

Semester-wise Breakup of Courses (MS)

Semester I

S1	Code	Subject	Pre-Requisite	Course Cr Hrs
1	ME XXX	Core-I	-	3-0-3
2	ME XXX	Core-II	-	3-0-3
3	ME XXX	Elective-I	-	3-0-3
4	ME 798	Research Methodology	-	1-0-1
Semester Credit Hours				10-0-10
Cumulative Credit Hours				10-0-10

Semester II

S2	Code	Subject	Pre-Requisite	Course Cr Hrs
1	ME XXX	Core-III	-	3-0-3
2	ME XXX	Core-IV	-	3-0-3
3	ME XXX	Elective-II	-	3-0-3
Semester Credit Hours				9-0-9
Cumulative Credit Hours				19-0-19

Semester III

S3	Code	Subject	Pre-Requisite	Course Cr Hrs
1	ME XXX	Elective-III	-	3-0-3
2	ME XXX	Elective-IV	-	3-0-3
3	ME 799	MS Thesis	-	6-0-6
Semester Credit Hours				12-0-12
Cumulative Credit Hours				31-0-31

Semester IV

S4	Code	Subject	Pre-Requisite	Course Cr Hrs
1	ME 799	MS Thesis	Continued from Previous	6-0-6
Cumulative Credit Hours				31-0-31

Core Courses for Design

List of Core Courses (Design Engineering)			
S. No.	Course Code	Course Title	Cr Hrs
1	ME 600	Theory of Elasticity	3-0-3
2	ME 702	Advanced Theory of Vibrations	3-0-3
3	ME 602	Finite Element Methods	3-0-3
4	ME 701	Advanced Mechanics of Composites	3-0-3
5	ME 704	Advanced Mechanics of Materials	3-0-3
6	ME 611	Fracture Mechanics	3-0-3

*At least four courses from the above

*The sequence of the core and elective courses can be varied depending upon the faculty availability and PG students' course requirement.

List of Elective Courses (Design Engineering)			
S. No.	Course Code	Course Title	Cr Hrs
1	ME 703	Advanced Materials in Engineering	3-0-3
2	ME 603	Theory of Plasticity	3-0-3
3	ME 604	Computational Fracture Mechanics	3-0-3
4	ME 605	MEMS Sensors & Actuators	3-0-3
5	ME 606	MEMS Devices and Applications	3-0-3
6	ME 610	Micro Fabrication	3-0-3
7	ME 711	MEMS Materials and Processes	3-0-3
8	ME 713	MEMS Micro System Design	3-0-3
9	ME 707	Advanced CAD/CAM	3-0-3
10	ME 708	Computer Integrated Manufacturing	3-0-3
11	ME 709	Advanced Manufacturing	3-0-3
12	ME 607	Engineering Tribology	3-0-3
13	ME 612	Structural Dynamics	3-0-3
14	ME 706	Advanced Strength of Materials	3-0-3
15	ME 704	Thin Walled Structure	3-0-3
16	ME 608	Theory of Plates and Shell	3-0-3
17	ME 713	Computational Fatigue Mechanics	3-0-3
18	ME 714	Computational Fracture Mechanics	3-0-3
19	ME 609	Product and Process Design	3-0-3
20	ME 715	Special Topics in Mechanical Engineering	3-0-3
21	MA 645	Advanced Numerical Techniques	3-0-3
22	MA 680	Applied Partial Differential Equation	3-0-3
23	MA 644	Advanced Engineering Mathematics	3-0-3

*At least one mathematics course from the following

*Post-graduate elective courses of Mechanical Engineering program of other streams can also be taken as elective courses.

Core Courses for Fluid Power

List of Core Courses (Fluid Power Engineering)			
S. No.	Course Code	Course Title	Cr Hrs
1	ME 720	Advanced Incompressible Fluid Dynamics	3-0-3
2	ME 620	Computational Fluid Dynamics I	3-0-3
3	ME 722	Advanced Heat Transfer	3-0-3
4	ME 728	Advanced Compressible Fluid Dynamics	3-0-3
5	ME 623	Turbo Machinery	3-0-3
6	ME 728	Turbulent Fluid Flow	3-0-3

*At least four courses from the above

*The sequence of the core and elective courses can be varied depending upon the faculty availability and PG students' course requirement.

List of Elective Courses (Fluid Power Engineering)

S. No.	Course Code	Course Title	Cr Hrs
1	ME 622	Computational Heat Transfer	3-0-3
2	ME 624	Computational Gas Dynamics	3-0-3
3	ME 721	Computational Fluid Dynamics II	3-0-3
4	ME 724	Computational Thermo-Mechanics	3-0-3
5	ME 725	Waves and Compressible Flow	3-0-3
6	ME 625	Combustion Phenomena	3-0-3
7	ME 726	Advance Thermodynamics	3-0-3
8	ME 727	Gas Turbine Theory and Performance	3-0-3
9	ME 626	Conduction Heat Transfer	3-0-3
10	ME 627	Convection Heat Transfer	3-0-3
11	ME 628	Radiation Heat Transfer	3-0-3
12	MA 645	Advanced Numerical Techniques	3-0-3
13	MA 680	Applied Partial Differential Equation	3-0-3
14	MA 644	Advanced Engineering Mathematics	3-0-3

*At least one mathematics course from the following

*Post-graduate elective courses of Mechanical Engineering program of other streams can also be taken as elective courses.