



# MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Department of CSE (Internet of Things)

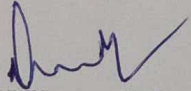
8<sup>th</sup> Board of Studies meeting on 08.07.2024 at 11:00 AM

## AGENDA

The 8<sup>th</sup> Board of Studies meeting for the Departments of CSE (Internet of Things) is convened on 08.07.2024 at 11:00 AM in hybrid (online/offline) mode.

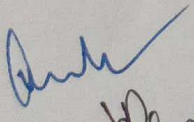
The Agenda of the meeting is as follows.

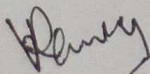
1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2022-23 on 16.12.2023.
2. Approval of Course Structure and Syllabus for MR22
3. Approval of Free Software's to be used in labs as per MR22 syllabus
  - NODE JS/ REACT JS/ DJANGO
  - Apache Kafka and Talend,Spark.
  - Python, Arduino
  - UI DESIGN – FLUTTER
4. Any other point with the permission of BoS Chairman.

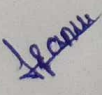
  
Dr. K.Vasanth Kumar  
Chairman,

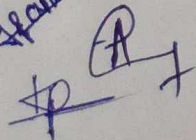
UG-B.Tech.-CSE (Internet of Things) - BOS,

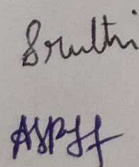
Head of the Department  
Dept. of CSE (Internet of Things),  
Malla Reddy Engineering College (Autonomous),  
Secunderabad, Telangana, State -500100.

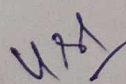


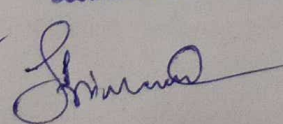














# MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda, Dhullapally(post via Kompally) Secunderabad-500100

## Department of CSE (Internet of Things)

### BOS – Attendance Sheet

July 08, 2024

The 8<sup>th</sup> UG-B.Tech. CSE (Internet of Things) Board of Studies meeting for the Academic Year 2023-24 was conducted on 08-07-2024 at 11:00 AM through Hybrid mode (online/offline). The following BOS Members have attended the BOS Meeting to finalize MR22 regulations CSE (Internet of Things) 2<sup>nd</sup> and 3<sup>rd</sup> Years B.Tech. Course Structure and Syllabus other points of agenda:

S. No	Name of the Member	Designation & Official Address	Category	Signature
1	Dr. K.Vasanth Kumar	Professor & Head of Department	Chairman	
2	Dr. D.Ramesh	Principal, JNTUH University College of Engineering Palair, Khammam Dist	University Nominee	
3	Dr. B. Eswara Reddy	Director, Software Development Center, JNTUA.	Subject Expert (Outside the Parent University)	ONLINE
4	Dr. CH.V.Rami Reddy	Assistant Professor, Vellore Institute of Technology, Vijayawada.	Subject Expert (Outside the Parent University)	
5	Mr. K.Prasad	Senior Software Engineer, Value Omentum, Hyderabad	Industry Expert	
6	Dr. P.Srinivas	Professor	Faculty Member	
7	Mr.L.Ramu	Assistant Professor	Faculty Member	
8	Mrs.K.Sowjanya Naidu	Assistant Professor	Faculty Member	
9	Mrs.A.Laxmi Prasanna	Assistant Professor	Faculty Member	
10	Ms.K.Ankitha	Assistant Professor	Faculty Member	
11	Ms. G. Sruthi	MTS II – IT Quality Assurance, Verizon data service Pvt Ltd, Gachibowli, Hyderabad	Alumni	

Dr. K.Vasanth Kumar

Chairman

UG-B.Tech.-CSE (Internet of Things) - BOS

Malla Reddy Engineering College (Autonomous)  
Secunderabad, Telangana, State - 500100

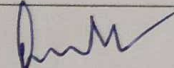

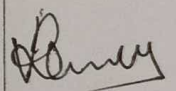
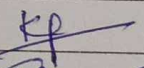
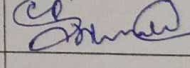
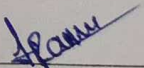
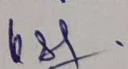
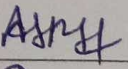
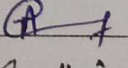
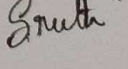


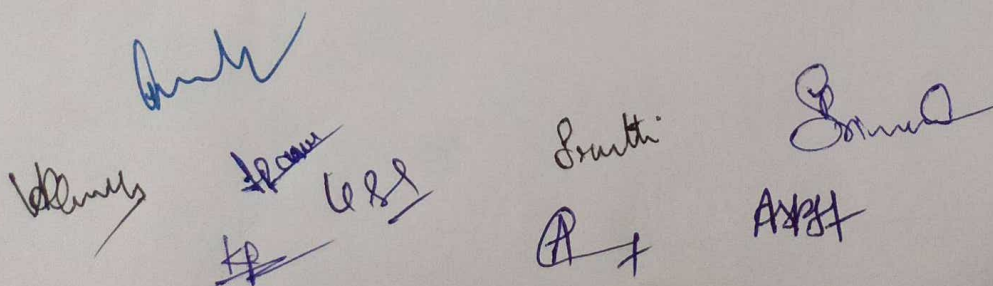
# MALLA REDDY ENGINEERING COLLEGE (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad-500 100.  
Department of CSE (Internet of Things)

## Minutes of the 8<sup>th</sup> BoS Meeting UG- B.Tech.-CSE (Internet of Things) held on 08-07-2024 at 11:00 AM

The 8<sup>th</sup> Board of Studies meeting for the UG - B.Tech.- CSE(Internet of Things) is conducted on 08-07-2024 at 11:00 AM in the Hybrid mode. The following members attended the BoS meeting to finalize MR22 regulations CSE (Internet of Things) 2<sup>nd</sup> and 3<sup>rd</sup> Years B.Tech. Course Structure, Syllabus and other points of agenda:

S. No	Name of the Member	Designation & Official Address	Category	Signature
1	Dr. K.Vasanth Kumar	Professor & Head of Department	Chairman	
2	Dr. D.Ramesh	Principal, JNTUH University College of Engineering Palair, Khammam Dist	University Nominee	
3	Dr. B. Eswara Reddy	Director, Software Development Center, JNTUA.	Subject Expert (Outside the Parent University)	ONLINE
4	Dr.CH.V.Rami Reddy	Assistant Professor, Vellore Institute of Technology, Vijayawada.	Subject Expert (Outside the Parent University)	
5	Mr. K.Prasad	Senior Software Engineer	Industry Expert	
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9	Mrs.A.Laxmi Prasanna	Assistant Professor	Faculty Member	
10	Ms.K.Ankitha	Assistant Professor	Faculty Member	
11	Ms. G. Sruthi	MTS II – IT Quality Assurance, Verizon data service Pvt Ltd, Gachibowli, Hyderabad	Alumni	



**The following is the agenda for the meeting.**

1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2022-23 on 07.08.2023.
2. Approval of Course Structure for MR22
3. Approval for Professional Electives and Open Elective Courses as Credit Transfer Courses through **MOOCs** the once offered under PEC/OEC category in MR22 and MR21 regulation.
4. Approval of **RUBRICS** for Seminar/Skill Development Lab/Viva-voce
5. Any other point with the permission of BoS Chairman.

At the outset, Dr. **K.Vasanth Kumar**, Professor & HOD and Chairman of the **UG - B.Tech.- CSE(Internet of Things)**Board of Studies, welcomed the members to the BoS meeting and informed the purpose of the meeting. Later BoS Members reviewed and discussed items in the agenda and finally the following items have been resolved unanimously by all the members of BoS to implement from the academic year 2023-24 onwards.

**The following resolutions are approved after careful discussion and observations.**

The BoS Members have thoroughly reviewed and approved the MR22 regulations CSE(Internet of Things) 3<sup>rd</sup> and 4<sup>th</sup> year course structure on 16-12-2023 at 11:00 AM as per the guide lines of the AICTE, UGC and JNTUH, Hyderabad.

Action Taken Report (ATR) on previous BoS Meeting (7<sup>th</sup>) in AY 2022-23. The previous Board of studies meeting (7<sup>th</sup>) in AY 2022-23 was held on date: 07-08-2023.

The following are the resolutions made in the meeting and corresponding actions taken are as follows.

1. Course Structure for MR22
2. Professional Electives and Open Elective Courses as Credit Transfer Courses through **MOOCs** the once offered under PEC/OEC category in MR22 and MR21 regulation.
3. **RUBRICS** for Seminar/Skill Development Lab/Viva-voce

*K. Vasanth Kumar*

*Henry*      *A*      *K.P.*      *Santhi*      *U.S.P.*      *Sharma*



Finally, Dr. K.Vasanth Kumar, Chairman – BoS has expressed his sincere thanks to all the Members of the BoS for their active participation and contribution. The meeting concluded at 12:00 Noon.

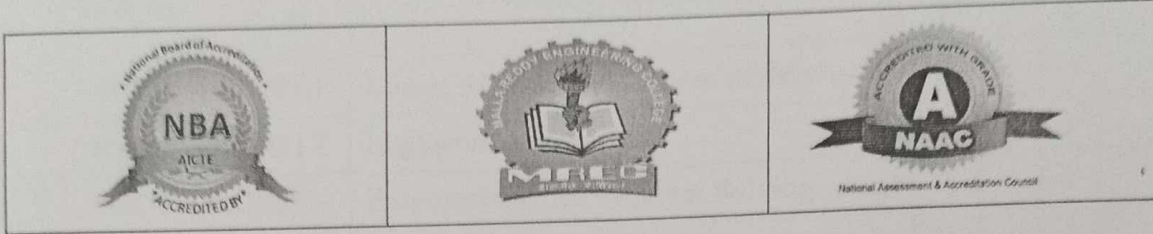
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Dr.K.Vasanth Kumar  
Chairman,  
UG-B.Tech.-CSE (Internet of Things) - BOS  
Dept. of CSE (Internet of Things)  
Malla Reddy Engineering College (Auton...  
Secunderabad, Telangana 500024

*Handwritten signatures in black ink:*  
Amit  
VSP  
Hemant  
Srinath  
ASPSH  
Kp  
Srinath

ACADEMIC REGULATIONS, COURSE STRUCTURE  
AND DETAILED SYLLABUS

Effective from the Academic Year 2022-23 onwards



Course Structure and II Year Syllabus  
for  
B.Tech. CSE (Internet of Things) Programme.  
(MR22 Regulations – Effective from Academic Year 2022-23 onwards)



For  
B.Tech. - Four Year Degree Programme

**MALLA REDDY ENGINEERING COLLEGE**  
(An UGC Autonomous Institution, Approved by AICTE and Affiliated to JNTUH,  
Hyderabad)

Recognized under section 2(f) & 12 (B) of UGC Act 1956, Accredited III Cycle by NAAC  
with 'A++' Grade, NIRF Rank Band 201-250, ARIIA Band Performer, NBA Tier-I  
Accredited (B.Tech.- CE, EEE, ME, ECE & CSE, M.Tech. - SE, EPS, TE),  
Maisammaguda (H), Dhulapally (Post Via Kompally), Medchal - Malkajgiri District,  
Secunderabad- 500100.

Telangana State. e-mail: principal@mrec.ac.in, Website: www.mrec.ac.in

*Handwritten signatures and initials in blue and green ink:*  
Wany, Ansh, A+, K, 1, URS, Asst, Shree



**MALLA REDDY ENGINEERING COLLEGE (Autonomous)**  
**COURSE STRUCTURE – B.Tech. CSE (Internet of Things) Programme.**  
**(MR22 Regulations - Effective from Academic Year 2022 – 23 onwards)**

MR22 I SEMESTER							
S. No	Category	Course Code	Name of the Subject	Contact hours/week			Credits
				L	T	P	
1.	BSC	C0B01	Linear Algebra and Numerical Methods	3	1	-	4
2.	BSC	C0B17	Engineering Chemistry	3	1	-	4
3.	ESC	C0501	Programming for Problem Solving	3	-	-	3
4.	ESC	C0305	Engineering Drawing	2	-	2	3
5.	BSC	C0B09	Semiconductor Physics	3	1	-	4
6.	ESC	C0502	Programming for Problem Solving Lab	-	-	2	1
7.	BSC	C0B11	Applied Physics Lab	-	-	2	1
8.	BSC	C0B18	Engineering Chemistry Lab	-	-	2	1
<b>Total</b>				<b>14</b>	<b>3</b>	<b>8</b>	<b>21</b>
<b>Total Contact Hours</b>				<b>25</b>			

MR22 II SEMESTER							
S. No	Category	Course Code	Name of the Subject	Contact hours/week			Credits
				L	T	P	
1.	HSMC	C0H01	English	3	-	-	3
2.	ESC	C0201	Basic Electrical and Electronics Engineering	3	-	-	3
3.	BSC	C0B02	Probability and Statistics	3	-	-	3
4.	ESC	C0504	Python Programming	3	1	-	4
5.	ESC	C0506	Python Programming Lab	-	-	2	2
6.	HSMC	C0H02	English Language and Communication Skills Lab	-	-	2	1
7.	ESC	C0202	Basic Electrical and Electronics Engineering Lab	-	-	2	1
8.	ESC	C1201	Engineering and IT Workshop	-	-	2	2
<b>Total</b>				<b>12</b>	<b>1</b>	<b>8</b>	<b>19</b>
<b>Total Contact Hours</b>				<b>21</b>			



MR22 III SEMESTER							
S. No	Category	Course Code	Course Title	L	T	P	Credits
1	PCC	C0507	Discrete Mathematics	3	-	-	3
2	PCC	C0509	Computer Organization and Architecture	3	-	-	3
3	PCC	C0510	Data Structures	3	-	-	3
4	PCC	C0409	Sensors & Devices	3	-	-	3
5	PCC	C0511	Object Oriented Programming through Java	3	-	-	3
6	PCC	C0512	Data Structures Lab	-	-	3	1.5
7	PCC	C6914	Sensors & Devices Lab	-	1	2	2
8	PCC	C0513	Object Oriented Programming through Java Lab	-	-	3	1.5
9	MC	C00M1	Gender Sensitization	-	-	2	-
<b>Total</b>				<b>15</b>	<b>1</b>	<b>10</b>	<b>20</b>
<b>Total Contact Hours</b>				<b>26</b>			

MR22 IV SEMESTER							
S. No	Category	Course Code	Course Title	L	T	P	Credits
1	BSC	C0B07	Applied Statistics and Optimization Techniques	4	-	-	4
2	PCC	C0515	Database Management Systems	3	-	-	3
3	PCC	C0517	Design and Analysis of Algorithms	3	-	-	3
4	PCC	C6901	Internet of Things Fundamentals	3	-	-	3
<b>Professional Elective -I</b>							
5	PEC-I	<b>C6601</b>	<b>Fundamentals of Artificial Intelligence</b>	3	-	-	3
		C0518	Free and Open Source Technologies				
		C6902	Object Oriented Analysis and Design				
6	PCC	C0519	Database Management Systems Lab	-	-	2	1
7	PCC	C1204	Design and Analysis of Algorithms Lab	-	-	2	1
8	PCC	C6903	Internet of Things Fundamentals Lab	-	-	2	1
9	PCC	C6921	Real-time Research Project/ Societal Related Project	-	-	2	1
10	PCC	C0522	Node JS/ React JS/ Django Lab	-	-	2	1
11	MC	C00M2	Environmental Science	2	-	-	-
<b>Total</b>				<b>18</b>	<b>-</b>	<b>10</b>	<b>21</b>
<b>Total Contact Hours</b>				<b>28</b>			

A collection of handwritten signatures and initials in various colors (black, green, blue) is located at the bottom of the page. Some are clearly legible, such as 'Smith' and 'ASPT', while others are more stylized or partially obscured.



MR22 V SEMESTER							
S. No	Category	Course Code	Course Title	L	T	P	Credits
1	PCC	C1211	Automata Theory and Compiler Design	3	-	-	3
2	PCC	C0450	Microprocessors & Microcontrollers	3	-	-	3
3	PCC	C0516	Operating System	3	-	-	3
4	HSMC	C01108	Business Economics and Financial Analysis	3	-	-	3
<b>Professional Elective - I</b>							
5	PEC-I	C6904	Architecting Smart IoT Devices	3	-	-	3
		C6905	Data Analytics for IoT				
		C6906	IoT System Architectures				
		C6907	Operating Systems for IoT				
		C0517	Design and Analysis of Algorithms				
6	PCC	C0520	Operating Systems Lab	-	-	2	2
7	PCC	C0451	Microprocessors & Microcontrollers Lab	-	-	2	2
8	HSMC	C01103	Advanced English Communication Skills Lab	-	-	2	2
9	PCC	C0530	UI design - Flutter	3	-	-	0
10	MC	C00M5	Constitution of India	2	-	-	0
11	MC	C00M3	Quantitative And Verbal Reasoning-I	2	-	-	0
<b>Total</b>				<b>20</b>	<b>-</b>	<b>8</b>	<b>20</b>
<b>Total Contact Hours</b>					<b>28</b>		

MR22 VI SEMESTER							
S.No	Category	Course Code	Course Title	L	T	P	Credits
1	PCC	C6908	Applications of IoT	3	-	-	3
2	PCC	C6909	Programming Languages for IoT	3	-	-	3
3	PCC	C6620	Machine Learning	3	-	-	3
<b>Professional Elective - III</b>							
4	PEC-III	C6620	Computer Vision and Robotics	3	-	-	3
		C1215	Real Time Systems				
			Embedded Hardware Design				
			Energy Sources and Power Mangement/Disaster Management & Mitigation				
		C0518	Software Engineering & Modelling				
5	OEC-I		<b>Open Elective-1</b>	3	-	-	3
6	PCC	C6910	Applications of IoT Lab	-	-	2	1
7	PCC	C6621	Machine Learning Lab	-	-	2	1
8	PRJ	C00P1	Industrial Oriented Mini Project/ Internship/ Skill Development Course (Big data-Spark)	-	-	4	2
9	MC	C00M6	Intellectual Property Rights	3	-	-	0
10	MC	C00M4	Quantitative Aptitude and Verbal Reasoning - II	3	-	-	0
<b>Total</b>				<b>21</b>	<b>-</b>	<b>8</b>	<b>19</b>
<b>Total Contact Hours</b>					<b>29</b>		

[Signatures: A7, Samithi, USA, ASPT, Suresh]

MR 22 VII SEMESTER							
S. No.	Category	Course Code	Name of the Course	Contact Hours / week			Credits
				L	T	P	
1	PCC	C6911	IoT Cloud and Data Analytics	3	-	-	3
2	PCC	C1215	Data Mining	3	-	-	3
<b>Professional Elective-VI</b>							
3	PEC-IV	C6912	Mobile Application Development for IoT	3	-	-	3
		C0536	Software Testing Methodologies				
		C0546	Cloud Computing				
		C6618	Artificial Intelligence				
		C6203	Cryptography and Network Security				
4	PEC-V	C0523	Quantum Computing	3	-	-	3
			Wireless Networks				
		C1220	Augmented Reality & Virtual Reality				
		C6913	IoT Automation				
		C0560	Human Computer Interaction				
5	OEC-II		Open Elective-II	3	-	-	3
6	PCC	C6915	IoT Cloud and Data Analytics Lab	-	-	2	1
7	PCC	C0562	Cloud Computing Lab	-	-	2	1
8	PRJ	C00P2	Project Stage - I	-	-	6	3
<b>Total</b>				<b>15</b>	<b>-</b>	<b>10</b>	<b>20</b>
<b>Total Contact Hours</b>				<b>25</b>			

MR 22 VIII SEMESTER							
S. No.	Category	Course Code	Name of the Course	Contact Hours / week			Credits
				L	T	P	
1	PEC-VI		Embedded Software Design	3	-	-	3
		C6916	5G & IoT Technologies				
		C7328	Cognitive Computing				
		C0559	Distributed Systems				
		C6919	Edge Analytics				
2	PEC-VII	C6920	Industrial IoT	3	-	-	3
			Fog Computing				
			Smart Sensor Technologies				
		C6215	Digital Forensics				
		C0550	Blockchain Technology				
3	OEC-III		Open Elective-III	3	-	-	3
4	PRJ	COOP3	Project Stage - II including Seminar	-	-	22	11
<b>Total</b>				<b>9</b>	<b>-</b>	<b>22</b>	<b>20</b>
<b>Total Contact Hours</b>				<b>31</b>			

A 7 5  
 Venu  
 Anshu  
 Kap Singh  
 WST  
 Suman