**M Tech Curriculum – 2025**

**MTech in Electronics Engineering(VLSI Design)**

**Department of Electronics and Communication Engineering, MIT Bengaluru**

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| **Year** | **First SEMESTER** | | | | | | **Second SEMESTER** | | | | | | |
| Sub. Code | Subject Name | L | T | P | C | Sub. Code | Subject Name | L | T | P | C |
| **I** | ECE XXXX | Linear Algebra, probability and statistics | 3 | 1 | 0 | 4 | ECE XXXX | CAD Algorithms for VLSI | 4 | 0 | 0 | 4 |
| ECE XXXX | Digital CMOS IC Design | 3 | 1 | 3 | 5 | ECE XXXX | Low Power System Design | 3 | 1 | 0 | 4 |
| ECE XXXX | Semiconductor Device Theory & Fabrication | 4 | 0 | 0 | 4 | ECE XXXX | FPGA Architectures and Applications | 3 | 0 | 3 | 4 |
| ECE XXXX | Analog VLSI Design | 4 | 0 | 3 | 5 | ECE XXXX | Elective-2 | 4 | 0 | 3 | 5 |
| ECE XXXX | Elective-1 | 4 | 0 | 3 | 5 | ECE XXXX | Elective-3 | 4 | 0 | 3 | 5 |
| HUM\_5051 | Research Methodology &Technical Communication | 1 | 0 | 3 | - | \*\*\*\*\*\*\* | Open Elective | 3 | 0 | 0 | 3 |
|  |  |  |  |  |  | HUM\_5051 | Research Methodology &Technical Communication | 1 | 0 | 3 | 2 |
|  | |  |  |  | **23** |  | |  |  |  | **27** |

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| **Year** | **Third & fourth SEMESTER** | | | | | |
| **Sub. Code** | **Subject Name** | **L** | **T** | **P** | **C** |
| **II** | ECE XXXX | Project Work and Industrial Training | 0 | 0 | 0 | 25 |
|  | |  |  |  | **25** |

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| **Programme Electives**   1. CMOS Analog & IO Circuit Design 2. CMOS Mixed Signal Design 3. Analog and Mixed Signal Verification 4. Digital System Design using Verilog 5. Advanced Computer Architecture 6. Advanced Microprocessors and Microcontrollers 7. Hardware Software Co-Design 8. ASIC Design 9. Introduction to System Verilog 10. Embedded System and SoC Design 11. SoC Design for Embedded System and IoT 12. IOT based System Design 13. Intelligent Embedded System Design 14. Embedded Security 15. Embedded Applications in Automotive Electronics 16. Fault Diagnosis in Embedded System | **Open Electives**   1. ARM Processor and Application 2. Nano Electronics |