



Maulana Azad
NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462 003
DEPARTMENT OF MECHANICAL ENGINEERING
M.Tech. in Mechanical Engineering
With Specialization in: Industrial Design
SCHEME OF STUDY (Revised April 2020)

First Semester

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID101	Computational Methods	3	1	-	4
ID102	Accelerated Product Design & Development	3	1	-	4
ID103	Product Planning & Design for Market	3	1	-	4
ID104	Advanced Computer Graphics	3	1	-	4
	Elective 1(A)	3	1	-	4
	Elective2(B)	3	1	-	4
ID105	Advanced CAD Laboratory	-	-	2	1
ID106	Seminar-I	-	-	2	1
ID107	Communication Skills NPTEL/MOOC/Hum Deptt.	2	-	-	2
Total Hours 30		Total Credit			28
Total Credits (Cumulative) 28					

Second Semester

Course No.	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID201	Work Study & Ergonomics	3	1	-	4
ID202	Design and Development of Product Prototype	3	1	-	4
ID203	Advanced Product Design	3	1	-	4
	Elective 3 (A)	3	1	-	4
	Elective4(A)	3	1	-	4
	Elective5(C)	3	1	-	4
ID204	Product Development Laboratory	-	-	2	1
ID205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
ID206	Seminar-II	-	-	2	1
Total Hours 30		Total Credit			28
Total Credits (Cumulative) 56					

Third semester

Course No.	Subjects	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID301	Dissertation phase-I	-	-	24	12
Total Hours 24 Total Credits (Cumulative) 68		Total Credit			12

Fourth semester

Course No.	Subjects	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ID401	Dissertation phase-II	-	-	24	12
Total Hours 24 Total Credits (Cumulative) 80		Total Credit			12

List of Electives

Group A	Group B
ID501 Bearing Design & Selection ID502 Stress & Vibration Analysis ID503 Mechanism & Synthesis ID504 Complex Mechanism and Graph Theory ID505 Detailed Design of Rotating Machines ID506 Design for Reliability ID507 Computer Aided Design and Manufacturing (CAD / CAM) ID508 Design of Computer Aided Engineering Systems ID509 Advanced Dynamics of Machine ID510 Material Selection in Mechanical Design ID511 Advanced Operations Research	ID601 Additive Manufacturing ID602 Concurrent Engineering ID603 Facility & Process Planning ID604 Accelerated Product Design & Development ID605 Advanced Operations Research
	Group C
	ID701 Value Engineering ID702 Supply Chain Management ID703 Robotics & Robot Applications ID704 Nature of Materials and Processes ID705 Intellectual Property Rights

Group-A Program Electives

Group-B Department Elective (for other programs of same department only)

Group-C Institute Elective (for other departments only)