agreed and modified the contents. AD BOS members given consent for the content changes as well as the syllabus.
Application Development using Flutter	CSE	The CSE BOS members suggested to change the syllabus and including the concepts runping applications in web, Android and IoS. Suggested to refer LinkedIn courses. As this is a common course, HoD agreed and modified the contents. AD BOS members given consent for the content changes as well as the syllabus.
User Interface Design	CSE	The CSE BOS member suggested to change the subject name as UI UX design and Suggested to include the concept of Figma in the syllabus. As this is a common course, HoD agreed and modified the contents and subject name as per the suggestions of CSE BoS members. AD BOS members given consent to the title change as well as the syllabus.



C # and .Net Fundamentals	CSE	The CSE BOS members suggested to remove the concepts of ADO.net and provide more opportunity to learn the concepts of ASP.net. As this is the common course, HoD agreed and modified the syllabus as per the suggestions of CSE BoS members and ADS BoS members given consent to the content changes as well as the syllabus.
Essentials of Devops	CSE	Since this is a common course, the CSE BOS members suggested to change the title as DevOps for Cloud. The HoD agreed and modified the title as DevOps for Cloud. The AD BOS members had given consent for the title change as well as the syllabus.
Digital Marketing Essentials	CSE	AD BOS members provided the consent for the syllabus.
Virtualization and Cloud Computing	CSE	The CSE BOS members suggested to include cloud service providers, costing techniques topic in the syllabus and suggested to refer the list of experiments mentioned in Microsoft Azure and Google cloud. Since this is a common course, HoD agreed the content changes and modified. AD BoS members also given consent to the content changes as well as the syllabus.
Multicore Architecture	CSE	BOS members provided the consent for the syllabus.
Distributed Systems	CSE	The CSE BOS members suggested to include the content Delivery Network in the syllabus. As this is a common course, HoD agreed to the content changes and modified. AD BoS members given consent to the content changes as well as the syllabus.
Blockchain Technologies	CSE	The CSE BOS members suggested to remove the cryptocurrency topic in the syllabus and suggested to focus on more on fundamentals of blockchain. Since this is a common course, HoD agreed to the content

		changes and modified as per the CSE BoS members suggestion. ADS BoS members given consent to the content changes as well as the syllabus.
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**006.04.03: List of Open Elective courses offered**

**Open Elective II**

Name of the Course	Offered to	Suggestions from BoS members
Fundamentals of Big Data	Mech., Bio.Tech.,MTR, Civil, ECE, EEE	BOS members provided the consent for the syllabus

**Open Elective III**

Name of the Course	Offered to	Suggestions from BoS members
Information Retrieval Basics	Mech., Bio.Tech.,MTR, Civil, ECE, EEE	BOS members provided the consent for the syllabus

**Open Elective IV**

Name of the Course	Offered to	Suggestions from BoS members
Introduction to Operating Systems	Mech., Bio.Tech.,MTR, Civil, ECE, EEE	BOS members provided the consent for the syllabus

**006.04.04: List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses**

NPTEL COURSE	Equivalent Professional elective course
Deep Learning	Deep Learning
Computer Vision and Image Processing - Fundamentals and Applications	Image Analytics and Computer Vision
Natural Language Processing	Natural Language Processing Essentials
Software Testing	Software Testing and Quality Assurance
Blockchain and its Applications	Blockchain Technologies

Cloud Computing	Virtualization and Cloud Computing
Introduction to Marketing Essentials	Digital Marketing Essentials

➤ BOS members approved the courses.

#### 006.04.05: Tentative final year curriculum of R2021

##### Semester VII

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
THEORY						
1	Human Values and Professional Ethics	HS	2	0	0	2
2	Management Elective	HS	3	0	0	3
3	Open Elective – II	OE	3	0	0	3
4	Open Elective – III	OE	3	0	0	3
5	Open Elective – IV	OE	3	0	0	3
PRACTICALS						
6	Summer Internship / Mini project	EEC	0	0	0	1
Total Credits			14	0	0	15

##### Semester VIII

S.NO.	COURSE TITLE	CATEGORY	PERIODS PER WEEK			CREDITS
			L	T	P	
1	Project work	EEC	0	0	20	10
<b>Total Credits</b>			<b>0</b>	<b>0</b>	<b>20</b>	<b>10</b>

➤ BOS members provide the consent for the syllabus

#### 006.05.00: ITEMS FOR RATIFICATION

006.05.01: Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
CS2202 Object Oriented Programming using Java and R2021	BOS members suggested to reduce the syllabus.
AD1701 Data Exploration and Visualization - R2020	BoS member suggested to separate the theory cum lab integrated courses in to theory and lab component due to better understanding of the students.
AD1702 Fundamentals of Natural Language Processing - R2020	
AD1711 Data Visualization Laboratory -R2020	

**006.05.02: NPTEL Examination results (students' performance) and action taken for the students who did not receive the certificates**

Sl. No.	Course Id	Course Title	Offered Institute	Number of Students				Pass Percentage
				Registered	Attended	Passed	Failed	
1	noc22-cs87	Cloud Computing	IITKGP	22	22	18	4	81.82
2	noc22-cs96	Introduction To Internet Of Things	IITKGP	35	35	32	3	91.43
3	noc22-hs76	Soft Skills	IITR	50	49	42	7	84.00
4	noc22-cs122	The Joy of Computing using Python	IIT Ropar	44	43	37	6	84.09

No. of Students passed	131
No. of Students failed	20
No. of Students got Elite+Gold+Topper	2
No. of Students got Elite+Silver+Topper	7
No. of Students got Elite+Silver	32
No. of Students got Elite	77
No. of Students Successfully completed	13
No. of Students with no certificate	18

- Encouraged the students to attend the same course in the current semester if it is a rerun course.
- If the student failed course is not a rerun course, encouraged the students to find another suitable course.
- Motivated them to do better in the exam
- Revise the assignment questions that were done through 12-week course.
- NPTEL mentors is assigned to monitor the progress of the assignment submission.

**006.05.03: Value Added Courses offered if any**

The courses that were conducted in 2021-2022 are

Name of the VAC Course	Name of the Company	No. of Students	Name of the VAC Course
Redhat Linux	School of Linux, Madurai	Mr.S.Suresh Kannan & K.Muthukumar	40
Machine Learning with Scikit-Learn, Keras and Tensorflow	QuantanicsTechServ Pvt. Ltd., Madurai.	Mr.FarhadhManaz and Mr.K.Vasanth Junior AI Develop, QuantanicsTechServ Pvt.Ltd., Madurai.	29
Spring Boot	Silicon Software Services, Chennai	Mr.S.Rajendran Ms.DominiNeya	55
Django Framework	LamdatechSoftics, Virudhunagar	Mr.S.Balaji, Ms.V.Rajeshwari	27
AWScloud	SchoolofLinux Madurai	School of LinuxMadurai	30
Flutter	NetworkzSystems,Madurai	Networkz Systems, Madurai	30
Fundamentals of Block chain and Cryptocurrency	IncrixTechlutionsLLP,Chennai	IncrixTechlutions LLP, Chennai	35

➤ BOS member suggested to run the value added courses from ICT Academy.

**006.05.04 : Curriculum feedback and action taken if any**

➤ NIL

**006.06.00: Information about the (Points Discussed in the following)**

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	The HOD Presented the new amendment given by Anna University for Honours, specialization and minors Degree
006.06.02	Pass Percentage of students	The HOD Presented the Pass percentage for year wise and course wise in the meeting.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 – 2024	Nil
006.06.04	NBA eSAR / status and information	The HOD Happily shared the date for audit of the compliance report.
006.06.05	Student Internship details (between 5 <sup>th</sup> and 6 <sup>th</sup> meeting)	The HOD shared the statistical data of the student internship/Inplant training details for R2020 & R2021 and its evaluation procedure.



**006.07.00: Any other Item:**


**General suggestions**

1. BOS members suggested to frame last course outcome as K4 level.
2. BOS members suggested to include recent version of text books.
3. BOS members suggested to give more hours for doing mini project for the lab courses.
4. Dr.N. Radha suggested to frame lab experiments based on scenario.
5. Mr.U. Shunmugam suggested that industry person may give partial delivery of industry related papers.
6. Dr.S.R. Balasundaram suggested to add pre-requisite for each course mentors have to give proper guidance to the students for choosing Professional Elective courses.

**006.08.00: Vote of Thanks**

- The meeting ended with the Vote of Thanks by Dr.A.Anandh, Associate Professor, Department of Computer Science and Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

  
**BoS Coordinator**  
**(Dr.A.Anandh)**

  
**BoS Chairman**  
**(Dr.A.Meenakshi)**  
**HoD - CSE**