

**Curriculum for B.Tech. Mechanical Engineering Program**

<b>Semester : 1</b>				
<b>Minimum Semester Credit Required : 21 Cumulative Semester Credit Required : 21</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
E.S.		Engineering Mechanics	3-0-0	3
E.S.		Basic Electrical Technology	3-0-0	3
B.S.		Mathematics (MATLAB/Mathematica)	3-0-0	3
B.S.		Physics	3-0-0	3
B.S.		Biosciences	2-0-0	2
HSS		H.S.S. – I (communication skills)	3-0-0	3
Lab		Physics Lab	0-0-3	2
Lab		Electrical Tech Lab	0-0-3	2
		<b>Total</b>	<b>17-0-6</b>	<b>21</b>
<b>Semester : 2</b>				
<b>Minimum Semester Credit Required : 21 Cumulative Semester Credit Required : 42</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
E.S.		Programming and Data Structure	3-0-0	3
E.S.		Basic Electronics	3-0-0	3
B.S.		Statistics	3-0-0	3
B.S.		Chemistry	3-0-0	3
Lab		Computer aided engineering drawings	1-0-3	3
Lab		Programming and Data Structure lab	0-0-3	2
Lab		Chemistry Lab	0-0-3	2
Lab		Basic Electronics Lab	0-0-3	2
		<b>Total</b>	<b>13-0-12</b>	<b>21</b>

<b>Semester : 3</b>		<b>Minimum Semester Credit Required : 22 Cumulative Semester Credit Required : 64</b>		
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
E.S.		Fluid Mechanics	3-0-0	3
B.S.		Material Science	2-0-0	2
B.S.		Environmental Sciences	2-0-0	2
P.C.		Dynamics	3-0-0	3
P.C.		Primary Manufacturing	3-0-0	3
H.S.S.		H.S.S. – II	3-0-0	3
H.S.S.		H.S.S. – III	3-0-0	3
Lab		Workshop- I	0-0-3	2
Project		Project – I	0-0-1	1
		<b>Total</b>	<b>19-0-4</b>	<b>22</b>
<b>Semester : 4</b>		<b>Minimum Semester Credit Required : 21 Cumulative Semester Credit Required : 85</b>		
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
E.S.		Thermodynamics	3-0-0	3
P.C.		Kinematics of Machines	3-0-0	3
P.C.		Machine Tools and Machining	3-0-0	3
P.C.		Elective- I	0-0-3	3
H.S.S		H.S.S. – IV	3-0-0	3
Lab		Workshop - II	0-0-3	2
Lab		Thermo fluid Lab- I	0-0-3	2
Project		Paper – II	0-0-1	1
G.R		Group related activities	0-0-1	1
		<b>Total</b>	<b>12-0-11</b>	<b>21</b>

<b>Semester : 5</b>				
<b>Minimum Semester Credit Required : 21 Cumulative Semester Credit Required : 106</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
P.C.		Mechanics of Solids	3-0-0	3
P.C.		Heat Transfer	3-0-0	3
P.C.		Applied Thermo Fluid - I	3-0-0	3
P.C.		Elective - II	0-0-3	3
H.S.S.		H.S.S. – V	0-0-3	3
Lab		Manufacturing Lab - I	0-0-3	2
Lab		Mechanics of Solid Lab	0-0-3	2
Project		Paper – III	0-0-1	1
G.R.		Group related activities	0-0-1	1
		<b>Total</b>	<b>9-0-14</b>	<b>21</b>

<b>Semester : 6</b>				
<b>Minimum Semester Credit Required :25 Cumulative Semester Credit Required : 131</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
P.C.		Machine Design	3-0-0	3
P.C.		Dynamics and Control of Machines	3-0-0	3
P.C.		Applied Thermo Fluid – II	3-0-0	3
P.C.		Non Traditional Manufacturing and Rapid Prototyping	3-0-0	3
P.C.		Elective – III	0-0-3	3
H.S.S.		H.S.S. – VI	0-0-2	2
Lab		Thermo Fluid Lab - II	0-0-3	2
Lab		Design Sessional / Design Practice	0-0-3	2
Lab		Mechanisms Sessional	0-0-3	2
G.R.		Group related activities	0-0-1	1
S.S.		Soft Skills	0-0-1	1
		<b>Total</b>	<b>12-0-16</b>	<b>25</b>

<b>Semester : 7</b>				
<b>Minimum Semester Credit Required :26 Cumulative Semester Credit Required : 157</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
P.C.		Computer Integrated Manufacturing and Automation	3-0-0	3
P.C.		Operational Research	3-0-0	3
P.C.		Elective - IV	0-0-3	3
P.C.		Elective – V	0-0-3	3
P.C.		Elective – VI	0-0-3	3
H.S.S.		H.S.S. – VII	0-0-2	2
Lab		Manufacturing Lab – II	0-0-3	2
Project		Mini Project	0-0-3	3
I.T.		Industrial Training Seminar	0-0-3	3
S.S.		Soft Skills	0-0-1	1
		<b>Total</b>	<b>6-0-21</b>	<b>26</b>

<b>Semester : 8</b>				
<b>Minimum Semester Credit Required : 19 Cumulative Semester Credit Required : 176</b>				
<b>Course Code</b>	<b>Subject No.</b>	<b>Subject Name</b>	<b>L-T-P</b>	<b>Credits</b>
P.C.		Elective – VII	0-0-3	3
P.C.		Elective – VIII	0-0-3	3
H.S.S.		H.S.S. – VIII	0-0-3	3
Project		Major Project	0-0-9	9
S.S.		Soft Skills	0-0-1	1
		<b>Total</b>	<b>0-0-19</b>	<b>19</b>

## List of Electives

### 5 Electives will be suggested

Electives	Subject Name
	Engineering measurements
	Computer aided inspection
	CFD (computational fluid dynamics)
	Turbo machines
	Engineering metrology
	Advanced welding technology
	Design of materials
<b>Micro Specialization</b>	
	Automation and Robotics
	Mechatronics
	Advanced Manufacturing
	Design Engineering
	Thermal Energy System