

Indian Institute of Technology Indore

Department of Mechanical Engineering



B.Tech.. Program

in

Mechanical Engineering

(Revised curriculum as per NEP)

2nd Year B.Tech. (Mechanical Engineering)

3rd Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ZZ 2XX	Course-I for Minor Program*	X-X-X	3
MA 205	Complex Analysis	3-1-0 (Half-Sem)	2
MA 207	Differential Equations-II	3-1-0 (Half-Sem)	2
ME 201N	Solid Mechanics	2-1-0	3
ME 203N	Fluid Mechanics	2-1-0	3
ME 205N	Materials Science and Engineering	2-1-0 (Half-Sem)	1.5
ME 207	Principles of Industrial Engineering	2-1-0	3
ME 209	Thermodynamics	2-1-0	3
ME 251N	Solid Mechanics Lab	0-0-2	1
ME 2XX	Department Elective-I	X-X-X	3
			21.5/23.5
Department Elective - I			
Course Code	Course Title	Weekly L-T-P	Credits
ME 217	Industrial Data Analytics	2-1-0	3
ME 219	Energy Storage Systems	2-1-0 (Half-Sem)	1.5
ME 221	Optical Measurement Techniques in Fluid Mechanics	2-1-0 (Half-Sem)	1.5
ME 223	Design Thinking for Mechanical Engineers	2-1-0 (Half-Sem)	1.5
ME 225	Fundamentals of Vibrations	2-1-0 (Half-Sem)	1.5
ME 227	Plastic Parts Manufacturing	2-0-2 (Half-Sem)	1.5
4th Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ZZ 2XX	Course-II for Minor Program*	X-X-X	3
MA 204N	Numerical Methods	2-0-2	3
ME 208	Theory of Manufacturing Processes	2-1-0	3
ME 210	Fluid Machinery	2-0-0	2
ME 212	Strength of Materials	2-1-0	3
ME 214	Introduction to Additive Manufacturing	2-1-0 (Half-Sem)	1.5
ME 252	Fluid Mechanics and Machinery Lab	0-0-2	1
ME 256	Computer Aided Machine Drawing	1-0-2	2
ME 258N	Manufacturing Processes Lab	0-0-2	1
ME 2XX	Department Elective-II	X-X-X	3
ZZ 2XX	Institute Open Elective-I	X-X-X	3
			22.5/25.5
Department Elective - II			
Course Code	Course Title	Weekly L-T-P	Credits
ME 216	Thermal Systems and Applications	2-1-0 (Half-Sem)	1.5
ME 218	Quality Management	2-1-0 (Half-Sem)	1.5
ME 220	Fundamentals of Acoustics	2-1-0 (Half-Sem)	1.5
ME 222	Introduction to Experimental Aerodynamics	2-1-0 (Half-Sem)	1.5
ME 224	Fundamentals of Microscale Flows	2-1-0 (Half-Sem)	1.5
ME 226	Introduction to Smart Materials	2-1-0 (Half-Sem)	1.5
ME 228	High Strain rate Forming Process	2-1-0 (Half-Sem)	1.5

3rd Year B.Tech. (Mechanical Engineering)

5th Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ZZ 3XX	Course-III for Minor Program*	X-X-X	3
ME 305	Machining Science and Metrology	2-1-0	3
ME 309	Heat Transfer	2-1-0	3
ME 311	Instrumentation and Control Systems	2-0-0	2
ME 313	Introduction to Robotics	2-1-0 (Half-Sem)	1.5
ME 315	Introduction to Finite Element Methods	2-1-0 (Half-Sem)	1.5
ME 355	Machining Science and Metrology Lab	0-0-2	1
ME 359	Heat Transfer Lab	0-0-2	1
ME 361	Instrumentation & Control Systems Lab	0-0-2	1
ME 3XX	Department Elective-III	X-X-X	3
ZZ 3XX	Institute Open Elective-II	X-X-X	3
			20/23
Department Elective - III			
Course Code	Course Title	Weekly L-T-P	Credits
ME 317	Operations Research	2-1-0	3
ME 319	Trends and Development in Solid Mechanics	2-1-0 (Half-Sem)	1.5
ME 321	Continuum Mechanics with Machine Learning	2-1-0	3
ME 323	Solid-State Cooling Technologies	2-1-0	3
ME 325	Introduction to Hybrid Additive Manufacturing Techniques	2-1-0 (Half-Sem)	1.5
ME 327	Sheet Metal Forming Processes	2-1-0 (Half-Sem)	1.5

6th Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ZZ 3XX	Course-IV for Minor Program*	X-X-X	3
ME 302	Applied Thermodynamics	2-1-0	3
ME 310	Design of Machine Elements	2-1-0	3
ME 312	Introduction to Computational Fluid Dynamics	2-1-0 (Half-Sem)	1.5
ME 314	Kinematics and Dynamics of Machines	1-1-0	2
ME 352N	Applied Thermodynamics Lab	0-0-2	1
ME 364	Kinematics & Dynamics of Machines Lab	0-0-2	1
ME 3XX	Department Elective-IV	X-X-X	3
ME 3XX	Department Elective-V	X-X-X	3
ZZ 3XX	Institute Open Elective-III	X-X-X	3
			20.5/23.5
Department Elective - IV and V			
Course Code	Course Title	Weekly L-T-P	Credits
ME 316	Automobile Engineering	2-1-0	3
ME 318	Mechatronics System Design	2-1-0	3
ME 320	Experimental Methods in Thermal Science	2-0-2 (Half-Sem)	1.5
ME 322	Introduction to Electric Vehicles	2-1-0 (Half-Sem)	1.5
ME 324	Condition-based Maintenance for Real Life Systems	2-1-0 (Half-Sem)	1.5
ME 326	Applied Impact Mechanics	2-1-0 (Half-Sem)	1.5
ME 328	Surface Modification Methods	2-0-2 (Half-Sem)	1.5

4th Year B.Tech. (Mechanical Engineering)

7th Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ZZ 4XX	Course V - Minor Program	0-0-4	2
ME 493N	BTP	0-0-32	16
ME 495	Internship - I	X-X-X	1
ME 497	Internship - II	X-X-X	1
ZZ 4XX	Institute Open Elective-IV (Along with in-house BTP)	X-X-X	3
			18/20

8th Semester			
Course Code	Course Title	Weekly L-T-P	Credits
ME 4XX	Department Elective-VI	X-X-X	3
ME 4XX	Department Elective-VII	X-X-X	3
ZZ 4XX	Institute Open Elective-IV (If not taken in 7th Sem)	X-X-X	3
ME 494	System Design Project (Optional with inst. elective) OR	1-1-8	6
ZZ 4XX	Institute Open Elective-V		
ZZ 4XX	Institute Open Elective-VI		
			15/15