SCHOOL OF ENGINEERING AND SCIENCES

M.Tech in IoT
2023-25 Batch

Semester Wise Course Credit Distribution Under Various Categories

Category	S1	S2	S3	S4	Total	%age
Value Added Courses (UG Common) (VAC)	2	-	-	-	02	2.5%
Skill Enhancement Courses (SEC)	2	2	-	-	04	5%
Multidisciplinary / Interdisciplinary / Foundation Core (FIC)	3	3	-	-	06	7.5%
Major Core (CC) + Specialization (SE) + Core Elective (CE)	16	20	-	-	36	45%
Research / Design / Industrial Practice / Project (RDIP)	-	-	17	15	32	40%
Grand Total	23	25	17	15	**80**	**100%**

VAC- Community Engagement & Social Responsibility
SEC-Problem Solving or Entrepreneurial mindset or Design Thinking
FIC- Mathematics or AIML or Project Management

M.Tech in IoT

Category	Sub-Category	Course Title	L	T/D	P/Pr	Credits
Semester-1						
VAC	University AEC	Community Engagement & Social Responsibility	-	-	1	01*
VAC	University AEC	Research Seminar	-	-	1	01*
SEC1	SEC	Design Thinking	1	-	1	02
CC	CORE	Embedded Programming	3	-	1	4
CC	CORE	Embedded Networking	3	-	1	4
CC	CORE	Smart Sensors and Actuators	3	-	1	4
CC	CORE	Computer Network and Internet Protocol	3	-	1	4
Multidisciplinary	School (Engg./Sc.)	AI/ML Techniques	2	-	1	3
Semester Total						**21**
Semester-2						
Category	Sub-Category	Course Title	L	T/D	P/Pr	Credits
VAC	University AEC	Community Engagement & Social Responsibility	-	-	1	01*
VAC	University AEC	Research Seminar	-	-	1	01*
SEC2	SEC	Entrepreneurial mindset	1	-	1	2
CE	Core Elective	Industry - Core Elective	3	-	1	4
CE	Core Elective	Industry - Core Elective	3	-	1	4
CC	Core	IoT Architecture and Protocols	3	-	1	4
CC	Core	SOC Design for IoT	3	-	1	4
CC	Core	Wireless Sensor Networks	3	-	1	4
Multidisciplinary	University (PSB)	Project Management	-	2	1	3
Semester Total						**27**

		Semester-3				
Category	Sub-Category	Course Title	L	T/D	P/Pr	Credits
RDIP	Research / Design / Industrial Practice / Project	Thesis (Project)	-	-	14	14
RDIP	Research / Design / Industrial Practice / Project	Industrial Practice			3	3
Semester Total						17
		Semester-4				
Category	Sub-Category	Course Title	L	T/D	P/Pr	Credits
RDIP	Internship / Research / Thesis	Thesis	-	-	15	15
Semester Total						15

List of Core Electives

1	Designing Embedded systems with UML
2	Distributed Systems and Cloud Computing
3	CMOS Digital IC Design
4	CMOS Analog and Mixed Signal IC Design
5	VLSI Accelerators for AI edge Computing Devices
6	RFIC Design
7	CMOS Circuit Design for 5G
8	Advanced Data Science Topics
9	Hardware/Software Co-Design
10	Wireless Access Technologies
11	Security applications in networking and distributed systems
12	Hardware Security for IoT
13	Machine Learning for Communication systems
14	Mobile Advanced Networks
15	Object-Oriented Programming in C++ and Java
16	Security applications in networking and distributed systems
17	Semantic Web and Information Extraction technologies
18	Advanced Signal Processing and Data Analytics
19	Computational Graph Theory
21	Network Security
22	Signal Processing and Computer Vision
23	VLSI Technology
24	Smart grid communication
25	Real Time Operating Systems
26	Embedded Linux
27	VLSI Testing and Verification
28	Deep Learning for IoT