



॥ त्वं ज्ञानमयो विद्वानमयोऽसि ॥

2nd year B. Tech Mechanical Engineering Program Structure For AY 2020-21

<i>Cat</i>	<i>Course</i>	<i>LTP</i>	<i>CH</i>	<i>NC</i>	<i>GC</i>	<i>Cat</i>	<i>Course</i>	<i>LTP</i>	<i>CH</i>	<i>NC</i>	<i>GC</i>
I Semester						II Semester					
IE	Engineering Mechanics	2-1-0	3	-	3	IE	Introduction to Electrical Engineering	3-0-2	5	-	4
IS	Chemistry	3-0-0	3	-	3	IE	Introduction to Computer Science	3-0-2	5	-	4
IS	Physics	3-0-0	3	-	3	IE	Introduction to Bioengineering	3-0-2	5	-	4
IS	Chemistry Lab	0-0-2	2	-	1						
IS	Physics Lab	0-0-2	2	-	1						
IS	Mathematics I	3-1-0	4	-	4	IS	Mathematics II	3-1-0	4	-	4
IE	Engineering Visualization	0-0-2	2	-	1	IE	Engineering Realization	0-0-2	1	-	1
NE	Engineering Design I	0-0-2	2	1	-	NE	Engineering Design II	0-0-2	2	1	-
NH	Communication Skill I	0-0-2	2	1	-	NH	Communication Skill II	0-0-2	2	1	-
NH	Social Connect and responsibilities I	0-0-1	1	0.5	-	NH	Social Connect and responsibilities II	0-0-1	1	0.5	-
NH	Performing Arts I /Sports I	0-0-1	1	0.5	-	NH	Performing Arts II/Sports II	0-0-1	1	0.5	-
Total		11-2-12	25	3	16	Total		12-1-14	27	3	17
III Semester						IV Semester					
LS	Scientific Computations	3-1-0	4	-	4	IE	Materials Science & Engineering F1: Material Selection F2: Structure of Materials	3 × 1-0-0	3	-	3

							F3: Physical Metallurgy				
IE	Thermodynamics	3-1-0	4	-	4	PC	Data Structure and Algorithm	3-0-2	5		4
PC	Mechanics of solids	3-1-0	4	-	4	IE	Signals and Systems	3-1-0	4	-	4
IE	Introduction to Machine Learning	3-0-2	5	-	4	PC	Fluid Mechanics	3-1-0	4	-	4
						PC	Fluid Mechanics-Lab	0-0-2	2		1
LS	Statistical Mechanics	2-0-0	2	-	2	PC	Manufacturing Process	3-0-0	3	-	3
	Optical Measurement Techniques	1-0-0	1		1	IH	Humanities I	3-0-0	3	-	3
NE	Intro. To Profession	0-1-0		1							
Total		15-3-2	20	1	19	Total		18-2-4	24	-	22
V Semester						VI Semester					
PC	Production & Operations Management	3-0-0	3	-	3	PC	Design of Machine elements	3-0-2	5		4
PC	Manufacturing Processes and Systems lab (HC)	0-0-2	2	-	1	PC	Machining and Automated Manufacturing Lab (HC)	0-0-2	2		1
PC	Heat Transfer	3-0-0	3		3	PC	Smart Manufacturing(HC)	2-0-2	4		3
PC	Kinematics and Dynamics of Machines	3-0-2	5		4	PC	Thermofluids Engineering	3-1-0	4		4
PC	Machining Science and Metrology	3-0-0	3		3	PC	Control of Mechanical Systems -(HC)	3-0-4	7		5
PC	Digital Fabrication	3-0-0	3		3	PE	Programme Elective-1	3-0-0	3		3
PC	Heat Transfer Lab	0-0-2	2		1						
IH	Humanities II	3-0-0	3	-	3						
NH	Professional Ethics I	0-1-0		1	-	NH	Professional Ethics II	0-1-0		1	-
Total		18-0-6	24	1	21	Total		14-1-10	25	1	20

	VII Semester						VIII Semester				
PP	B. Tech. Project	0-0-6	6	-	3	IH	Humanities IV	3-0-0	3	-	3
PE	Programme Electives	6-0-0	6	-	6	PE	Programme Electives	7-0-0	7	-	7
PC	Thermofluids Lab	0-0-2	2		1	OE	Open Elective-2	3-1-0	4		4
OE	Open Elective-1	3-0-0	3		3	OE	Open Elective-3	3-0-0	3		3
IH	Humanities III	3-0-0	3	-	3						
IS	Environmental Science	2-0-0	2	-	2						
Total		14-0-8	22	-	18	Total		16-1-0	17	-	17
Total of graded and Non-Graded Credit									9	150	
Non-Graded Design Credits									6	-	
Grand Total									15	165	

Note: ES are proposed Engineering Science compulsory courses