

DEPARTMENT OF MECHANICAL ENGINEERING
Programme: B. Tech. in Mechanical Engineering (2016-17)
Programme Code: ME

The overall credits structure

BD Core (BC)		BD Elective (BE)	
Category	Credits	Category	Credits
DC	83	DE	15
BS	20	OE	15
BES	20		
HU	12		
Total	135	Total	30

Total Credits = 165

Basic Science (BS) Core			
MA-101	Engg Mathematics-I	3-1-0	4
PH-101	Applied Physics	3-0-2	4
MA-102	Engg Mathematics-II	3-1-0	4
CH-101	Applied Chemistry	3-0-2	4
MA-201	Engg Mathematics-III	3-1-0	4
	Total BS Core	15-3-4	20

Basic Engineering & Sciences (BES) Core			
CS-101	Computer Concepts & C	2-1-2	4
CE-101	Environment and Ecology	2-1-0	3
ME-102	Engg. Graphics	1-0-2	2
EC-101	Basic Electrical & Electronics Engg.	2-1-0	3
ME-103	Engineering Mechanics	3-1-0	4
ME-104	Engineering Workshop	0-0-2	1
EE-201	Electrical Machines and Controls	3-0-0	3
	Total BES Core	13-4-6	20

Humanities and Social Sciences (HU)			
HU-101	Professional Communication-I	2-0-2	3
HU-102	Professional Communication-II	2-0-2	3
HU-201	Human Values and Professional Ethics	3-0-0	3
HU-202	Cyber Security	3-0-0	3
	Total BS Core	10-0-4	12

Discipline Core (DC)			
ME-101	Mini Project-1	0-0-2	1
ME-105	Mini Project-2	0-0-2	1
ME-201	Engineering Thermodynamics	2-1-0	3
ME-202	Material Science	3-0-0	3
ME-207	Applied Thermodynamics	3-0-2	4
ME-203	Kinematics of Machines	3-1-0	4
ME-204	Strength of Materials	3-0-2	4
ME-205	Machine Drawing-I	0-0-3	1
ME-208	Manufacturing Science-I	3-0-2	4
ME-209	Dynamics of Machines	3-0-2	4
ME-210	Fluid Mechanics	3-0-2	4
ME-211	Measurement and Metrology	2-1-2	4
ME-212	Machine Drawing-II	0-0-3	1
ME-206	Mini Project-3	0-0-4	2
ME-213	Mini Project-4	0-0-4	2
ME-301	Manufacturing Science-II	3-0-2	4
ME-302	Machine Design-I	3-0-0	3
ME-303	Heat and Mass Transfer	3-0-2	4
ME-304	Internal Combustion Engine & Compressor	3-0-0	3
ME-305	Industrial Engineering	3-0-0	3
ME-306	Fluid Machinery	3-0-2	4
ME-308	Machine Design –II	3-0-0	3
ME-309	Refrigeration and Air Conditioning	2-1-0	3
ME-307	Mini Project-5	0-0-4	2
ME-310	Mini Project-6	0-0-4	2
ME-401	Major Project –I	0-0-6	3
ME-402	Major Project-II	0-0-12	6
MET311	Practical Training	-----	N C
	Total BS Core	48-4-62	83

Discipline Electives (DE)			
ME3xx	Mini Project	0-0-8	4
ME3xx	Mechanical Vibrations	3-1-0	4
ME3xx	Gas Dynamics and Propulsion	3-0-2	4
ME3xx	Turbo-machinery	3-0-2	4
ME3xx	Computer Aided Mechanical Design	3-0-2	4
ME3xx	Robotics Engineering	3-1-0	4
ME3xx	Total Quality Management	3-0-2	4
ME3xx	Project Management	3-0-2	4
ME3xx	Micro and Nano Manufacturing	3-0-2	4
ME3xx	Mechanics of Composite materials	3-1-0	4
ME-3xx	Computer Aided Manufacturing	3-0-2	4
ME4xx	Fracture Mechanics	3-1-0	4
ME4xx	Finite Element Method	3-0-2	4
ME4xx	Optimization Techniques in Engineering	3-1-0	4
ME4xx	Non Destructive Testing	3-0-2	4
ME4xx	Mechanical System Design	3-1-0	4
ME4xx	Computational Fluid Dynamics	3-0-2	4
ME4xx	Advanced Strength of Materials	3-1-0	4
ME4xx	Non Conventional Energy Resources	3-1-0	4
ME4xx	Heat Exchanger Design	3-1-0	4
ME4xx	Theory of Plasticity	3-1-0	4
ME4xx	Reliability Engineering	3-1-0	4
ME4xx	Applied Elasticity	3-1-0	4
ME4xx	Microprocessor Applications in Manufacturing	3-1-0	4
ME4xx	Metrology	3-1-0	4
ME4xx	Fuels, Combustion and Pollution	3-1-0	4
ME-4xx	Automobile Engineering	3-0-2	4
ME-4xx	Power Plant Engineering	3-1-0	4

SCHEME OF EXAMINATION OF B.TECH.

(Mechanical Engineering) (2016-17)

First Year – 1st Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MA-101	Engineering Mathematics-I	3	1	0	4	4
CS-101	Computer Concepts & C-programming	2	1	2	5	4
PH-101	Applied Physics	3	0	2	5	4
HU-101	Professional Communication-I	2	1	2	5	4
CE-101	Environment and Ecology	2	1	0	3	3
ME-101	Mini Project-1	0	0	2	2	1
ME-102	Engineering Graphics	1	1	2	4	3
	Total	13	5	10	28	23

First Year – 2nd Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MA-102	Engineering Mathematics-II	3	1	0	4	4
CH-101	Applied Chemistry	3	0	2	5	4
EE-101	Basic Electronics & Electrical Engineering	2	1	0	3	3
ME-103	Engineering Mechanics	3	1	0	4	4
HU-102	Professional communication-II	2	0	2	4	3
ME-104	Engineering Workshop	0	0	2	2	1
ME-105	Mini Project-1	0	0	2	2	1
	Total	13	3	8	24	20

Second Year – 3rd Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MA-201	Engineering Mathematics-III	3	1	0	4	4
ME-201	Engineering Thermodynamics	2	1	0	3	3
ME-202	Material Science	3	0	0	3	3
ME-203	Kinematics of Machines	3	1	0	4	4
ME-204	Strength of Materials	3	0	2	5	4
HU-201	Human Values and Professional Ethics	3	0	0	3	3
ME-205	Machine Drawing-I	0	0	3	3	1
ME-206	Mini Project-3	0	0	4	4	2
	Total	17	4	9	29	24

Second Year – 4th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
ME-207	Applied Thermodynamics	3	0	2	5	4
ME-208	Manufacturing Science-I	3	0	2	5	4
ME-209	Dynamics of Machines	3	0	2	5	4
ME-210	Fluid Mechanics	3	0	2	5	4
HU-202	Cyber Security	3	0	0	3	3
EE-201	Electrical Machines and Controls	3	0	0	3	3
ME-211	Measurement and Metrology	2	1	2	5	4
ME-212	Machine Drawing-II	0	0	3	3	1
ME-213	Mini Project-4	0	0	4	4	2
	Total	20	1	17	38	29

Third Year – 5th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
ME-301	Manufacturing Science-II	3	0	2	5	4
ME-302	Machine Design-I	3	0	0	3	3
ME-303	Heat and Mass Transfer	3	0	2	5	4
ME-304	Internal Combustion Engine & Compressor	3	0	0	3	3
ME-305	Industrial Engineering	3	0	0	3	3
ME-306	Fluid Machinery	3	0	2	5	4
ME-307	Mini Project-5	0	0	4	4	2
	Total	18	0	10	28	23

Third Year – 6th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
ME-308	Machine Design –II	3	0	0	3	3
ME-309	Refrigeration and Air Conditioning	2	1	0	3	3
ME-3xx	Departmental Elective-1	3	1	0	4	4
ME-3xx	Departmental Elective-2	3	0	2	5	4
ME-3xx	Departmental Elective-3	3	0	2	5	4
XX-xxx	Open Elective-1	3	1	0	4	4
ME-310	Mini Project-6	0	0	4	4	2
	Total	17	3	8	28	24

Summer	MET-311 Practical Training	NC only S/Z
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Fourth Year – 7th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
ME-401	Major Project –I	0	0	6	6	3
ME-4xx	Departmental Elective-4	3	0	0	3	3
XX-xxx	Open Elective-2	3	1	0	4	4
XX-xxx	Open Elective-3	3	0	2	5	4
	Total	9	1	8	18	14

Fourth Year – 8th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
ME-402	Major Project-II	0	0	12	12	6
XX-xxx	Open Elective-4	3	0	0	3	3
	Total	3	0	12	15	9