St. MARTIN'S ENGINEERING COLLEGE

(Autonomous Institution - UGC, Govt. of India)

| ESTD : 2002 | NAAC (A+) & NBA Accredited | Affiliated to JNTUH
| Approved by AICTE | NIRF & ARIIA Ranked | A Non Minority Institute

UGC AUTONOMOUS

Date: 30/11/2022

MINUTES OF MEETING -BOARD OF STUDIES (BOS)

The Meeting of the Board of Studies of Artificial Intelligence and Machine Learning department was held on 30th November, 2022 at 5.30 PM in online mode.

The following members were present.

S.No.	Name of the Faculty	Designation	Signature
1	Dr. N. Krishnaiah, Professor & HOD, Department of AI & ML, SMEC.	Chairman	
2	Dr. V. Kamakshi Prasad, Professor of CSE & BoS Chairperson, JNTUH College of Engineering, Hyderabad.	University Nominee	
3	Dr. K. Venkatesh Sharma, Professor, Dept. of CSE, CVR College of Engineering, Hyderabad.	Educationist	
4	Dr. P. L. Srinivasa Murthy, Professor,Department of CSE, Institute of Aeronautical Engineering, Dundigal, Hyderabad.	Educationist	
5	Mr. Bonthala Mallikarjuna Aswanth Kumar, Lead Technology, Synechron, Hyderabad.	Industrialist	B.M. Aswaith Kumr.
6	Dr. S.V.S. Rama Krishnam Raju, Professor of ECE, Dean Academics, SMEC.	Member	
7	Dr. D. Ranadheer Reddy, Professor & HOD, Department of S&H, SMEC.	Member	
8	Dr. R. Santhoshkumar, Professor & HOD, Dept. of CSE, SMEC.	Faculty Member	
9	Dr. R. Nagaraju, Professor & HOD, Dept. of IT, SMEC.	Faculty Member	
10	Dr. K.Srinivas, Professor, Dept. of CSE (AI & ML), SMEC.	Faculty Member	
11	Dr. N. Satheesh, Professor, Dept. of CSE, SMEC	Faculty Member	
12	Mr. Pannati Nagesh, React Front End Developer, Syncor Solutions, Hyderabad.	Alumni Member	

The Meeting began with chairman, Board of studies extending a warm welcome to all the members of participating in the meeting.

The following points were discussed and approved during the meeting

1. The following SMEC R22 Course Structure and the detailed syllabi of I-I, I-II, II-I and II-II were presented, discussed and approved. And the total credits for the programme were discussed, finalized and approved.

I YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits	Internal (CIE)	External (SEE)	Total
			Hours per Week				Maximum Marks		
1	MA101BS	Matrices and Calculus	3	1	0	4	40	60	100
2	AP102BS	Applied Physics	3	1	0	4	40	60	100
3	CS105ES	Programming for Problem Solving	3	0	0	3	40	60	100
4	ME107ES	Engineering Workshop	0	1	3	2.5	40	60	100
5	EN104HS	English for Skill Enhancement	2	0	0	2	40	60	100
6	CS106ES	Elements of Computer Science & Engineering	0	0	2	1	50	-	50
7	AP103BS	Applied Physics Laboratory	0	0	3	1.5	40	60	100
8	CS107ES	Programming for Problem Solving Laboratory	0	0	2	1	40	60	100
9	EN105HS	English Language and Communication Skills Laboratory	0	0	2	1	40	60	100
10		Induction Programme							
		Total	**11**	**3**	**12**	**20**	**370**	**480**	**850**
Mandatory Course (Non- Credit)									
11	*CH109MC	Environmental Science	3	0	0	0	100	-	100

I YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits	Internal (CIE)	External (SEE)	Total
			Hours per Week				Maximum Marks		
1	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4	40	60	100
2	CH202BS	Engineering Chemistry	3	1	0	4	40	60	100
3	ME208ES	Computer Aided Engineering Graphics	1	0	4	3	40	60	100
4	EE206ES	Basic Electrical Engineering	2	0	0	2	40	60	100
5	EC203ES	Electronic Devices and Circuits	2	0	0	2	40	60	100
6	CH204BS	Engineering Chemistry Laboratory	0	0	2	1	40	60	100
7	EE208ES	Basic Electrical Engineering Laboratory	0	0	2	1	40	60	100
8	CS205ES	Python Programming Laboratory	0	1	2	2	40	60	100
9	CS206ES	IT Workshop	0	0	2	1	40	60	100
		Total	**11**	**3**	**12**	**20**	**360**	**540**	**900**

II YEAR I SEMESTER

S. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Internal (CIE)	External (SEE)	Total
1	MA303BS	Mathematical and Statistical Foundations	3	1	0	4	40	60	100
2	CS301PC	Data Structures	3	0	0	3	40	60	100
3	CS304PC	Computer Organization and Architecture	3	0	0	3	40	60	100
4	CS306PC	Software Engineering	3	0	0	3	40	60	100
5	CS305PC	Operating Systems	3	0	0	3	40	60	100
6	CS313PC	Introduction to Data Structures Lab	0	0	2	1	40	60	100
7	CS311PC	Operating Systems Lab	0	0	2	1	40	60	100
8	CSM308PC	Software Engineering Lab	0	0	2	1	40	60	100
9	CS312PC	Node JS/ React JS/Django	0	0	2	1	40	60	100
		Total	**15**	**1**	**8**	**20**	**360**	**540**	**900**
Mandatory Course (Non- Credit)									
10	*CI309MC	Constitution of India	3	0	0	0	100	-	100

II YEAR II SEMESTER

S. No.	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
			L	T	P		Internal (CIE)	External (SEE)	Total
1	CS401PC	Discrete Mathematics	3	0	0	3	40	60	100
2	CSM404PC	Automata Theory and Compiler Design	3	0	0	3	40	60	100
3	CS405PC	Database Management Systems	3	0	0	3	40	60	100
4	CSM406PC	Introduction to Artificial Intelligence	3	0	0	3	40	60	100
5	CS413PC	Object Oriented Programming through Java	3	0	0	3	40	60	100
6	CS407PC	Database Management Systems Lab	0	0	2	1	40	60	100
7	IT408PC	Java Programming Lab	0	0	2	1	40	60	100
8	AIM410PC	Real-time Research Project/Field-Based Research Project	0	0	4	2	50	-	50
9	CSM411PC	Prolog/ Lisp/ Pyswip	0	0	2	1	40	60	100
		Total	**15**	**0**	**10**	**20**	**370**	**480**	**850**
Mandatory Course (Non-Credit)									
10	*GS409MC	Gender Sensitization Lab	0	0	2	0	100	-	100

2. The following SMEC R22 Course Structure of III-I, III-II, IV-I and IV-II were presented, discussed and approved. And the total credits for the programme were discussed, finalized and approved.

III YEAR I SEMESTER

S. No.	Course Title	Hours per Week			Credits	Maximum Marks		
		L	T	P		Internal (CIE)	External (SEE)	Total
1	Design and Analysis of Algorithms	3	1	0	4	40	60	100
2	Machine Learning	3	0	0	3	40	60	100
3	Computer Networks	3	0	0	3	40	60	100
4	Business Economics & Financial Analysis	3	0	0	3	40	60	100
5	Professional Elective-I	3	0	0	3	40	60	100
6	Machine Learning Lab	0	0	2	1	40	60	100
7	Computer Networks Lab	0	0	2	1	40	60	100
8	Advanced English Communication Skills Lab	0	0	2	1	40	60	100
9	UI design- Flutter	0	0	2	1	40	60	100
	Total	**15**	**1**	**08**	**20**	**360**	**540**	**900**
Mandatory Course (Non-Credit)								
10	Intellectual Property Rights	3	0	0	0	100	-	100

III YEAR II SEMESTER

S. No.	Course Title	Hours per Week			Credits	Maximum Marks		
		L	T	P		Internal (CIE)	External (SEE)	Total
1	Knowledge Representation and Reasoning	3	0	0	3	40	60	100
2	Data Analytics	3	0	0	3	40	60	100
3	Natural Language Processing	3	0	0	3	40	60	100
4	Professional Elective – II	3	0	0	3	40	60	100
5	Open Elective-I	3	0	0	3	40	60	100
6	Natural Language Processing Lab	0	0	3	1.5	40	60	100
7	Principles of Data Analytics Lab	0	0	3	1.5	40	60	100
8	Industrial Oriented Mini Project/ Internship/Skill Development Course (DevOps)	0	0	4	2	-	100	100
	Total	**15**	**0**	**10**	**20**	**280**	**520**	**800**
Mandatory Course (Non-Credit)								
9	Environmental Science	3	0	0	0	100	-	100

Environmental Science in III Yr II Sem Should be Registered by Lateral Entry Students Only.

IV YEAR I SEMESTER

S. No.	Course Title	Hours per Week			Credits	Maximum Marks		
		L	T	P		Internal (CIE)	External (SEE)	Total
1	Deep Learning	3	0	0	3	40	60	100
2	Nature Inspired Computing	2	0	0	2	40	60	100
3	Professional Elective -III	3	0	0	3	40	60	100
4	Professional Elective -IV	3	0	0	3	40	60	100
5	Open Elective - II	3	0	0	3	40	60	100
6	Professional Practice, Law & Ethics	0	0	4	2	40	60	100
7	Professional Elective - III Lab	0	0	2	1	40	60	100
8	Project Stage - I	0	0	6	3	-	-	-
	Total	**14**	**0**	**12**	**20**	**280**	**420**	**700**

IV YEAR II SEMESTER

S. No.	Course Title	Hours per Week			Credits	Maximum Marks		
		L	T	P		Internal (CIE)	External (SEE)	Total
1	Professional Elective - V	3	0	0	3	40	60	100
2	Professional Elective – VI	3	0	0	3	40	60	100
3	Open Elective – III	3	0	0	3	40	60	100
4	Project Stage – II including Seminar	0	0	22	11	40	60	100
	Total	**9**	**0**	**22**	**20**	**160**	**240**	**400**

*MC – Satisfactory/Unsatisfactory

Professional Elective-I	Professional Elective - II
Graph Theory	Software Testing Methodologies
Introduction to Data Science	Information Retrieval Systems
Web Programming	Pattern Recognition
Image Processing	Computer Vision and Robotics
Computer Graphics	Data Warehousing and Business Intelligence
Professional Elective - III	**Professional Elective -IV**
Internet of Things	Quantum Computing
Data Mining	Expert Systems
Scripting Languages	Semantic Web
Mobile Application Development	Game Theory
Cloud Computing	Mobile Computing
Professional Elective - V	**Professional Elective – VI**
Social Network Analysis	Speech and Video Processing
Federated Machine Learning	Robotic Process Automation
Augmented Reality & Virtual Reality	Randomized Algorithms
Web Security	Cognitive Computing
Ad-hoc & Sensor Networks	Conversational AI

 # Courses in PE - III and PE - III Lab must be in 1-1 correspondence.

Open Elective I	Open Elective II	Open Elective III
Fundamentals of AI	Introduction to Natural Language Processing	Chatbots
Machine Learning Basics	AI applications	Genetic Algorithms & Fuzzy logic

The following points were suggested for future possible implementations

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The meeting ended with chairman thanking members for their lively and useful interaction to evolve a best possible course structure and syllabus for the B. Tech Artificial Intelligence and Machine Learning (AI & ML) programme.
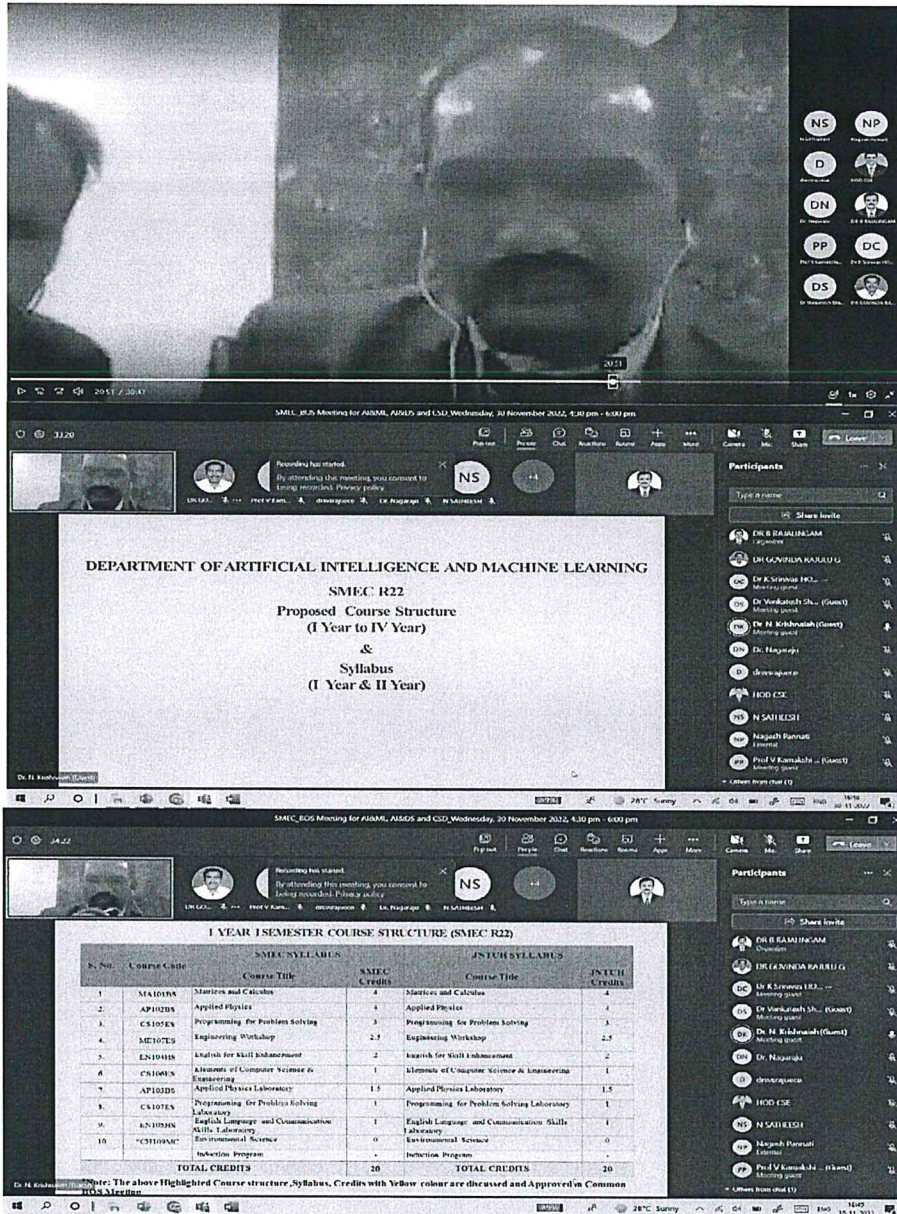
Copy to:
1. Principal
2. IQAC

Chairman

Dr. N. Krishnaiah
HOD (AI & ML)