

**MTech (CAD/CAM)**

**Sem I (All compulsory)**

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|--|-----------|
| 1. Analytical Methods in Engineering                 | [3-0-0-3] |
| 2. Research Methodology                              | [3-0-0-3] |
| 3. NC-CNC Machine Tools and Programming              | [2-0-2-3] |
| 4. Finite Element Methods for Mechanical Engineering | [3-0-0-3] |
| 5. Geometric Modelling Lab (GML)                     | [0-0-3-2] |

**Sem II (3 Compulsory + 2 Electives)**

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|---|-----------|
| 1. Computer-Aided Geometric Design      | [3-0-0-3] |
| 2. Additive & Subtractive Manufacturing | [3-0-0-3] |
| 3. Geometric Programming Lab (GPL)      | [0-0-3-2] |
| 4. Elective 1                           | [3-0-0-3] |
| 5. Elective 2                           | [3-0-0-3] |

**Sem III**

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|--------------------------|------------|
| ME598 Graduate Seminar I | [0-0-0-2]  |
| ME699 M.Tech. Thesis     | [0-0-0-16] |

**Sem IV**

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|---------------------------|------------|
| ME599 Graduate Seminar II | [0-0-0-2]  |
| ME699 M.Tech. Thesis      | [0-0-0-16] |

**Electives**

1	ME612	Rapid Product Development Technologies
2	ME615	Computer Integrated Manufacturing Systems
3	ME621	Advanced Mechanics of Solid
4	ME642	Advanced Manufacturing Processes and Technologies
5	ME651	Industrial Instrumentation & Metrology
6	ME681	Engineering Optimization
7	ME686	MEMS: Microfabrication and Application
8	ME687	Smart Materials and Structures
9	ME631	Mechanical Vibration and Condition Monitoring
10	MT603	Sensors and Actuators
11	ME675	Thermal Aspects in Manufacturing
12	ME685	Robotics and Intelligent Systems
13	ME645	Metal Forming
14	ME646	Nano Finishing Science and Technology
15	ME605	Design for Manufacturing and Assembly
16	ME613	Product Life Cycle Management
17	ME619	Supply Chain Management
18	ME620	Business Analytics
19	ME614	Scheduling
20	ME626	Design of Experiment

**MTech (Design)**

**Sem I (All compulsory)**

1. Analytical Methods in Engineering	[3-0-0-3]
2. Research Methodology	[3-0-0-3]
3. Advanced Mechanics of Solid	[3-0-0-3]
4. Finite Element Methods for Mechanical Engineering	[3-0-0-3]
5. Design Lab I	[0-0-3-2]

**Sem II (2 Compulsory + 3 Electives)**

1. Mechanical Vibrations and Condition Monitoring	[3-0-2-4]
2. Design Lab II	[0-0-3-2]
3. Elective 1	[3-0-0-3]
4. Elective 2	[3-0-0-3]
5. Elective 3	[3-0-0-3]

**Sem III**

ME598 Graduate Seminar I	[0-0-0-2]
ME699 M.Tech. Thesis	[0-0-0-16]

**Sem IV**

ME599 Graduate Seminar II	[0-0-0-2]
ME699 M.Tech. Thesis	[0-0-0-16]

**Electives**

1	ME622	Fracture and Fatigue
2	ME623	Mechanics of Composite Laminates
3	ME624	Reliability of Mechanical Systems
4	ME632	Fault Diagnosis and Prognosis of Engineering Systems
5	ME636	Computational Fluid Dynamics
6	ME675	Thermal Aspects in Manufacturing
7	ME681	Engineering Optimization
8	ME685	Robotics and Intelligent Systems
9	ME686	Micro Electromechanical Systems (MEMS)
10	ME687	Smart Materials and Structures
11	ME688	Biomaterials Science and Engineering
12	EC661	Fuzzy logic and Neural Networks
13	MT603	Sensor and Actuators
14	ME637	Fundamentals and Applications of Microfluidics
15	ME605	Design for Manufacturing and Assembly
16	ME602	Computational Geometry for Design and Manufacturing
17	ME611	Design of Experiment
18	ME532	Processing of Composites
19	ME625	Contact Mechanics
20	ME532	Processing of Composites

**MTech in Smart Manufacturing (SM)**

**Sem I (All compulsory)**

1. Analytical Methods in Engineering	[3-0-0-3]
2. Research Methodology	[3-0-0-3]
3. Precision Manufacturing process	[3-0-0-3]
4. Automation and Control of Manufacturing Process	[3-0-0-3]
5. Manufacturing Processes Lab I	[0-0-3-2]

**Sem II (3 Compulsory + 2 Electives)**

1. Cyber Physical systems	[3-0-0-3]
2. Additive & Subtractive Manufacturing	[3-0-0-3]
3. Manufacturing Processes Lab II	[0-0-3-2]
4. Elective 1	[3-0-0-3]
5. Elective 2	[3-0-0-3]

**Sem III**

ME598 Graduate Seminar I	[0-0-0-2]
ME699 M.Tech. Thesis	[0-0-0-16]

**Sem IV**

ME599 Graduate Seminar II	[0-0-0-2]
ME699 M.Tech. Thesis	[0-0-0-16]

**Electives**

1	Applied AI& ML for Manufacturing Process
2	Simulation of Manufacturing Process
3	Computer-Aided Geometric Design
4	Supply Chain Management
5	Flexible Manufacturing Systems
6	Fabrionics
7	Joining and forming process
8	Sensing and Instrumentation
9	Robotics and Intelligent Systems
10	Finite Element Analysis for Mechanical Engineers
11	Business Analytics using R
12	Quality Control and Reliability Engineering
13	Applications of Six sigma in Manufacturing Industry
14	Smart Manufacturing
15	Industrial Instrumentation and Metrology