

**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MECHANICAL ENGINEERING DEPARTMENT**

**Programme** : M.Tech.  
**Specialization** : Manufacturing Engineering  
**Department** : Mechanical Engineering

**Semester-I**

Course Number	Course Title	L	T	P	C	Course Tag*
ME 899	Communication Skills	PP/NP				C
	Core 1 (Basket 1)	3	1	0	4	C
	Core 2 (Basket 1)	3	1	0	4	C
	Core 3 (Basket 1)	3	1	0	4	C
	Elective I (Basket 2)	3	0	0	6	D
	Elective II	3	0	0	6	D
	Elective III / Institute Elective	3	0	0	6	D/I <sup>##</sup>
	Elective IV (Basket 3)	3	0	0	6	D
	Total Credits:				36	

\*C: Core; DIC: Department introductory; D: Department elective; I: Institute elective

**## If the student opts for “I” in 1<sup>st</sup> semester then he/she has to opt for “D” in 2<sup>nd</sup> semester and vice versa.**

**Semester-II**

Course Number	Course Title	L	T	P	C	Course Tag*
ME 643	Materials Processing and Simulation Lab	0	0	3	3	C
ME 694	Seminar	0	0	4	4	C
	Elective V (Basket 4)	3	0	0	6	D
	Elective VI	3	0	0	6	D
	Elective VII	3	0	0	6	D
	Elective VIII	3	0	0	6	D
	Elective IX / Institute Elective	3	0	0	6	I/D <sup>##</sup>
	Total Credits:				37	

\*C: Core; DIC: Department introductory; D: Department elective; I: Institute elective

**Semester-III**

Course Number	Course Title	L	T	P	C	Course Tag*
ME 797	M.Tech. Project – Stage I	0	0	0	50	C
	Total Credits:				50	

**Semester-IV**

Course Number	Course Title	L	T	P	C	Course Tag*
ME 798	M.Tech. Project – Stage II	0	0	0	40	C
	Total Credits:				40	

**Basket 1 for Core:**

Number	Title
ME 785	Machining Processes
ME 786	Welding Processes
ME 787	Deformation Processes
ME 788	Liquid Material Processing

**One elective to be chosen from each of following Baskets****Basket 2: Manufacturing system (Elective I)**

Number	Title
ME 711	Manufacturing planning and control
ME 773	Reliability modelling and analysis of engineering systems
ME 477	Introduction to optimization
ME 714	Computer Integrated Manufacturing
ME 712	CNC and Programming
ME 794	Statistical Design of Experiments

**Basket 3: Maths (Elective IV)**

Number	Title
ME 673	Mathematical Methods in Engineering
ME 621	Mathematical Method for Mechanics and Dynamics

**Basket 4: Computational Analysis (Elective V)**

Number	Title
ME 613	Finite element methods
ME 415	Computational fluid dynamics and heat transfer
ME 756	Numerical methods for manufacturing processes
ME 789	Computational tools for process modelling
ME 793	Multiscale Materials Informatics, Discovery and Design