

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

# **B.Tech. in Mechanical Engineering**

**Course Credit System**

Academic Year 2018-19

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

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	Machine Design -II	PCC-BTM701	3	0	1	4	20	20	100	3	60%	25	125
2	Renewable Energy Sources and Utilization	PCC-BTM702	3	0	1	4	20	20	100	3	60%	25	125
3	Finite Element Method	PCC-BTM703	3	0	1	4	20	20	100	3	60%	25	125
4	Ind. Engineering and Project Management	PCC-BTM704	3	0	1	4	20	20	100	3	60%	25	125
<b>Elective Course (Group I)</b>													
5	Business process re-engg. & TQM	PEC-BTM707	3	0	1	4	20	20	100	3	60%	25	125
	Computational Fluid Dynamics	PEC-BTM708											
	Process Eqpt. Design and Piping Engineering	PEC-BTM709											
	Introduction to Cryogenics	PEC-BTM725											
<b>Project Course</b>													
6	Project Stage I	PRJ-BTM798	0	2+6\$	0	4	@	@	-	-	-	50*	50
<b>Value Added Courses</b>													
7	Intro. to Research Methodology	VAC-BTM771	1	-	2	0	20	20	100	3	60%	50	150
8	Intro. to Nanotechnology	VAC-BTM772	1	-	2	0	20	20	100	3	60%	50	150
<b>UG/PG Elective Courses</b>													
9	Advanced Stress Analysis	PC-MTMD101	3	-	1	0	20	20	100	3	60%	25	125
<b>Online Courses</b>													
10	Online Course	OLC-BTM781	-	-	-	0	-	-	-	-	-	-	-
	<b>TOTAL</b>		<b>15</b>	<b>2</b>	<b>5</b>	<b>24</b>							<b>675</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) 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.

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

(5) Student must choose only one elective course per elective group from those offered by the department in the semester.

(6) \$ For Project course: contact hours = 2 and self-learning hours = 6 ; @ For project course, in-semester evaluation shall include one or more in-semester presentations. (\*) 25 points for report and 25 points for presentation and viva voce examined by supervisor and one internal examiner.

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

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

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	Design of Mechanical Systems	PCC-BTM801	3	0	1	4	20	20	100	3	60%	25	125
2	CAD/CAM/CIM	PCC-BTM802	3	0	1	4	20	20	100	3	60%	25	125
3	Industrial Management, Entrepreneurship and ERP	PCC-BTM803	3	0	1	4	20	20	100	3	60%	25	125
<b>Elective Courses (Group II)</b>													
4	Industrial Robotics	PEC-BTM807	3	0	1	4	20	20	100	3	60%	25	125
	Supply Chain Management	PEC-BTM808											
	Automobile Engineering	PEC-BTM809											
	Welding Process and Welding Technology	PEC-BTM810											
	Power Plant Engineering	PEC-BTM811											
<b>Project Course</b>													
5	Project Stage II	PRJ-BTM898	0	2+12\$	0	7	@	@	-	-	-	100*	100
<b>Value Added Course</b>													
6	Advanced I.C.Engine	VAC-BTM825	1	0	2	0	20	20	100	3	60%	50	150
7	Electric Vehicle Design & Development	VAC-BTM826	2	0	1	0	20	20	100	3	60%	25	125
<b>UG/PG Elective Courses</b>													
8	Design of Heat Exchangers	PC-MTTH201	3	0	0	0	20	20	100	3	60%	25	125
<b>Online Courses</b>													
9	Online Course	OLC-BTM881	-	-	-	0	-	-	-	-	-	-	-
	<b>TOTAL</b>		<b>12</b>	<b>2</b>	<b>4</b>	<b>23</b>							<b>600</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) 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.

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

(5) Student must choose only one elective course per elective group from those offered by the department in the semester.

(6) \$ For Project course: contact hours = 2 and self-learning hours = 12 ; @ For project course, in-semester evaluation shall include one or more in-semester presentations. (\*) 50 points for report and 50 points for presentation and viva voce examined by supervisor and one internal examiner.

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