



MAULANA AZAD
NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal - 462003

DEPARTMENT OF MECHANICAL ENGINEERING

M.Tech (Part Time) in Industrial Engineering and Management

PROPOSED SCHEME M.Tech (w.e.f. July 2024)

**First
Semester:**

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
ITEM24511	Work System Design and Ergonomics	3	-	-	3
ITEM24512	Supply Chain Management	3	-	-	3
	Department Elective -1	3	-	-	3
SM24514	Modeling and Simulation Laboratory	-	-	2	1
Total Hours: 11 Total Credits: 10		Total Semester Credits			10

Second Semester:

CourseNo.	Subje ct	Schemes of studies periods per week			Total Credit s
		L	T	P	
ITEM24513	Production and Operations Management	3	-	-	3
	Department Elective -2	3	-	-	3
AR24513	Automation and Robotics Laboratory I	-	-	2	1
ITEM24515	Seminar-I	-	-	2	1
ITEM24516	Minor Project-I (Self Learning)				2
Total Hours: 12 Total Credits: 20		Total Semester Credits			10

- Communication Skill will be Audit Course of 2 credits which will not be counted in SGPA/CGPA calculation

Third Semester:

Course No.	Subject	Schemes of studiesperiods per week			Total Credit s
		L	T	P	
ITEM24521	Decision Modeling	3	-	-	3
ITEM24522	Principles and Practices Management	3	-	-	3
	Department Elective -3	3	-	-	3
ITEM24523	Decision Modelling Laboratory	-	-	2	1
Total Hours: 11 Total Credits: 30		Total Semester Credits			10

Fourth Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
	Department Elective - 4	3	-	-	3
	Open Elective	3	-	-	3
ID24523	Product Development Laboratory	-	-	2	1
IEM24524	Seminar-II	-	-	2	1
IEM24525	Minor Project-II (Self learning)				2
Total Hours: 12 Total Credits: 40		Total Semester Credits			10

Fifth Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
IEM24611	Dissertation Phase-I	-	-	40	20
Total Hours: 40 Total Credits: 60		Total Semester Credits			20

Sixth Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
IEM24621	Dissertation Phase-II	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Department Electives

List of Program Electives A	
IEM24551	Marketing Management
IEM24552	Production Planning and Control
IEM24553	Lean Manufacturing
IEM24554	Reliability, Availability and Maintainability Engineering
IEM24555	Green Logistics
IEM24556	Total Quality Management
IEM24557	ERP and MIS
IEM24558	Maintenance Management
IEM24559	Entrepreneurship & Start up Creation
IEM24560	Concurrent Engineering
IEM24561	Design of Experiments
IEM24562	Organizational Behavior
IEM24563	Industrial Design and Processes
IEM24564	Financial Management and Accounting
IEM24565	Industrial safety and Environment Management System
ME24524	Research Methodology

List of Open Electives

ARP24581	Introduction to Urban Planning
BSE24581	Bioprocess Engineering
BSE24582	Biophysics Tools and Techniques
CHE24581	Analytical Techniques
CHE24582	Green Technology & Processes
CE24581	Solid Waste Management
CE24582	Basic Concept of GIS
CE24583	Road Safety
CSE24581	Machine Learning
CSE24582	Advanced Data Structures and Algorithms
PHY24581	Nanotechnology and Nanoscience
EE24581	Electric Machines & Applications
EE24582	Control and Instrumentation
ECE24581	Introduction to Fuzzy Logic
ECE24582	Neural Networks and its Applications
EC24581	Energy Resource Technologies
HUM24581	Intellectual Property Rights for Engineers
HUM24582	Applied Psychology: Human Centered Design and Engineering
MTH24581	Advanced Operations Research
MTH24582	Computing Technologies
MME24581	Advanced Instrumentation Methods for Material Analysis
MME24582	Smart Materials and their Application
MBA24581	Engineering Startup Management