

B.Tech in Mechanical Engineering (2020-21)

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	MAL151 Engineering Maths-I (3-0-2) 4	CSL106 FOCP-I (2-0-4) 4	CHL150 Engineering Chemistry (2-0-2) 3	CLL101 Effective Communication-I (2-0-1) 2.5	MEP110 Engineering Graphics & Drawing (1-0-4) 3	CSL110 Problem Solving and Design Thinking (2-0-2) 3			MER118 GP 1 Credit	MES101 CS-I (70 Hours)	12	1	14	405	20.5
2	MAL152 Engg Maths-II (3-0-2) 4	CSL108 FOCP-II (2-0-4) 4	PHY150 Engineering Physics (3-0-2) 4	CLL102 Effective Communication-II (2-0-1) 2.5	MEL150 Basic of Mechanical and Civil Engineering (2-0-2) 3	ECL110 Basic of Electrical & Electronics Engineering (2-0-2) 3			MER119 GP 1 Credit	MES102 CS-II (70 Hours) 2 Credits	14	1	12	405	21.5+2
MED 210: Minor Project + Community Service (Remaining Hours)														02	
3	MEL215 Production Engineering (3-0-2) 4	MEL203 Mechanics of Solids-I (3-0-2) 4	MEL290 Thermodynamics (3-1-0) 4	MEL205 Engineering Mechanics (3-1-0) 4	MEP207 M/c Drawing (0-0-4) 2	Open Elective-1 (3-0-0) 3		MEP200 Special Software Solidworks/A NSYS/ MATLAB/other software packages (0-0-2) 1	MER218 GP 1 Credit	MES201 CS-III	15	2	10	405	23
4	MEL 314 Energy Conversion (3-0-2) 4	MEL206 Theory of Machines (3-1-2) 5	MEL208 Fluid Mechanics (3-1-0) 4	MEL209 Materials Science and Engg. (2-0-2) 3	Open Elective-2 (3-0-0) 3	CLL120 Human Values and Professional Ethics (2-0-0) 2		MEP220 Special Software Solidworks/A NSYS/ MATLAB/other software packages (0-0-2) 1	MER219 GP 1 Credit	MES202 CS-IV 140 Hours* 2 Credit	16	2	8	390	23+2

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

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

PROGRAM ELECTIVES FOR EACH TRACK

Tracks	Robotics and Automation		Non Specialization	
Program Elective-1	MEL-478 Robotics and Control (2-0-2) 3		MEL 312 ICE & GT (2-0-2) 3	MEL 418 Vehicle Development and Testing (2-1-0) 3
Program Elective-2	MEL-479 Industrial Automation and Process Control (3-0-0) 3		MEL 328 Machine Design II (2-1-0) 3	MEL 613-IP Project Management (2-1-0) 3
Program Elective-3	MEL-480 Mechatronics System Design (2-0-2) 3		MEL 473 Additive manufacturing Technologies (2-0-2) 3	MEL 412 Supply Chain Management (2-1-0) 3
Program Elective-4	MEL-481 Advanced Robotics (2-1-0) 3		MEL478 Robotics and Control (2-0-2) 3	MEL 485 Smart Manufacturing (2-0-2) 3
Program Elective-5	MEL-486 Signal Processing, AI & NN Technique (2-0-2) 3		MEL 470 Product Design & Development Engineering (2-0-2) 3	MEL-611-TH Renewable Energy Sources (2-1-0) 3
Program Elective-6	MEL-677-IP Optimization Techniques (2-0-2) 3		MEL 483 Heating Ventilation Air Conditioning (2-1-2) 4	MEL-475 E-Mobility (2-1-0) 3