

<b>JBIET-R24</b>	<b>J. B. Institute of Engineering and Technology</b> (UGC Autonomous)	<b>M.Tech</b>
<b>M.Tech. (VLSI SYSTEM DESIGN)</b> <b>Course Structure</b>		

**I YEAR I SEMESTER**

S. No	Code	Course Title	L	T	P/D	Credits
1	MM61A	Digital System Design	3	0	0	3
2	MM61B	Digital CMOS Integrated Circuit Design	3	0	0	3
3	MM61C	1. Scripting Languages for VLSI	3	0	0	3
	MM61D	2. Digital System Design using HDL				
	MM61E	3. Microcontrollers and Programmable Digital Signal Processors				
4	MM61F	1. CPLD and FPGA Architectures and Applications	3	0	0	3
	MM61G	2. Nanomaterials and Nanotechnology				
	MM61H	3. IOT and its Applications				
5	MM61I	HDL Simulation Lab	0	0	4	2
6	MM61J	Digital CMOS IC Design Lab	0	0	4	2
7	MM91A	Soft Skills	2	0	0	0
<b>Total</b>			<b>14</b>	<b>0</b>	<b>8</b>	<b>16</b>

**I YEAR II SEMESTER**

S. No	Code	Course Title	L	T	P/D	Credits
1	MM62A	Analog CMOS IC Design	3	0	0	3
2	MM62B	Low Power VLSI Design	3	0	0	3
3	MM62C	1. VLSI Signal Processing	3	0	0	3
	MM62D	2. RF IC Architecture				
	MM62E	3. SOC Design				
4	MM62F	1. Hardware Software Co-Design	3	0	0	3
	MM62G	2. Image and Video Processing				
	MM62H	3. Design for Testability				
5	MM92A	Research Methodology and IPR	2	0	0	2
6	MM62I	Analog CMOS IC Design Lab	0	0	4	2
7	MM62J	VLSI Design and Verification Lab	0	0	4	2
8	MM92B	Personality Development and Professional values	2	0	0	0
<b>Total</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>18</b>

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**II YEAR –I SEMESTER**

<b>S. No.</b>	<b>Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	MM33A MM33B MM33C	1.Memory Technologies 2.CAD for VLSI 3.Artificial Intelligence	3	0	0	3
2	MM60A MM60B	1. Clean Room Technology and Maintenance. 2. Principles of Computer Communications and Networks.	3	0	0	3
3	MM631	Mini Project	0	0	4	2
4	MM632	Technical Seminar	0	0	2	1
5	MM633	Phase-I Dissertation	0	0	18	9
<b>Total</b>			<b>6</b>	<b>0</b>	<b>24</b>	<b>18</b>

**II YEAR – II SEMESTER**

<b>S. No.</b>	<b>Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
1	MM641	Phase-II Dissertation	0	0	32	16
<b>Total</b>			<b>0</b>	<b>0</b>	<b>32</b>	<b>16</b>

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**R24 COURSE STRUCTURE (2024-2025)**

<b>Open Elective-I</b>										
<b>S. No.</b>	<b>Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>D</b>	<b>Credits</b>	<b>Category</b>	<b>Common Subject (Y/N)</b>	
1	MM3OA	Disaster Management	3	0	0	0	3	OEC	CE	
2	MM3OB	Precast & Prefabricated Construction	3	0	0	0	3	OEC	CE	
3	MM6OA	Clean Room Technology and Maintenance.	3	0	0	0	3	OEC	ECE	
4	MM6OB	Principles of Computer Communications and Networks.	3	0	0	0	3	OEC	ECE	
5	MM2OA	Renewable Energy Technologies and Battery Storage	3	0	0	0	3	OEC	EEE	
6	MM2OB	Solar and Energy Storage Systems	3	0	0	0	3	OEC	EEE	
7	MM1OA	Industrial Safety	3	0	0	0	3	OEC	MECH	
8			3	0	0	0	3	OEC	CSE	
9			3	0	0	0	3	OEC	CSE	