CURRICULUM

B.Tech. Mechanical Engineering (MDM) with specialization in Design and Manufacturing :2014 Batch onward
(According to 28th Senate meeting held on 23.12.2015)

Semester 1					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Calculus	3	0	3	BSC	MAT104T
Engineering Mechanics	3	0	3	BSC	PHY108T
Computational Engineering / Basic Electrical and Electronics Engineering	3	0	3	BEC / BEC	COM105T / ELE103T
Concepts in Engineering Design/ Science and Engineering of Materials	3	0	3	DES / BEC	DES101T / INT108T
English for Communication	2	0	2	HMC	INT107T
Earth, Environment & Design/ Professional Ethics for Engineers	2		P/F	DES / HMC	DES103T / MAN102T
Engineering Skills Practice	0	3	2	BEC	INT110P
Materials & Mechanics Practice	0	3	2	BSC	PHY109P
Computational Engineering Practice/ Measurement & Data Analysis Practice	0	3	2	BEC / BSC	COM105P / INT111P
Engineering Graphics	1	3	3	BEC	INT109P
Total			**23**		
Semester 2					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Differential Equations	3	0	3	BSC	MAT105T
Engineering Electromagnetics	3	0	3	BSC	PHY107T
Basic Electrical and Electronics Engineering/ Computational Engineering	3	0	3	BEC / BEC	ELE103T / COM105T
Science and Engineering of Materials / Concepts in Engineering Design	3	0	3	BEC / DES	INT108T / DES101T
Design History	2	0	2	DES	DES102T
Professional Ethics for Engineers/ Earth, Environment & Design	2	0	P/F	HMC / DES	MAN102T / DES103T
Measurement & Data Analysis Practice/ Computational Engineering Practice	0	3	2	BSC / BEC	INT111P / COM105P
Industrial Design Sketching	0	3	2	DES	DES104P
Engineering Electromagnetics Practice	0	3	2	BSC	PHY107P
Design Realization	0	3	2	DES	DES105P
Total			**22**		
Semester 3					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Linear Algebra	3	0	3	BSC	MAT204T
Thermal Engineering - Concepts and Applications	3	0	3	PEC	MEC213T
Mechanics of Materials	3	0	3	PEC	MEC214T
Basic Concepts in Manufacturing Processes	3	0	3	PEC	MEC215T
Electrical Drives	1	3	3	PEC	ELE220P
Machine Drawing and Manufacturability Analysis Practice	0	3	2	PEC	MEC216P
Product Realization Practice	0	3	2	PEC	MEC217P
Systems Thinking for Design	2	0	2	DES	DES201T
Engineering Economics	2	0	2	HMC	MAN201T
Total			**23**		

Semester 4					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Numerical Methods	3	0	3	BSC	MAT206T
Fluid Mechanics and Heat Transfer	3	0	3	PEC	MEC218T
Kinematics and Dynamics of Mechanisms	3	0	3	PEC	MEC219T
Quality Inspection and Product Validation	3	0	3	PEC	MEC220T
Mechanical Design Practice	0	3	2	PEC	MEC221P
Quality Inspection and Product Validation Practice	0	3	2	PEC	MEC220P
Fluid Mechanics and Heat Transfer Practice	0	3	2	PEC	MEC218P
Designing Intelligent Systems	2	0	2	DES	DES203T
Sociology of Design	2	0	2	HMC	MAN202T
Total			**22**		
Semester 5					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Sustainable Design	2	0	2	DES	DES301T
Entrepreneurship and Management Functions	2	0	2	HMC	MAN301T
Thermal Energy Systems	3	0	3	PEC	MEC317T
Design of Machine elements	3	0	3	PEC	MEC318T
Automation in Manufacturing	3	0	3	PEC	MEC319T
Sensors and Controls	3	0	3	PEC	MEC320T
Thermal Engineering Practice	0	3	2	PEC	MEC321P
Sensors and Controls Practice	0	3	2	PEC	MEC320P
Manufacturing Automation Practice	0	3	2	PEC	MEC319P
Total			**22**		
Semester 6					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Design for Quality and reliability	2	0	2	DES	DES302T
Product Management	2	0	2	HMC	MAN303T
Computational Methods in Engineering	3	0	3	PEC	MEC322T
Computer Aided Design and Manufacturing	3	0	3	PEC	MEC323T
Elective – I	3	0	3	ELE	-
Elective – II	3	0	3	ELE	-
Microprocessors and Controllers	1	3	3	PEC	MEC324A
Mechanical Design Simulation Practice	0	3	2	PEC	MEC325P
Product Design Practice	0	3	2	PCD	INT303
Total			**23**		
Semester 7					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Internship	0	-	5	PCD	INT404
Industrial Engineering	2	0	2	PEC	MEC413T
Free Elective – I	3	0	3	ELE	-
Design Project	0	6	5	DES	DES401
Total			**15**		
Semester 8					
Course Name	**I**	**P**	**C**	**Category**	**Code**
Elective – III	3	0	3	ELE	-
Free Elective-II	3	0	3	ELE	-
Innovation Management	2	0	2	HMC	MAN407T
Project	0	-	10	PCD	INT405
Total			**18**		

*Internship is for a period of 5 months