

**Structure of Curriculum
2023-Session**

SEMESTER - 1							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre- requisites
			L	T	P	C	
MA101	Mathematics - I	Sc/HS	3	1	0	4	None
ME101	Engineering Mechanics	BE	3	0	0	3	None
CY101/ PH101	Chemistry/Physics	Sc/HS	2/3	1	0	3/4	None
CE101	Engineering Drawing	BE	1	0	4	3	None
EE101/ EC101	Basic Electrical Engineering/ Basic Electronics Engineering	BE	2	0	0	2	None
HS101	English Language Skills	Sc/HS	2	0	0	2	None
HS151	English Language Skills Lab	L	0	0	2	1	None
CY151/ PH151	Chemistry/Physics Lab	L	0	0	2	1	None
EE151/ EC151	Basic Electrical Lab/ Basic Electronics Lab	L	0	0	2	1	None
Total Contact Hours – Component wise			13/ 14	2	10		
Total Contact Hours			25/26			20/21	-

SEMESTER - 2							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA102	Mathematics – II	Sc/HS	3	1	0	4	None
EE101/ EC101	Basic ElectricalEngineering/ BasicElectronicsEngineering	BE	2	0	0	2	None
PH101/ CY101	Physics /Chemistry	Sc/HS	3/2	1	0	4/3	None
CY102	Environmental Science	Sc/HS	2	0	0	2	None
CS102	Introduction to Computing	BE	2	1	0	3	None
ME152	Workshop Practice	L	0	0	4	2	None
EE151/ EC151	Basic Electrical Lab/Basic Electronics Lab	L	0	0	2	1	None
CY151/ PH151	Chemistry Lab/Physics Lab	L	0	0	2	1	None
CS152	Computing Lab	L	0	0	2	1	None
VA102	Skill Development and Prototyping	L	0	0	2	1	
Total Contact Hours – Component wise			12/11	3	12		
Total Contact Hours			27/26			21/20	---

SEMESTER - 3							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre- requisites
			L	T	P	C	
MA 201	Integral Transforms and PDEs	M	3	1	0	4	None
Professional Core Courses - 1, 2, 3							
ME 201	Strength of Materials	PC	3	0	0	3	None
ME 203	Engineering Thermodynamics	PC	3	0	0	3	None
ME 205	Fluid Mechanics	PC	3	0	0	3	None
Special Course - 1							
ME 291	Safety Engineering	S	2	0	0	2	None
Lab Courses - 1, 2, 3							
ME 251	Material Testing Lab	L	0	0	2	1	None
ME 253	Advanced Workshop Practice.	L	0	1	2	2	None
ME 255	Fluid Mechanics Lab	L	0	1	2	2	None
Total Contact Hours - Component wise			14	3	6		
Total Contact Hours			23			20	---

SEMESTER - 4							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre- requisites
			L	T	P	C	
Professional Core Courses - 4, 5, 6							
ME 202	Kinematics & Dynamics of Machines	PC	3	1	0	4	ME 101
ME 204	Engineering Materials	PC	3	0	0	3	None
ME 206	Applied Thermodynamics	PC	3	0	0	3	ME 203
Professional Elective - 1							
ME 212	Metrology & Instrumentation	PE	3	0	0	3	None
ME 214	Dynamics of rigid Bodies	PE	3	0	0	3	None
ME 216	Principles of Gas Turbine	PE	3	0	0	3	None
ME 218	Concepts in Engineering Design	PE	3	0	0	3	None
Professional Elective - 2							
ME 220	Fluid Machines	PE	3	0	0	3	None
ME 222	Advanced Strength of Material	PE	3	0	0	3	None
ME 224	Organizational Behaviour	PE	3	0	0	3	None
ME 226	Numerical Methods in Engineering	PE	3	0	0	3	None
Open Elective - 1							
ME 272	Product Design and Development.	OE	2	0	0	2	None
Lab Courses - 4, 5, 6							
ME 252	Theory of Machine Lab	L	0	1	2	2	None
ME 254	Material Science Lab	L	0	0	2	1	None
ME 256	Fluid Machines Lab	L	0	1	2	2	None
Total Contact Hours – Component wise			17	3	6		
Total Contact Hours			26			23	---

SEMESTER - 5							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
Professional Core Courses - 7, 8, 9							
ME 301	Manufacturing Technology-I	PC	3	0	0	3	None
ME 303	Heat Transfer	PC	3	1	0	4	None
ME 305	Machine Design-I	PC	3	1	0	4	None
Professional Elective - 3							
ME 311	Internal Combustion Engine	PE	3	0	0	3	None
ME 313	Experimental Stress Analysis	PE	3	0	0	3	None
ME 315	Non Traditional Manufacturing	PE	3	0	0	3	None
Professional Elective – 4							
ME 317	Industrial Engineering	PE	3	0	0	3	None
ME 319	Design of Thermal systems	PE	3	0	0	3	None
ME 321	Tribology	PE	3	0	0	3	None
Open Elective – 2							
ME 371	Power plant Engg. And Energy Audit.	OE	2	0	0	2	None
Lab Courses - 7, 8, 9							
ME 351	Non Traditional Machining Lab	L	0	0	2	1	None
ME 353	Thermal Engineering Lab	L	0	1	2	2	None
ME 355	Machine Design and Drawing	L	0	1	2	2	None
Total Contact Hours – Component wise			17	4	6		
Total Contact Hours			27			24	---

SEMESTER - 6							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
Professional Core Courses – 10, 11							
ME 302	Machine Design-II	PC	3	1	0	4	ME 305
ME 304	Manufacturing Technology-II	PC	3	0	0	3	None
Professional Elective – 5							
ME 312	Power Plant Engineering	PE	3	0	0	3	None
ME 314	Mechanics of Composite Material	PE	3	0	0	3	None
ME 316	Machine Tool Technology	PE	3	0	0	3	None
ME 318	Advanced Manufacturing Technology and Quality Assurance	PE	3	0	0	3	None
Professional Elective – 6							
ME 320	CAD-CAM	PE	3	0	0	3	None
ME 322	Principles of Management	PE	3	0	0	3	None
ME 324	Gas Dynamics	PE	3	0	0	3	None
ME 326	Robotics	PE	3	0	0	3	None
Open Elective – 3							
ME 372	Industry 4.0 and 6 Sigma Engg.	OE	2	0	0	2	None
Special HS Course – 2							
HS392	Corporate English	S	2	0	0	2	None
Lab Courses – 10, 11							
ME 352	Advanced Mechanical Lab-I	L	0	1	2	2	None
ME 354	Advanced Manufacturing Lab	L	0	1	2	2	None
ME 382	Minor Project	P	0	0	2	1	None
Total Contact Hours – Component wise			16	3	6		
Total Contact Hours			25			22	---

SEMESTER – 7							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
ME 401	Project – I	P	0	0	10	5	None
Professional Elective –7							
ME 411	Refrigeration and Air-conditioning	PE	3	0	0	3	None
ME 413	Mechanical Micro Machining	PE	3	0	0	3	None
ME 415	Fracture Mechanics	PE	3	0	0	3	None
ME417	Supply Chain and Logistics Management	PE	3	0	0	3	None
Professional Elective –8							
ME 419	Mechatronics and Control	PE	3	0	0	3	None
ME 421	Wind energy	PE	3	0	0	3	None
ME 423	Green Manufacturing	PE	3	0	0	3	None
ME 425	Biomechanics	PE	3	0	0	3	None
Open Elective –4							
ME 471	Supply Chain Management	OE	2	0	0	2	None
Special Course –3							
CE491	Disaster Management	S	2	0	0	2	None
Lab Courses – 12							
ME 451	Advanced Mechanical Lab-II	L	0	1	2	2	None
ME 481	Summer Internships*	I	0	0	0	2	
Total Contact Hours – Component wise			10	1	12		
Total Contact Hours			23			19	---

*The Summer Internships should be of at least eight weeks, which can be split over two summer breaks (one after 4th Semester and the other after 6th Semester) with at least four weeks each.

SEMESTER - 8							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre- requisites
			L	T	P	C	
ME 402	Project - II	P	0	0	18	9	None
Professional Elective –9							
ME 412	Computational Fluid Dynamics	PE	3	0	0	3	None
ME 416	Manufacturing of Composite Materials	PE	3	0	0	3	None
Professional Elective –10							
ME 418	Mechanical Vibration	PE	3	0	0	3	None
ME 420	Automobile Engineering.	PE	3	0	0	3	None
ME 422	Advanced Manufacturing Process	PE	3	0	0	3	None
Special Course –4							
HS492	Entrepreneurship	S	2	0	0	2	None
Total Contact Hours – Component wise			8	0	18		
Total Contact Hours			26			17	---