

B. Tech. Smart Manufacturing (MSM)

(According to 31st senate meeting minutes)

Semester 1				
Course Name	I	P	C	Category
Calculus	3	0	3	BSC
Engineering Mechanics	3	0	3	BSC
Computational Engineering / Basic Electrical & Electronics Engineering	3	0	3	BEC/ BEC
Concepts in Engineering Design/ Science and Engineering of Materials	3	0	3	DES/BEC
English for Communication	2	0	2	HMC
Earth, Environment & Design/ Professional Ethics for Engineers	2		P/F	DES/HMC
Engineering Skills Practice	0	3	2	BEC
Materials & Mechanics Practice	0	3	2	BSC
Computational Engineering Practice/ Measurement & Data Analysis Practice	0	3	2	BEC/BSC
Engineering Graphics	1	3	3	BEC
Total			23	
Semester 2				
Course Name	I	P	C	Category
Differential Equations	3	0	3	BSC
Engineering Electromagnetics	3	0	3	BSC
Basic Electrical & Electronics Engineering/ Computational Engineering	3	0	3	BEC/BEC
Science and Engineering of Materials / Concepts in Engineering Design	3	0	3	BEC/DES
Design History	2	0	2	DES
Professional Ethics for Engineers/ Earth, Environment & Design	2	0	P/F	HMC/DES
Measurement & Data Analysis Practice/ Computational Engineering Practice	0	3	2	BSC/BEC
Industrial Design Sketching	0	3	2	DES
Engineering Electromagnetics Practice	0	3	2	BSC
Design Realization	0	3	2	DES
Total			22	
Semester 3				
Course Name	I	P	C	Category
Probability and Statistics	3	0	3	BSC
Engineering Economics	2	0	2	HMC
Data Structures and Algorithms	3	0	3	PEC
Thermal Concepts for Manufacturing Engineers	3	0	3	PEC
Manufacturing Processes I	3	0	3	PEC
Manufacturing Processes Practice I	0	3	2	PEC
Production Drawing and Manufacturability Analysis	1	3	3	PEC
Electrical Drives	1	3	3	PEC
Data Structures and Algorithms Practice	0	3	2	PEC
Total			24	

Semester 4				
Course Name	I	P	C	Category
Free Elective (Maths category)	3	0	3	BSC
Operations and Supply Chain Management	3	0	3	HMC
Database Management Systems	3	0	3	PEC
Manufacturing Processes II	3	0	3	PEC
Sensors and Controls	3	0	3	PEC
Sensors and Controls Practice	0	3	2	PEC
Manufacturing Processes Practice II	0	3	2	PEC
Machine to Machine Communication Practice	1	3	3	PEC
Total			22	
Semester 5				
Course Name	I	P	C	Category
Entrepreneurship and Management Functions	2	0	2	HMC
Manufacturing Systems	3	0	3	PEC
Robotics and Automation	3	0	3	PEC
Quality Engineering	3	0	3	PEC
Mechanical Design Concepts	3	0	3	PEC
Robotics and Automation Practice	0	3	2	PEC
Quality Inspection and Product Validation Practice	0	3	2	PEC
Embedded Systems Practice	1	3	3	PEC
Total			21	
Semester 6				
Course Name	I	P	C	Category
Operations Research	2	0	2	HMC
Smart Connected Systems	3	0	3	PEC
Special Manufacturing Processes	3	0	3	PEC
Computer Aided Design and Manufacturing	3	0	3	PEC
Elective I	3	0	3	ELE
Elective II	3	0	3	ELE
Computer Aided Design and Manufacturing Practice	0	3	2	PEC
Smart Connected Systems Practice	0	3	2	PEC
Product Design Practice	0	3	2	DES
Total			23	
Semester 7				
Course Name	I	P	C	Category
Internship	0	-	5	PCD*
Data Analytics	2	0	2	HMC
Free Elective – I	3	0	3	ELE
Design and Manufacturing Project	0	6	5	PCD
Total			15	
Semester 8				
Course Name	I	P	C	Category
Free Elective (Management category)	2	0	2	HMC
Elective – III	3	0	3	ELE
Free Elective-II	3	0	3	ELE
Project	0	-	10	PCD
Total			18	

*Internship is for a period of 5 months