

# B.Tech in Mechanical Engineering (2021-22)

Semester	Semester Course Code, Course Name (L-T-P) Credits							GP	Community Service	Hrs. Per week			Contact Hours per Semester	Credits	
	L	T	P												
1	<b>MAL151</b> Engineering Maths-I (3-0-2) 4	<b>CSL106</b> FOCP-I (2-0-4) 4	<b>CHL150</b> Engineering Chemistry (2-0-2) 3	<b>CLL101</b> Effective Communication-I (2-0-1) 2.5	<b>MEP110</b> Engineering Graphics & Drawing (1-0-4) 3	<b>CSL110</b> Problem Solving and Design Thinking (2-0-2) 3			<b>MER118</b> GP 1 Credit	<b>MES101</b> CS-I	12	1	14	405	20.5
2	<b>MAL152</b> Engg Maths-II (3-0-2) 4	<b>CSL108</b> FOCP-II (2-0-4) 4	<b>PHY150</b> Engineering Physics (3-0-2) 4	<b>CLL102</b> Effective Communication-II (2-0-1) 2.5	<b>MEL150</b> Basic of Mechanical and Civil Engineering (2-0-2) 3	<b>ECL110</b> Basic of Electrical & Electronics Engineering (2-0-2) 3			<b>MER119</b> GP 1 Credit	<b>MES102</b> CS-II 140 Hours* 2 Credits	14	1	12	405	21.5+2
<b>MED 210: Minor Project</b>														02	
3	<b>MEL215</b> Production Engineering (3-0-2) 4	<b>MEL203</b> Mechanics of Solids-I (3-0-2) 4	<b>MEL290</b> Thermodynamics (3-1-0) 4	<b>MEL205</b> Engineering Mechanics (3-1-0) 4	<b>MEP207</b> M/c Drawing (0-0-4) 2	Open Elective- 1 (3-0-0) 3		<b>MEP200</b> Special Software Solidworks/ANSYS/MATLAB/other software packages (0-0-2) 1	<b>MER218</b> GP 1 Credit	<b>MES201</b> CS-III	15	2	10	405	23
4	<b>MEL 314</b> Energy Conversion (3-0-2) 4	<b>MEL206</b> Theory of Machines (3-1-2) 5	<b>MEL208</b> Fluid Mechanics (3-1-0) 4	<b>MEL209</b> Materials Science and Engg. (2-0-2) 3	Open Elective-2 (3-0-0) 3	<b>CLL120</b> Human Values and Professional Ethics (2-0-0) 2		<b>MEP220</b> Special Software Solidworks/ANSYS/MATLAB/other software packages (0-0-2) 1	<b>MER219</b> GP 1 Credit	<b>MES202</b> CS-IV 140 Hours* 2 Credit	16	2	8	390	23+2

MET 310: Industrial Training I														02	
5	<b>MEL202</b> Heat and Mass Transfer (3-0-2) 4	<b>MEL207</b> Machine Design I (3-1-0) 4	<b>MEL303</b> Fluid Machines (2-1-2) 4	<b>SML300</b> Entrepreneurs hip (3-0-0)3	PE-1 (2-0-2) 3	<b>SML200</b> Engineering Economics (2-0-2) 3		<b>MEP300</b> Special Software Solidworks /ANSYS/ MATLAB/other software packages (0-0-2) 1	<b>MER318</b> GP 1 Credit	<b>MES301</b> CS-V	15	2	10	405	23
6	<b>MEL 326</b> Instrumentation & Control Engineering (3-0-2) 4	<b>MEL 310</b> Industrial Engineering (3-1-0) 4	PE-2 (2-0-2) 3	PE-3 (2-0-2) 3	Open Elective-3** (MOOC/45) (3-0-0) 3	Foreign Language Elective (3-0-0) 3	<b>CLP300</b> Campus to Corporate (1-0-0) 1		<b>MER319</b> GP 1 Credit	<b>MES302</b> CS-VI 140 Hours* 2 Credit	17	1	6	360	22+2
MET 410: Industrial Training-II														03	
7	<b>MEL401</b> Operations Research (2-1-0) 3	PE-4 (2-0-2) 3	PE-5 (2-0-2) 3	<b>CHL100</b> Environmental Studies (3-0-0) 3	<b>MED423</b> Major Project I 4 Credits		<b>MEC321</b> Seminar 1 Credit			<b>MES401</b> CS-VII	9	1	8	270	17
8	<b>MED424</b> Major Project II /Internship 6 Credits	PE-6 (2-0-2) 3	Open Elective-4** (MOOC/45) (3-0-0) 3				<b>SEG 400</b> Self study Gate Non Credit			<b>MES402</b> CS-VIII (140 Hours) 2 Credit	6	-	6	180	12+2
<b>Total</b>											109	10	62		<b>169+8 =177</b>

\*Students can utilise the summer/winter break period to complete the remaining 140 community service hours every year.

## PROGRAM ELECTIVES

Tracks	Robotics and Automation
Program Elective-1	MEL-478 Robotics and Control (2-0-2) 3
Program Elective-2	MEL-479 Industrial Automation and Process Control (3-0-0) 3
Program Elective-3	MEL-480 Mechatronics System Design (2-0-2) 3
Program Elective-4	MEL-481 Advanced Robotics (2-1-0) 3
Program Elective-5	MEL-486 Signal Processing, AI & NN Technique (2-0-2) 3
Program Elective-6	MEL-677-IP Optimization Techniques (2-0-2) 3