



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

M.TECH in EMBEDDED SYSTEMS

COURSE STRUCTURE (R20)

Applicable From 2020-21 Admitted Batch

I YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2015503	Microcontrollers & Programmable Digital Signal Processors	PC	3	0	0	3	30	70	100
2	2015504	System Design with Embedded Linux	PC	3	0	0	3	30	70	100
3		Professional Elective - I	PE	3	0	0	3	30	70	100
4		Professional Elective - II	PE	3	0	0	3	30	70	100
5	2015521	Microcontrollers & Programmable Digital Signal Processors Lab	PC	0	0	3	2	30	70	100
6	2015522	System Design with Embedded Linux Lab	PC	0	0	3	2	30	70	100
7	2015502	Research Methodology & IPR	PC	2	0	0	2	30	70	100
8		Audit Course - I	AC	2	0	0	0	100	-	100
TOTAL				16	0	6	18	310	490	800

I YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2025505	RTL Simulation and Synthesis with PLDs	PC	3	0	0	3	30	70	100
2	2025506	Advanced Digital Signal Processing	PC	3	0	0	3	30	70	100
3		Professional Elective - III	PE	3	0	0	3	30	70	100
4		Professional Elective - IV	PE	3	0	0	3	30	70	100
5	2025523	RTL Simulation and Synthesis with PLDs Lab	PC	0	0	3	2	30	70	100
6	2025524	Advanced Digital Signal Processing Lab	PC	0	0	3	2	30	70	100
7	2025525	Mini Project with Seminar	PS	0	0	4	2	30	70	100
8		Audit Course - II	AC	2	0	0	0	100	-	100
TOTAL				14	0	10	18	310	490	800

II YEAR I SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1		Professional Elective - V	PE	3	0	0	3	30	70	100
2		Open Elective	OE	3	0	0	3	30	70	100
3	2035526	Dissertation Phase - II	PS	0	0	12	6	100	0	100
TOTAL				6	0	12	12	160	140	300

II YEAR II SEMESTER

S. No.	Course Code	Course Name	Course Area	Periods per week			Credits	Scheme of Examination Maximum Marks		
				L	T	P		Internal (CIE)	External (SEE)	Total
1	2045527	Dissertation Phase - III	PS	0	0	12	6	100	0	100
2	2045528	Dissertation Viva - Voce	PS	0	0	28	14	0	100	100
TOTAL				0	0	40	20	100	100	200

Professional Elective (PE) Courses

Professional Elective-I

S. No.	Course Code	Course Title
1	2015507	Programming Languages for Embedded Software
2	2015508	AI & Machine Learning
3	2015509	Computer Vision

Professional Elective-II

S. No.	Course Code	Course Title
1	2015510	Communication Buses & Interfaces
2	2015511	Parallel Processing
3	2015512	Advanced Computer architecture

Professional Elective-III

S. No.	Course Code	Course Title
1	2025513	IoT & Applications
2	2025514	VLSI Signal Processing
3	2025515	SOC Architecture

Professional Elective-IV

S. No.	Course Code	Course Title
1	2025516	Hardware Software Co - Design
2	2025517	Network Security and Cryptography
3	2025518	Physical Design Automation

Professional Elective-V

S. No.	Course Code	Course Title
1	2035519	Scripting Languages
2	2035520	Memory Technologies
3	2035521	Wireless Sensor Networks

Audit Course – I

S. No.	Course Code	Course
1	2010001	English for Research Paper Writing and its Significance
2	2010002	Disaster Management
3	2010003	Sanskrit for Technical Knowledge
4	2010004	Value Education

Audit Course – II

S. No.	Course Code	Course
1	2020005	Constitution of India in Practice
2	2020006	Pedagogy Studies
3	2020007	Stress Management by Yoga
4	2020008	Personality Development Through Life Enlightenment Skills

Open Elective (OE) Course

S. No.	Course Code	Course Title
1	2035501	Overview of VLSI & Embedded Systems
2	2035502	Principles of Electronic Communications
3	2035503	Fundamentals of Nano Technology

***Open Elective** – Students should take Open Electives from List of Open Electives Offered by Other Departments/Branches Only.