Maulana Azad National Institute of Technology, Bhopal – 462003
Mechanical Engineering Department

M Tech in Industrial Design

SCHEME OF STUDY (wef July 2021)

First Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
ID 511	Computational Methods	3	-	-	3
ID 512	Accelerated Product Design & Development	3	-	-	3
ID 513	Product Planning & Design for Market	3	-	-	3
ID 514	Advanced Computer Graphics	3	-	-	3
HUM 511	Communication Skills	2	-	-	2
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
ID 515	Advanced CAD Laboratory	-	-	2	1
ID 516	Seminar-I	-	2	-	1
Total hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subjects	Scheme of studies period per week			Total Credits
		L	T	P	
ID 521	Work Study & Ergonomics	3	-	-	3
ID 522	Design and Development of Product Prototype	3	-	-	3
ID 523	Advanced Product Design	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
ME 524	Research Methodology	1	1	-	2
ID 525	Product Development Laboratory	-	-	2	1
ID 526	Seminar-II	-	2	-	1
Total hours: 24 Total Credits: 44		Total Semester Credits			22

Maulana Azad National Institute of Technology, Bhopal – 462003
Mechanical Engineering Department

<u>M Tech in Industrial Design</u>

Third Semester:

Course No.	Subjects	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID 611	Dissertation Phase - I	-	-	32	16
Total hours: 32 Total Credits: 60		Total Semester Credits			16

Fourth Semester:

Course No.	Subjects	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID 621	Dissertation Phase - II	-	-	40	20
Total hours: 40 Total Credits: 80		Total Semester Credits			20

Mechanical Engineering Department

M Tech in Industrial Design

List of Program Electives A		List of Open Electives C	
ID 551	Bearing Design & Selection	ARP - 581	Introduction to Urban Planning
ID 552	Mechanism & Synthesis	BSE – 581	Bioprocess Engineering
ID 553	Detailed Design of Rotating Machines	BSE – 582	Biophysics Tools and Techniques
ID 554	Design for Reliability	CHE – 581	Analytical Techniques
ID 555	Computer Aided Design and Manufacturing (CAD / CAM)	CHE – 582	Green Technology & Processes
ID 556	Advanced Dynamics of Machine	CE – 581	Solid Waste Management
ID 557	Material Selection in Mechanical Design	CE – 582	Basic Concept of GIS
ID 558	Advanced Operations Research	CE – 583	Road Safety
ID 559	Concurrent Engineering	CSE – 581	Machine Learning
ID 560	Facility & Process Planning	CSE – 582	Advanced Data Structures and Algorithms
ID 561	Additive Manufacturing	PHY – 581	Nanotechnology and Nanoscience
ID 562	Design of Experiments	EE – 581	Electric Machines & Applications
ID 563	Supply Chain Management	EE – 582	Control and Instrumentation
ID 564	Robotics & Robot Applications	ECE – 581	Introduction to Fuzzy Logic
ID 565	Nature of Materials and Processes	ECE – 582	Neural Networks and its Applications
List of Departmental Electives B		EC - 581	Energy Resource Technologies
AM 513	Mechanical Behavior of Material	HUM – 581	Intellectual Property Rights for Engineers
AM 557	Product Design & Material Selection	HUM – 582	Applied Psychology: Human Centered Design and Engineering
SM 511	Robotics and Automation	MTH – 581	Advanced Operations Research
TH 511	Advanced Thermodynamics	MTH – 582	Computing Technologies
TH 551	Renewable Energy	MME – 581	Advanced Instrumentation Methods for Material Analysis
SV 512	Theory of Vibration-I	MME – 582	Smart Materials and their Application
SV 567	Product Design & Development	MBA-581	Engineering Startup Management