K L E F
DEPARTMENT OF MECHANICAL ENGINEERING
Green fields, Vaddeswaram, Guntur

MAPPING OF COURSES WITH PROGRAM OUTCOMES (Y20 Regulations)

S.No	Course Code	Course Name	Category	L	T	P	S	Cr	Pre-req	PO												PSO	
										1	2	3	4	5	6	7	8	9	#	11	12	1	2
1	20UC1101	Integrated Professional English	HSS	0	0	4	0	2	Nil									1	1				
2	20UC1202	English Proficiency	HSS	0	0	4	0	2	Nil								1	1			2		
3	20UC2103	Professional Communication Skills	HSS	0	0	4	0	2	Nil		1			1							1		
4	20UC2204	Corporate Communication Skills	HSS	0	0	4	0	2	Nil		1			1							1		
5	20UC3005	Aptitude Builder	HSS	0	0	4	0	2	Nil		1			1							1		
6	20UC0007	Indian Heritage and Culture	HSS	2	0	0	0	0	Nil	1													
7	20UC0008	Indian Constitution	HSS	2	0	0	0	0	Nil												1		
8	20UC0009	Ecology & Environment	HSS	2	0	0	0	0	Nil						2						1		
9	20UC0010	Universal Human Values & Professional Ethics	HSS	2	0	0	0	0	Nil								2						
10	20UC0011	Entrepreneurship	HSS	2	0	0	0	0	Nil											2			
11	20MT1101	Mathematics for Computing	BS	2	2	0	2	4.5	Nil	2													
12	20UC1102	Design Thinking and Innovation-I	BS	1	0	0	4	2	Nil	1	2	3	2	2				3		2			
13	19MT2102	Mathematics for Engineers	BS	2	1	0	0	3	Nil	2													
14	20PH1010	Science Elective-1 (Mechanics)	BS	3	1	0	0	4	Nil	2				2									
15	20UC1203	Design Thinking and Innovation-II	BS	1	0	0	4	2	Nil	1	2	3				2	2			2			
16	20PH2007	Science Elective - 2 (Materials for Mechanical Engineering Applications)	BS	3	0	2	0	4	Nil	1			1							1			
17	19BT1001	Biology for Engineers	BS	2	0	0	0	2	Nil						1	1							
18	20SC1101	Computational Thinking for Design	ES	3	0	2	6	5.5	Nil	2	2		2										
19	20ME1103	Design Tools Workshop –I	ES	0	0	4	0	2	Nil			2		2									
20	19SC1202	Data Structures	ES	3	0	2	3	4.75	20SC1101	2		2											
21	20ME1203	Computational Thinking and Data Sciences	ES	3	0	2	3	4.75	20SC1101	2	2												
22	19SC1209	Design Tools Workshop –II	ES	0	0	4	0	2	Nil			1	2	2									
23	20ME1002	2D Modeling of Physical Systems using CAD tools	ES	1	0	2	0	2	Nil		1	1	1	1								1	
24	20ME2104	3D Modeling and Physical Prototyping of Mechanical components	ES	0	0	4	0	2	20ME1002	2	2	2	2	2								2	2
25	20ME2209	Numerical Computation for Mechanical Engineers	ES	2	0	2	0	3	Nil	2													
26	20EE2205	Circuits and Electronics	ES	3	0	2	0	4	Nil	2				2									
27	20ME2105	Thermodynamics	ES	3	0	0	0	4	Nil	2	2		2										
28	20ME2101	Mechanics of Solids	PC	3	0	2	0	4	20PH1010		2	2										2	2

29	20ME2106	Fluid mechanics and Hydraulic machines	PC	3	0	2	0	4	Nil	2	2		2											
30	20ME2107	Manufacturing Techniques	PC	3	0	2	0	4	Nil	1	2	2											2	2
31	20ME2208	Mechanical Engineering Design	PC	3	0	2	4	5	20ME2101	1	2	1											2	1
32	20ME2210	Analysis of Thermal systems	PC	3	1	0	4	5	20ME2105	2	2		2											
33	20ME2211	Analysis of Mechanisms and Machines	PC	3	0	2	0	4	20PH1010		2	2	2											
34	20ME2212	Engineering in the physical world	PC	1	0	0	4	2	20ME2105		2													
35	20ME3113	Machine Design & Innovation	PC	3	1	0	4	5	20ME2208		2	2	2	3									2	3
36	20ME3114	Industry 4.0 & Design of Cyber Physical Systems	PC	3	0	0	4	4	Nil			2	2										2	
37	20ME3115	Heat transfer	PC	3	0	2	0	4	Nil	2													2	2
38	20ME3216	Artificial Intelligence and Data Analytics	PC	3	0	2	0	4	Nil	2				2										
39	20ME3221	Oops through Java	FC	3	0	2	0	4	Nil	1				2										
40	20ME3222	R Programming	FC	3	0	2	0	4	Nil	1				2										
41	20ME3223	Python Programming	FC	3	0	2	0	4	Nil	1				2										
42	20ME3224	Machine Learning	FC	3	0	2	0	4	Nil		1	2												
43	20ME4051	Theory of Elasticity and Plasticity	Engineering design	3	0	0	0	3	20ME2208	2	2													
44	20ME4052	Dynamics of Multi Body Systems		2	0	2	0	3	20PH1010	1	2												2	
45	20ME4053	Modeling Analysis and Design of Robotic Systems		2	0	2	0	3	Nil	2	2													
46	20ME4054	Creep, Fatigue and Fracture Mechanics		3	0	0	0	3	20ME2208		2		2											
47	20ME4055	Advanced Strength of Materials		2	0	2	0	3	20ME2101	2	2		2											
48	20ME4056	Mechanics of Composites		2	0	2	0	3	20ME2208	2														
49	20ME4057	Sustainable Design & Social Innovation in Engineering Design		1	0	4	0	3	20ME2208	1			3	2		2							3	3
50	20ME4061	Modern Manufacturing Processes	Smart manufacturing process	2	0	2	0	3	20ME2107		1													
51	20ME4062	Additive Manufacturing		2	0	2	0	3	Nil		1													
52	20ME4063	Advanced Materials		3	0	0	0	3	Nil		1													
53	20ME4064	Flexible Manufacturing Systems		2	0	2	0	3	Nil		1		2											
54	20ME4065	Robotics & Industrial Automation		2	0	2	0	3	Nil			1												
55	20ME4066	Reverse Engineering		3	0	0	0	3	Nil	1		1												
56	20ME4067	Sustainable Design & Social Innovation in Smart Manufacturing		1	0	4	0	3	Nil	1			3	2		2							3	3
57	20ME4071	Automobile Engineering	Automobile Engineering	2	0	2	0	3	Nil		2													
58	20ME4072	Hybrid & Electric Vehicle Design		2	0	2	0	3	Nil	1			2											
59	20ME4073	Autotronics & Safety		2	0	2	0	3	Nil	1	1		2											
60	20ME4074	Robotics & Industrial Automation		2	0	2	0	3	Nil			1												
61	20ME4075	Automotive Electrical and Electronics System		2	0	2	0	3	Nil	1	1	1												
62	20ME4076	Automobile Engine System and Performance		2	0	2	0	3	Nil	2	2		1											
63	20ME4077	Sustainable Design & Social Innovation in Automobile Engineering		1	0	4	0	3	Nil	1			3	2		2							3	3
64	20ME4081	Autotronics		2	0	2	0	3	Nil	1	2	2	2											

65	20ME4082	Automotive Sensor and Applications	Autotronics	2	0	2	0	3	Nil	1		2	2										
66	20ME4083	Electronic Engine Management System		2	0	2	0	3	Nil	1		2	2										
67	20ME4084	Instrumentation in Automotive Industries		2	0	2	0	3	Nil	1		2	2										
68	20ME4085	Autotronics and Vehicle Intelligence		2	0	2	0	3	Nil	2	1			2									
69	20ME4086	Autonomous Vehicle Design		2	0	2	0	3	Nil	1	1												
70	20ME4087	Sustainable Design & Social Innovation in Autotronics		1	0	4	0	3	Nil	1			3	2		2						3	3
71	20ME4091	Design for Quality and Reliability	Product Design	3	0	0	0	3	Nil	1		1											
72	20ME4092	Design of Agricultural Products & Machinery		3	0	0	0	3	Nil			2				2							
73	20ME4093	Designing Intelligence Systems		3	0	0	0	3	Nil	1		1											
74	20ME4094	Sustainable Design		3	0	0	0	3	Nil	1		1											
75	20ME4095	Systems Thinking for Design		3	0	0	0	3	Nil	1		1											
76	20ME4096	Design with Advanced Engineering Materials		3	0	0	0	3	Nil	1		1											
77	20ME4097	Sustainable Design & Social Innovation in Product Design		1	0	4	0	3	Nil	1			3	2		2						3	3
78	20IE2050	Social internship	PR	0	0	0	8	2	Nil		2			2				2				2	2
79	20IE3050	Technical Internship	PR	0	0	0	8	2	Nil		2			2				2				2	2
80		Design Studio elective	PR	0	0	0	10	2.5	Nil		2			2				2				2	2
81	20IE3150	Mid Grad Capstone Project – I	PR	0	0	0	8	2	Nil		3		3									2	2
82	20IE3250	Mid Grad Capstone Project – II	PR	0	0	0	8	2	Nil		3			3				3				2	2
83	20IE4150	Capstone Project - I	PR	0	0	0	24	6	Nil		3			3				3				2	2
84	20IE4250	Capstone Project - II	PR	0	0	0	24	6	Nil		3			3				3				2	2
85	19IE4050	Practice School	PR	0	0	0	24	6	Nil		3			3				3				2	2
86	19IE4051	Internship	PR	0	0	0	24	6	Nil		3			3				3				2	2
87	20TS3101	Technical Proficiency - 1 / Entrepreneurial Incubation	PTA	0	0	0	12	3	Nil									2		2			
88	20TS3202	Technical Proficiency - 2 / Technopreneurship	PTA	0	0	0	12	3	Nil									2		2			
89	20TS4103	Technical Proficiency - 3 / Entrepreneural Skilling	PTA	0	0	0	12	0	Nil									2		2			
90	20TS4204	Technical Proficiency - 4 / Entrepreneural Skilling	PTA	0	0	0	12	0	Nil									2		2			
91	19ME40B4	Robotics	OE	3	0	0	0	3	Nil			2		2									
92	19ME40B5	Mechatronics	OE	3	0	0	0	3	Nil		2												
93	19ME40B6	Operations Research	OE	3	0	0	0	3	Nil					2									
94	19ME40B7	Hybrid Electric vehicles	OE	3	0	0	0	3	Nil	1			2										
95	19ME40B8	Industry 4.0	OE	3	0	0	0	3	Nil			1	1										
96	19ME40B9	Industrial Automation	OE	3	0	0	0	3	Nil			1											
97	19ME40C1	Logistics & Supply chain management	OE	3	0	0	0	3	Nil											1			
98	19ME40C2	Total Quality Management	OE	3	0	0	0	3	Nil											1			
99	19ME40C3	Smart Mobility	OE	3	0	0	0	3	Nil			1											
100	19ME40C4	Managerial Economics for Engineers	OE	3	0	0	0	3	Nil											1			
		No. of Courses mapped to each PO & PSO								50	45	32	30	31	2	8	3	15	1	11	6	23	20