

B.E.(Hons.) Mechanical Engineering with Specialization in 3D Printing

Sr. No.	Course code	Course Name	Teaching			Credits (C)	Examination Scheme					Category
			Scheme				Theory Marks		Tutorials/		Total	
			(Hours)						Practical Marks		Marks	
			L	T	P		E	Mi	I	V		
B.E. 1st Year: Semester 1&2												
1	3110002	English	2	0	2	3	70	30	20	30	150	HSS
2	3110003	Programming for Problem Solving	3	0	2	4	70	30	20	30	150	ES
3	3110004	Basic Civil Engineering	3	0	2	4	70	30	20	30	150	ES
4	3110005	Basic Electrical Engineering	3	0	2	4	70	30	20	30	150	ES
5	3110006	Basic Mechanical Engineering	3	0	2	4	70	30	20	30	150	ES
6	3110007	Environmental Sciences	2	2	0	0	70	30	0	0	100	M
7	3110011	Physics	3	0	2	4	70	30	20	30	150	BS
8	3110012	Workshop/ Manufacturing Practices	0	0	4	2	0	0	20	80	100	ES
9	3110013	Engineering Graphics & Design	2	0	4	4	70	30	20	30	150	ES
10	3110014	Mathematics – I	3	2	0	5	70	30	0	0	100	BS

11	3110015	Mathematics –2	3	2	0	5	70	30	0	0	100	BS
12	3110017	Induction Program	0	0	0	0	0	0	0	0	0	M
B.E. 2nd Year: Semester 3												
13	3130004	Effective Technical Communication	2	0	2	3	70	30	20	30	150	HSS
14	3130005	Complex Variables and Partial Differential Equations	3	2	0	5	70	30	0	0	100	BS
15	3130007	Indian Constitution	2	0	0	0	50	0	0	0	50	M
16	3130008	Design Engineering - I A	0	0	2	1	0	0	20	80	100	PW
17	3131904	Material Science and Metallurgy	3	0	2	4	70	30	20	30	150	ES
18	3131905	Engineering Thermodynamics	4	0	2	5	70	30	20	30	150	PC
19	3131906	Kinematics and Theory of Machines	4	0	2	5	70	30	20	30	150	PC
B.E. 2nd Year: Semester 4												
20	3140005	Design Engineering 1 B	0	0	2	1	0	0	20	80	100	PW
21	3141901	Mechanical Measurement and Metrology	4	0	2	5	70	30	20	30	150	BS
22	3141906	Fluid Mechanics and Hydraulics Machines	4	0	2	5	70	30	20	30	150	PC
23	3141907	Fundamentals of Machine Design	4	0	2	5	70	30	20	30	150	PC
24	3141908	Manufacturing Processes	3	0	2	4	70	30	20	30	150	PC
25	3141909	Organisational Behaviour	3	0	0	3	70	30	0	0	100	HSS
26	114AN01	Introduction to Additive Manufacturing	3	0	2	4	70	0	0	30	100	CMD
B.E. 3rd Year: Semester 5												

27	3150001	Design Engineering - II A	0	0	2	1	0	0	20	80	100	PW
28	3150005	Integrated Personality Development Course	2	0	0	2	70	30	20	30	150	PDE
29	3151909	Heat Transfer	4	0	2	5	70	30	20	30	150	PC
30	3151910	Operation Research	3	0	0	3	70	30	0	0	100	HSS
31	3151911	Dynamics of Machinery	4	0	2	5	70	30	20	30	150	PC
32	3151912	Manufacturing Technology	3	0	2	4	70	30	20	30	150	PC
33	3151913	Oil Hydraulics And Pneumatics	3	0	0	3	70	30	0	0	100	OE
34	115AN01	Materials Science for Additive Manufacturing	3	0	0	3	70	0	0	0	70	CMD
35	115AN02	Solid Modelling	3	0	4	5	70	0	0	30	100	CMD
B.E. 3rd Year: Semester 6												
36	3160001	Design Engineering II B	0	0	2	1	0	0	20	80	100	PW
37	3160003	Integrated Personality Development Course	2	0	0	2	70	30	20	30	150	PDE
38	3161903	Computer Aided Design Professional Elective - I	3	0	2	4	70	30	20	30	150	PE
39	3161910	Applied Thermodynamics	4	0	2	5	70	30	20	30	150	PC
40	3161917	Computer Aided Manufacturing Professional Elective - II	3	0	2	4	70	30	20	30	150	PE
41	3161923	Non-destructive Testing Professional Elective - III	3	0	2	4	70	30	20	30	150	PE
42	3161924	Entrepreneurship and E-business Open elective - II	3	0	0	3	70	30	0	0	100	OE
43	116AN01	Additive Manufacturing Lab	0	0	4	2	0	0	0	80	80	CMD
B.E. 4th Year: Semester 7												

44	3170001	Summer Internship	0	0	0	2	0	0	20	80	100	PW
45	3171910	Power Plant Engineering	3	0	0	3	70	30	0	0	100	PC
46	3171917	Design of Machine Elements	3	0	2	4	70	30	20	30	150	PC
47	3171922	Automation in Manufacturing Professional Elective - IV	3	0	2	4	70	30	20	30	150	PE
48	3171923	Internal Combustion Engine Professional Elective - V	3	0	2	4	70	30	20	30	150	PE
49	3171929	Quality and Reliability Engineering Professional Elective - VI	3	0	2	4	70	30	20	30	150	PE
50	3171931	Nanotechnology and surface Engineering Open Elective - III	3	0	0	3	70	30	0	0	100	OE
51	117AN01	Project	0	0	8	4	0	0	0	70	70	CMD
B.E. 4th Year: Semester 8												
52	3181901	Internship/Project	0	0	24	12	0	0	100	100	200	PW

Sr. No.	Category	Total number of courses
1	HSS - Humanities and Social Sciences	4
2	BS - Basic Science	5
3	ES - Engineering Science	7
4	PC - Professional core	11
5	PE - Professional Elective	6
6	OE - Open Elective	3
7	PW - Project Work	6
8	M - Mandatory	3

9	PDE - Personality Development Elective	2
10	CMD - Compulsory for Minor or Specialization Degree	5