



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 (R22)

Applicable From 2022-23 Admitted Batch

S. No	Category	Breakup of credits (Total 68 credits)
1	Programme Core	20
2	Professional Elective	15
3	Open Elective	3
4	Mandatory Credit Course	2
5	Project Work	28
6	Audit Course	-
	Total Credits	68



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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	2215503	Microcontrollers & Programmable Digital Signal Processors	PC	3	0	0	3	40	60	100
2	2215504	System Design with Embedded Linux	PC	3	0	0	3	40	60	100
3		Professional Elective - I	PE	3	0	0	3	40	60	100
4		Professional Elective - II	PE	3	0	0	3	40	60	100
5	2215521	Microcontrollers & Programmable Digital Signal Processors Lab	PC	0	0	3	2	40	60	100
6	2215522	System Design with Embedded Linux Lab	PC	0	0	3	2	40	60	100
7	2215502	Research Methodology & IPR	MC	2	0	0	2	40	60	100
8		Audit Course - I	AC	2	0	0	0	100	-	100
TOTAL				16	0	6	18	380	420	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	2225505	RTL Simulation and Synthesis with PLDs	PC	3	0	0	3	40	60	100
2	2225506	Advanced Digital Signal Processing	PC	3	0	0	3	40	60	100
3		Professional Elective - III	PE	3	0	0	3	40	60	100
4		Professional Elective - IV	PE	3	0	0	3	40	60	100
5	2225523	RTL Simulation and Synthesis with PLDs Lab	PC	0	0	3	2	40	60	100
6	2225524	Advanced Digital Signal Processing Lab	PC	0	0	3	2	40	60	100
7	2225525	Mini Project with Seminar	PS	0	0	4	2	40	60	100
8		Audit Course - II	AC	2	0	0	0	100	-	100
TOTAL				14	0	10	18	380	420	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	40	60	100
2		Open Elective	OE	3	0	0	3	40	60	100
3	2235526	Dissertation Work Review-I	PS	0	0	12	6	100	0	100
TOTAL				6	0	12	12	180	120	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	2245527	Dissertation Work Review-II	PS	0	0	12	6	100	0	100
2	2245528	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	2215507	Programming Languages for Embedded Software
2	2215508	AI & Machine Learning
3	2215509	Computer Vision

Professional Elective-II

S. No.	Course Code	Course Title
1	2215510	Communication Buses & Interfaces
2	2215511	Parallel Processing
3	2215512	Advanced Computer architecture

Professional Elective-III

S. No.	Course Code	Course Title
1	2225513	IoT & Applications
2	2225514	VLSI Signal Processing
3	2225515	SOC Architecture

Professional Elective-IV

S. No.	Course Code	Course Title
1	2225516	Hardware Software Co - Design
2	2225517	Network Security and Cryptography
3	2025518	Physical Design Automation

Professional Elective-V

S. No.	Course Code	Course Title
1	2235519	Scripting Languages
2	2235520	Memory Technologies
3	2235521	Wireless Sensor Networks

Audit Course – I

S. No.	Course Code	Course
1	2210001	English for Research Paper Writing and its Significance
2	2210002	Disaster Management
3	2210003	Sanskrit for Technical Knowledge
4	2210004	Value Education

Audit Course – II

S. No.	Course Code	Course
1	2220005	Constitution of India in Practice
2	2220006	Pedagogy Studies
3	2220007	Stress Management by Yoga
4	2220008	Personality Development Through Life Enlightenment Skills

Open Elective (OE) Course

S. No.	Course Code	Course Title
1	2235501	Overview of VLSI & Embedded Systems
2	2235502	Principles of Electronic Communications
3	2235503	Fundamentals of Nano Technology

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