M.Tech (ECE) with specialization in Microelectronic Systems and IoT

PROGRAMME OUTCOMES:

PO1: An ability to independently carry out research /investigation and development work to solve practical problems

PO2: An ability to write and present a substantial technical report/document

PO3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: Students will be able to analyze and develop models, tools and techniques to solve complex problems in VLSI and IoT.

PSO2: Students will be able to demonstrate entrepreneurial skills and ethical principles.

M.Tech in ECE with specialization in Microelectronic Systems and IoT Programme w.e.f. 2020-21 Batch

FIRST SEMESTER

S.No	Sub Code	Subject	Contact hours	Credits
1	17M11EC118	Advanced Digital Signal Processing	3	3
2	20M51EC121	Introduction to IoT System Design	3	3
3		DE-I	3	3
4		DE-II	3	3
5		DE-III	3	3
6	18M11GE111	Research Methodology and Intellectual Property Rights	2	2
7.	20M55EC113	Microelectronics and IoT Lab-1	6	3
		Total	23	20

SECOND SEMESTER

S.No	Sub Code	Subject	Contact hours	Credits
1	17M21EC115	Analogue Integrated Circuit Design	3	3
2	20M51EC124	IoT Perspective: Cloud Computing and Machine Learning	3	3
3		DE-IV	3	3
4		DE-V	3	3
5	20M55EC114	Microelectronics and IoT Lab-2	6	3
6	17M11EC120	Project Based Learning - I	4	2
		Audit-I	2	Qualifying
		Total	22	17

THIRD SEMESTER

Sl. No.	Course Code	Title	Contact Hours				Credits
			L	T	P	Total	
1.		Open Elective	3			3	3
2.	17M17EC218	Seminar & Term Paper **OR** Earn credits by transfer eg. MOOCs, Course Work at another Institute, Supervised Study				4	4
3.	17M15EC114	Project Based Learning - II				8	4
4.	17M17EC219/ 17M17EC220/ 17M17EC221	Dissertation /Industrial Project / Entrepreneurial Project				8	4
		Audit-II	2			2	Qualifying
		TOTAL				25	15

FOURTH SEMESTER

S.No	Sub Code	Subject	Contact hours	Credits
1	17M17EC222/	Dissertation /Industrial Project/	32	16
	17M17EC223/ 17M17EC224	Entrepreneurial Project	**32**	**16**

Courses for Audit-I and II:

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through life enlightenment skills

List of some Elective Subjects

1. Digital Integrated Circuit Design
2. HDL Based Digital System Design
3. Semiconductor Device Modelling
4. Digital System Testing
5. Advanced Embedded System
6. Fundamentals of Semiconductor devices
7. VLSI Physical Design
8. Mixed Signal IC Design
9. Big Data Analytics for IoT
10. IoT Security
11. VLSI Architecture for DSP Applications
12. Optoelectronic and Photonics Materials & Devices
13. Low Power VLSI Design
14. ASIC Verification using System Verilog