

**An Autonomous Programme Structure of
M. Tech. Mechanical Engineering
Specialization: Mechanical Engineering Design
(With Effect From Academic Year: 2017-2018)**

SEMESTER I

Course Code	Course Title	Teaching Scheme			Examination Scheme				Marks	Credit
		Hours/Week			In Semester	End Semester	Oral	Practical		
		Lecture	Tutorial	Practical						
MED 1101	Advanced Mathematics and Numerical Techniques	3	1	0	50	50	0	0	100	4
MED 1102	Design of Experiments and Research Methodology	3	1	0	50	50	0	0	100	4
MED 1103	Advance Mechanics of Materials	3	0	0	50	50	0	0	100	3
MED 1104	Design of Tribosystems	3	0	0	50	50	0	0	100	3
PEMED 1101	Elective I	3	0	0	50	50	0	0	100	3
MED 1105	Design of Tribosystems Lab	0	0	2	0	0	25	0	25	1
MED 1106	Advance Mechanics of Materials Lab	0	0	2	0	0	0	25	25	1
PEMED 1102	Elective I Lab	0	0	2	0	0	25	0	25	1
Total		15	2	6	250	250	50	25	575	20
Grand Total		23			575				575	20

Elective I:

1. Transport Phenomena
2. Advance Materials Technology
3. Power Train design

SEMESTER II

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme				Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral	Practical		
MED 1201	Automation and Control Technology	3	0	0	50	50	0	0	100	3
MED 1202	Vibration and Acoustic	3	0	0	50	50	0	0	100	3
MED 1203	Finite Element Analysis	3	0	0	50	50	0	0	100	3
MED 1204	Design & Optimization	3	0	0	50	50	0	0	100	3
PEMED 1202	Elective II	3	0	0	50	50	0	0	100	3
MED 1105	Automation and Control Technology Lab	0	0	2	0	0	25	0	25	1
MED 1106	Vibration and Acoustic Lab	0	0	2	0	0	25	0	25	1
MED 1107	Finite Element Analysis Lab	0	0	2	0	0	0	25	25	1
MED 1108	Seminar	0	2	0	0	0	50	0	50	2
AC 1201	Audit Course*	0	0	2	0	0	0	0	0	0
Total		15	2	8	250	250	100	25	625	20
Grand Total		25			625				625	20

Elective II:

1. Computational Fluid Dynamics
2. Design for Manufacture and Assembly
3. Heat Exchanger Design

AC 1201: *Audit Courses – Soft Skills and Business Communication / Entrepreneurship Development

SEMESTER III

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme			Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral		
HSEL 2101	Elective III	3	1	0	50	50	0	100	4
OE 2101	Elective IV	3	0	0	50	50	0	100	3
MED 2104	Project Stage I	0	0	18	125	0	100	225	9
Total		6	1	18	225	100	100	425	16
Grand Total		25			425			425	16

Elective III:

1. Environmental Studies
2. Engineering Economics and Project Management
3. Fundamentals of Disaster Management

Elective IV:

1. Modal Analysis
2. Vehicle Dynamics
3. Reliability-Base Design Optimization

SEMESTER IV

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme			Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral		
MED 1202	Project Stage II	0	0	28	200	0	150	350	14
Total		0	0	28	200	0	150	350	14
Grand Total		28			350			350	14