

M. Tech (Engineering Design) - 2016 Batch

COURSE COMPONENTS

S. No.	Course Code	Name of the Course	Credits
1	14MA3008	Computational Mathematics	3:0:0
2	14CE3006	Finite Element Methods in Engineering	3:0:0
3	14MA3018	Optimization Techniques	3:0:0
4	14ME3006	Computer Applications in Design	3:0:0
5	14ME3007	Engineering Materials and Applications	3:0:0
6	14ME3008	Advanced Strength of Materials	3:0:0
7	14ME3011	Computer Aided Engineering Laboratory	0:0:2
8	14ME3026	Advanced Mechanism Design	3:0:0
9	14ME3028	Advanced Mechanical Vibrations	3:0:0
10	14ME3033	Engineering Product Design and Development Strategies	3:0:0
11	14ME3039	Experimental Stress Analysis	3:0:0
12	14ME3040	Engineering Fracture Mechanics	3:0:0
13	15ME3001	Vibration Laboratory I	0:0:1
		Total Course Credits	36
14	16VE3001	Value Education	2
15	PSP3998	Part Semester Project	12
16	FSP3999	Full Semester project	20
		Total	70

Sl.No	Course Code	Soft Core – [Engineering Design] (min of 12 credits to be earned)	Credits
		Name of the Course	
1	14ME3023	Design of Mechanical System Elements	3:0:0
2	14ME3024	Design for Manufacturing and Assembly	3:0:0
3	14ME3027	Industrial Tribology	3:0:0
4	14ME3037	Quality Concepts in Design	3:0:0
5	15ME3002	Rotor Dynamics	3:0:0
6	15ME3003	Modal Analysis of Mechanical Systems	3:0:0
		Total	18

M. Tech. (Thermal Engineering) - 2016 Batch

COURSE COMPONENTS

S. No.	Course Code	Name of the Course	Credits
1	14CE3006	Finite Element Methods in Engineering	3:0:0
2	14MA3008	Computational Mathematics	3:0:0
3	14ME3001	Combustion in Engines	3:0:0
4	14ME3002	Advanced Thermodynamics	3:0:0
5	14ME3003	Advanced Fluid Mechanics	3:0:0
6	14ME3004	Design of Thermal Power Equipments	3:0:0
7	14ME3011	Computer Aided Engineering Laboratory	0:0:2
8	14ME3017	Advanced Heat Transfer Laboratory	0:0:1
9	14ME3019	Energy Conservation and Management	3:0:0
10	14ME3022	Advanced Heat Transfer	3:0:0
11	15ME3008	Advanced Instrumentation in Thermal Engineering	3:0:0
12	15ME3009	Advanced Refrigeration and Air-Conditioning Systems	3:0:0
13	15ME3010	Design and Analysis of Heat Exchangers	3:0:0
		Total Course Credits	36
14	16VE3001	Value Education	2
15	PSP3998	Part Semester Project	12
16	FSP3999	Full Semester project	20
		Total	70

Sl.No	Course Code	Soft Core – [Thermal Engineering] (min of 12 credits to be earned)	Credits
		Name of the Course	
1	14AE3002	Advanced Computational Fluid Dynamics	3:0:0
2	14AE3010	Advanced Computational Fluid Dynamics Lab	0:0:1
3	14ME3036	Biomass Energy	3:0:0
4	15ME3004	Nuclear Power Engineering	3:0:0
5	15ME3005	Solar Energy Utilization	3:0:0
6	15ME3011	Advanced Turbo Machinery	3:0:0
7	15ME3012	Two Phase Flow and Heat Transfer	3:0:0
		Total	19

M. Tech (Advanced Manufacturing Technology) - 2016 Batch

COURSE COMPONENTS

S. No.	Course Code	Name of the Course	Credits
1	14MA3008	Computational Mathematics	3:0:0
2	14ME3005	Computer Integrated Manufacturing Systems	3:0:0
3	14ME3007	Engineering Materials and Applications	3:0:0
4	14ME3011	Computer Aided Engineering Laboratory	0:0:2
5	14ME3012	CAD/CAM Laboratory	0:0:2
6	14ME3015	Theory of Metal Cutting	3:0:0
7	14ME3016	Advanced Metrology	3:0:0
8	14ME3018	Automation and Robotics Laboratory	0:0:2
9	14ME3020	Advanced Manufacturing Processes	3:0:0
10	14ME3024	Design for Manufacturing and Assembly	3:0:0
11	14ME3030	Industrial Robotics	3:0:0
12	14ME3034	Control of CNC Machine tools	3:0:0
13	15ME3007	Advanced Tool Design	3:0:0
		Total Course Credits	36
14	16VE3001	Value Education	2
15	PSP3998	Part Semester Project	12
16	FSP3999	Full Semester project	20
		Total	70

Sl. No	Course Code	Soft Core – [Manufacturing] (min. of 12 credits to be earned)	Credits
		Name of the Course	
1	14CE3006	Finite Element Methods in Engineering	3:0:0
2	14MA3018	Optimization Techniques	3:0:0
3	14ME3006	Computer Applications in Design	3:0:0
4	14ME3025	Manufacturing System and Simulation	3:0:0
5	14ME3037	Quality Concepts in Design	3:0:0
6	15ME3006	Design of Fluid Power Systems	3:0:0
		Total	18

**M. Tech in Advanced Manufacturing Technology (Lateral Entry) - 2016 Batch
(Eligibility: PGD in Advanced Manufacturing Technology)**

COURSE COMPONENTS

Table 1

PROGRAM CORE

Sl. No.	Course Code	Name of the Course	Credits
1	14MA3008	Computational Mathematics	3:0:0
2	14ME3007	Engineering Materials and Applications	3:0:0
3	14ME3011	Computer Aided Engineering Laboratory	0:0:2
4	14ME3015	Theory of Metal cutting	3:0:0
5	14ME3024	Design for Manufacturing and Assembly	3:0:0
6	14ME3030	Industrial Robotics	3:0:0
7	14ME3034	Control of CNC Machine tools	3:0:0
		Total Credits	20
8	PSP3998	Part Semester Project	12
		Total Credits	32

Table 2

Sl. No	Course Code	Soft Core - [Manufacturing Engineering] (min of 14 credits to be earned)	Credits
		Name of the Course	
1	14CE3006	Finite Element Methods in Engineering	3:0:0
2	14MA3018	Optimization Techniques	3:0:0
3	14ME3006	Computer Application in Design	3:0:0
4	14ME3025	Manufacturing System and Simulation	3:0:0
5	14ME3037	Quality Concepts in Design	3:0:0
		Total Credits	15

**Post Graduate Diploma in
Advanced Manufacturing Technologies (PGDAMT) - 2016 Batch**

COURSE COMPONENTS

S. No.	Sub. Code	Name of the Course	Credit
1	14ME3005	Computer Integrated Manufacturing Systems	3:0:0
2	14ME3012	CAD/CAM Laboratory	0:0:2
3	14ME3016	Advanced Metrology	3:0:0
4	14ME3018	Automation and Robotics Laboratory	0:0:2
5	14ME3020	Advanced Manufacturing Processes	3:0:0
6	16VE3001	Value Education	2:0:0
7	15ME3006	Design of Fluid Power Systems	3:0:0
8	15ME3007	Advanced Tool Design	3:0:0
9	FSP3999	Full Semester Project	0:0:20
		Total	41

**Post Graduate Diploma in
Petroleum and Natural Gas Flow Measurements and Instrumentation - 2016 Batch**

COURSE COMPONENTS

S. No.	Course Code	Name of the Course	Credit
1	14AE3010	Advanced Computational Fluid Dynamics Lab	0:0:1
2	14ME3003	Advanced Fluid Mechanics	3:0:0
3	14ME3007	Engineering Materials and Applications	3:0:0
4	14ME3016	Advanced Metrology	3:0:0
5	14ME3018	Automation and Robotics Laboratory	0:0:2
6	16VE3001	Value Education	2:0:0
7	15ME3006	Design of Fluid Power Systems	3:0:0
8	15ME3008	Advanced Instrumentation in Thermal Engineering	3:0:0
9	FSP3999	Full Semester Project	0:0:20
Total			40*

* towards the requirement of balance of one credit, student may choose Industrial Training or Mini Project.

M. Tech (Manufacturing Engineering) - Part Time 3 Years - 2016 Batch

CURRICULUM

Semester I			
Sl. No	Course Code	Name of the Course	Credits
1	14MA3008	Computational Mathematics	3:0:0
2	14ME3007	Engineering Materials and Applications	3:0:0
3	14ME3015	Theory of Metal Cutting	3:0:0
4	14ME3005	Computer Integrated Manufacturing Systems	3:0:0
Total Credits			12
Semester II			
Sl. No	Course Code	Name of the Course	Credits
1	14ME3020	Advanced Manufacturing Processes	3:0:0
2	14ME3016	Advanced Metrology	3:0:0
3	14ME3034	Control of CNC Machine tools	3:0:0
Practical			
4	14ME3012	CAD/CAM Laboratory	0:0:2
Total Credits			11
Semester III			
Sl. No	Course Code	Name of the Course	Credits
1	14ME3024	Design for Manufacturing and Assembly	3:0:0
2	15ME3007	Advanced Tool Design	3:0:0
3	14ME3030	Industrial Robotics	3:0:0
Practical			
4	14ME3011	Computer Aided Engineering Laboratory	0:0:2
Total Credits			11
Semester IV			
Sl. No	Course Code	Name of the Course	Credits
1		Soft Core I	3:0:0
2		Soft Core II	3:0:0

3		Soft Core III	3:0:0
4	16VE3001	Value Education	2
		Practical	
5	14ME3018	Automation and Robotics Lab	0:0:2
		Total Credits	13
		Semester V	
Sl. No	Course Code	Name of the Course	Credits
1		Soft Core IV	3:0:0
2		Part Semester Project	12
		Total Credits	15
		Semester VI	
Sl. No	Course Code	Name of the Course	Credits
1		Full Semester project	20
		Total Credits	20