REVISED COURSES & CREDIT DISTRIBUTION FOR B.TECH. PROGRAM
2016-17 BATCH

Classification	Total No of Credits	First Year Core Credits	Balance Credits	Remarks about Balance of Credits
General	11	11		
Basic Sciences	28	16	12	Prescribed by the BoS
Engineering Sciences & Technical Arts	31	23	8	Soft Skills, TA/GA and one Engineering Sciences & Technical Arts
Program Core	75	-	75	
Program Specific Soft Core	21	-	21	
Project	12 / 18	-	12 / 18	To be registered in the 8th semester only
Other Electives	12 / 6	-	12 / 6	
Total	**190**	**50**	**140**	

B.Tech. (Mechanical) – 2016 batch
COURSE COMPONENTS

Table 1

Sl. No.	Course Code	Basic Sciences – 12 credits Name of the Course	Credits
1	14MA2001	Vector Calculus and Complex Analysis	3:1:0
2	14MA2003	Mathematical Transforms	3:1:0
3	14MA2006	Numerical Mathematics and Computing	3:1:0
		Course Total	12

Table 2

Sl. No.	Course Code	Engineering Sciences & Technical Arts – 8 credits Name of the Course	Credits
1	16EN2006	Soft skills – I	2:0:0
2	16EN2007	Soft skills – II	2:0:0
3		Technical Aptitude / General Aptitude	1:0:0
4	14ME2001	Engineering Mechanics	3:0:0
		Course Total	8

Table 3

Sl.No	Course Code	Program Core – 75 credits & a full / part semester project	
		Name of the Course	**Credits**
1	14ME2002	Metallurgy Laboratory×	0:0:1
2	14ME2003	Material Science and Engineering	3:0:0
3	14ME2004	Manufacturing Processes	3:0:0
4	14ME2005	Machining Processes	3:0:0
5	14ME2006	Metrology and Measurement Systems	3:0:0
6	14ME2007	Fluid Power Control Engineering	3:0:0
7	14ME2008	Foundry, Smithy, Welding and Sheet Metal Laboratory	0:0:2
8	14ME2009	Metrology Laboratory×	0:0:1
9	16ME2008	Machining Practice	0:0:2
10	14ME2010	Fluid Power Control and Mechatronics Laboratory	0:0:2
11	15ME2002	CAM Laboratory	0:0:2
12	16ME2009	Thermal Engineering Laboratory	0:0:2
13	16ME2010	Heat Transfer Laboratory	0:0:2
14	14ME2014	Engineering Thermodynamics	0:0:2
15	14ME2015	Thermal Engineering I	3:0:0
16	14ME2016	Thermal Engineering II	3:0:0
17	14CE2003	Mechanics of Fluids	3:1:0
18	16ME2011	Heat and Mass Transfer#	3:0:0
19	16CE2004	Fluid Mechanics and Strength of Materials Lab	0:0:2
20	14CE2002	Mechanics of Solids	3:1:0
21	14ME2025	Computer Aided Design and Manufacturing	3:0:0
22	14ME2026	Mechanics of Machines	3:1:0
23	14ME2027	Dynamics of Machinery	3:1:0
24	14ME2028	Design of Mechanical Transmission Systems	3:0:0
25	14ME2029	Design of Machine Elements	3:1:0
26	14ME2031	Computer Aided Design and Engineering Laboratory	0:0:2
27	14ME2032	Machine Drawing	0:0:2
28	15ME2001	Dynamics Laboratory	0:0:2
		Total Credits	**75**
	FSP2999/PSP2998	Full / Part Semester Project	18/12
		Total	**93/87**

× - Courses to be offered together in the same semester.

Table 4

Sl. No	Course Code	Soft Core - [Design Engineering] (min of 21 credits to be earned) Name of the Course	Credits
1	14ME2034	Design of Jigs, Fixtures and Press Tools	3:0:0
2	14CE3006	Finite Element Methods in Engineering	3:0:0
3	14ME2036	Mechanical Vibrations	3:1:0
4	14ME2037	Product Design and Development Strategies	3:0:0
5	14MA3018	Optimization Techniques	3:0:0
6	14ME2039	Composite Materials	3:0:0
7	14ME2040	Design for Manufacture	3:0:0
8	14ME2044	Industrial Design	3:0:0
9	14MA2018	Operations Research II	3:1:0
10	14AE2019	Computational Fluid Dynamics	3:1:0
11	14ME2038	Tribology in Design	3:1:0
		Total Credits	**37**

Sl. No	Course Code	Soft Core - [Manufacturing Engineering] (min of 21 credits to be earned) Name of the Course	Credits
1	14MA2018	Operations Research II	3:1:0
2	14ME2042	Mechatronics and Control Systems	3:0:0
3	14ME2043	Industrial Engineering	3:1:0
4	14ME2045	Rapid Prototyping and Tooling	3:0:0
5	14ME2046	Metal Cutting Theory and Practice	3:1:0
6	14ME2047	Welding Technology	3:0:0
7	14ME2048	Foundry Technology	3:0:0
8	14ME2039	Composite Materials	3:0:0
9	14MA3018	Optimization Techniques	3:0:0
10	14ME2040	Design for Manufacture	3:0:0
11	14ME2035	Industrial Safety Engineering	3:0:0
		Total Credits	**36**

Sl. No	Course Code	Soft Core - [Thermal Engineering] (min of 21 credits to be earned) Name of the Course	Credits
1	14ME2049	Renewable Energy Sources	3:0:0
2	14ME2050	Advanced Internal Combustion Engines	3:1:0
3	14ME2051	Refrigeration and Air Conditioning	3:1:0

4	14ME2052	Biomass Energy systems	3:0:0
5	14ME2053	Alternative Fuels for I.C Engines	3:0:0
6	14ME2021	Modern Vehicle Technology	3:0:0
7	14AE2019	Computational Fluid Dynamics	3:0:0
8	14ME2018	Power Plant Engineering	3:0:0
9	14MA2018	Operations Research II	3:1:0
10	14ME2058	Turbomachinery	3:0:0
11	14ME2059	Design of Heat Exchangers	3:0:0
		Total Credits	**36**