

**Sardar Patel College of Engineering, Andheri (West), Mumbai 400 058**

**T.Y.B.Tech. in Mechanical  
Engineering**

**Course Credit System**

Academic Year 2018-19

**Sardar Patel College of Engineering**  
**Academic Year 2018-19**  
**Courses Offered for Third Year B.Tech. in Mechanical Engineering (Semester V)**

Sr. No.	Course Name	Code	Course Plan per Week (Hrs)			Credits	In semester Evaluation (Points)		End Semester Evaluation (Points)		End semester weightage (%)	Term work/Practical #	Total Points
			L	P	T		T-I	T-II	Points	Time (Hrs)			
<b>Core Courses</b>													
1	Heat and Mass Transfer	PCC-BTM501	3	-	-	3	20	20	100	3	60%	-	100
2	Theory of Machine-II	PCC-BTM502	3	-	-	3	20	20	100	3	60%	-	100
3	Mechatronics	PCC-BTM503	3	-	-	3	20	20	100	3	60%	-	100
4	Thermal Systems	PCC-BTM504	3	-	-	3	20	20	100	3	60%	-	100
5	Hydraulic Machinery	PCC-BTM505	3	-	-	3	20	20	100	3	60%	-	100
6	Numerical Methods	PCC-BTM506	2	-	1	3	20	20	100	3	60%	25	125
<b>Laboratory Courses</b>													
7	Heat and Mass Transfer Lab.	PCC-BTM551	-	2	-	1	-	-	-	-	-	50	50
8	Theory of Machine-II Lab.	PCC-BTM552	-	2	-	1	-	-	-	-	-	50	50
9	Mechatronics Laboratory	PCC-BTM553	-	2	-	1	-	-	-	-	-	50	50
10	Thermal Systems Laboratory	PCC-BTM554	-	2	-	1	-	-	-	-	-	50	50
11	Hydraulic Machinery Lab.	PCC-BTM555	-	2	-	1	-	-	-	-	-	50	50
<b>Value Added Courses</b>													
12	Compliant Mechanisms	VAC-BTM525	1	-	2	0	20	20	100	3	60%	50	150
13	Digital Manufacturing	VAC-BTM526	-	2	-	0	20	20	100	3	60%	50	150
14	Knowledge Based Engineering	VAC-BTM528	-	2	-	0	20	20	100	3	60%	50	150
15	Reverse Engg. and Product Development	VAC-BTM529	1	2	-	0	20	20	100	3	60%	50	150
16	Introduction to Aerodynamics	VAC-BTM530	1	-	2	0	20	20	100	3	60%	50	150
<b>Online Courses</b>													
17	Online Course	OLC-BTM581	-	-	-	0	-	-	-	-	-	-	-
<b>TOTAL</b>			<b>17</b>	<b>10</b>	<b>1</b>	<b>23</b>							<b>875</b>

**Notes:** (1) Refer (i) Academic rules and regulations and (ii) Examination rules and regulations for further details

(2) # Assessment criteria for laboratory/Tutorial work. i.e. weightage for assessment shall be as follows: (i) Attendance in Laboratory/Tutorial = 20%, (ii) Journal/Drawing sheet/Sketch book = 40%, (iii) MCQ/Oral/Test = 40%.

(3) Laboratory course is considered as a separate head of passing.

(4) Student can opt for an online course available on <https://swayam.gov.in/> or <https://onlinecourses.nptel.ac.in/> and inform department by filling up registration form. After successful completion of the course and approval from the department UG committee, the course title can appear on the grade card of student.

(5) Department will offer the Value Added courses in a semester subject to availability of resources and enrollment of minimum 20 students opting for the course. Upon successful completion of the

(6) Value Added course, the grades of the courses will appear in the grade card of the student.

(7) (6) L- Lecture, P- Laboratory, T-Tutorial.

Sardar Patel College of Engineering													
Academic Year 2018-19													
Courses Offered for Third Year B.Tech. in Mechanical Engineering (Semester VI)													
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)			Credits	In semester Evaluation (Points)		End Semester Evaluation (Points)		End semester weightage (%)	Term work/Practical #	Total Points
			L	P	T		T-I	T-II	Points	Time (Hrs)			
Core Courses													
1	Refrigeration and Air Conditioning	PCC-BTM601	3	-	-	3	20	20	100	3	60%	-	100
2	Machine Design-I	PCC-BTM602	3	-	1	4	20	20	100	3	60%	25	125
3	Health Safety and Environment (HSE)	MC-BT003	2	-	1	3	20	20	100	3	60%	25	125
4	Internal Combustion Engine	PCC-BTM604	3	-	-	3	20	20	100	3	60%	-	100
5	Manufacturing Planning and Control	PCC-BTM605	3	-	1	4	20	20	100	3	60%	25	125
Laboratory Courses													
6	Refrigeration and Air Conditioning Lab.	PCC-BTM651	-	2	-	1	-	-	-	-	-	50	50
7	Internal Combustion Engine Laboratory	PCC-BTM654	-	2	-	1	-	-	-	-	-	50	50
Value Added Courses													
8	Introduction to MEMS	VAC-BTM625	1	-	2	0	20	20	100	3	60%	50	150
9	Product Lifecycle Management	VAC-BTM627	1	-	2	0	20	20	100	3	60%	50	150
10	Advanced Heat Transfer	VAC-BTM628	1	-	2	0	20	20	100	3	60%	50	150
11	Lean and Green Manufacturing	VAC-BTM629	1	-	2	0	20	20	100	3	60%	50	150
12	Intro. to Computer Integrated Manufacturing	VAC-BTM631	2	-	-	0	20	20	100	3	60%	0	100
13	Introduction to Augmented Reality	VAC-BTM632	1	2	-	0	20	20	100	3	60%	50	150
14	Introduction to AI and Machine Learning	VAC-BTM633	1	2	-	0	20	20	100	3	60%	50	150
15	Non-Destructive Testing	VAC-BTM634	1	2	-	0	20	20	100	3	60%	50	150
Online Courses													
16	Online Course	OLC-BTM681	-	-	-	0	-	-	-	-	-	-	-
	<b>TOTAL</b>		<b>14</b>	<b>4</b>	<b>3</b>	<b>19</b>							<b>675</b>

**Notes:** (1) Refer (i) Academic rules and regulations and (ii) Examination rules and regulations for further details

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(6) L- Lecture, P- Laboratory, T-Tutorial.