

Courses of Study and Scheme of Assessment

ME MANUFACTURING ENGINEERING

(2021 REGULATIONS)

(\*Minimum No. of credits to be earned: 71)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
<b>I SEMESTER</b>									
21PP01	Advanced Operations Research	3	1	0	4	50	50	100	PC
21PP02	CNC and Automation	3	0	0	3	50	50	100	PC
21PP03	Futuristic Materials and their Processing	3	0	0	3	50	50	100	PC
21PP04	Design for Manufacture and Assembly	3	1	0	4	50	50	100	PC
21PP05	Advanced Metrology	3	1	0	4	50	50	100	PC
21PP61	Research Methodology and IPR	2	0	0	2	50	50	100	RMC
21PP72	Audit Course – I	2	0	0	0	100	0	100	MC
21PP51	Object Computing and Data Structures Laboratory	0	0	4	2	50	50	100	PC
21PP52	Advanced Manufacturing Laboratory	0	0	4	2	50	50	100	PC
<b>Total 30hrs</b>		<b>19</b>	<b>3</b>	<b>8</b>	<b>24</b>	<b>500</b>	<b>400</b>	<b>900</b>	
<b>II SEMESTER</b>									
21PP06	Engineering Economics	3	1	0	4	50	50	100	PC
21PP07	Computer Aided Modeling and Analysis	3	1	0	4	50	50	100	PC
21PP__	Professional Elective – I	3	0	0	3	50	50	100	PE
21PP__	Professional Elective – II	3	0	0	3	50	50	100	PE
21PP__	Professional Elective – III	3	0	0	3	50	50	100	PE
21PP82	Audit Course – II	2	0	0	0	100	0	100	MC
21PP53	Computer Aided Modeling and Analysis Laboratory	0	0	4	2	50	50	100	PC
21PP54	Automation and Smart Manufacturing Laboratory	0	0	4	2	50	50	100	PC
21PP63	Industrial Visit and Technical Seminar	0	0	4	2	50	50	100	EEC
<b>Total 31 hrs</b>		<b>17</b>	<b>2</b>	<b>12</b>	<b>23</b>	<b>500</b>	<b>400</b>	<b>900</b>	
<b>III SEMESTER</b>									
21PP__	Professional Elective – IV	3	0	0	3	50	50	100	PE
21PP__	Open Elective	3	0	0	3	50	50	100	OE
21PP71	Project Work I	0	0	12	6	50	50	100	EEC
<b>Total 21 hrs</b>		<b>6</b>	<b>0</b>	<b>12</b>	<b>12</b>	<b>150</b>	<b>150</b>	<b>300</b>	
<b>IV SEMESTER</b>									
21PP81	Project Work II	0	0	24	12	50	50	100	EEC
<b>Total 24 hrs</b>		<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>	<b>50</b>	<b>50</b>	<b>100</b>	

<b>PROFESSIONAL ELECTIVE (PE) COURSES (Four to be opted)</b>									
21PP21	Additive Manufacturing	3	0	0	3	50	50	100	PE
21PP22	Advanced Casting and Welding Technologies	3	0	0	3	50	50	100	PE
21PP23	Design of Fluid Power Systems	3	0	0	3	50	50	100	PE
21PP24	Digital Manufacturing	3	0	0	3	50	50	100	PE
21PP25	Finite Element Applications in Manufacturing	3	0	0	3	50	50	100	PE
21PP26	Image Processing and Machine Vision	3	1	0	4	50	50	100	PE
21PP27	Industrial Ergonomics	3	0	0	3	50	50	100	PE
21PP28	Industrial Internet of Things	3	0	0	3	50	50	100	PE
21PP29	Lean Six Sigma	3	0	0	3	50	50	100	PE
21PP30	Logistics and Supply Chain Management	3	0	0	3	50	50	100	PE
21PP31	Mechanics of Polymer Matrix Composites	3	0	0	3	50	50	100	PE
21PP32	Mechanics of Robot	3	0	0	3	50	50	100	PE
21PP33	Mechatronics System	3	0	0	3	50	50	100	PE
21PP34	Non-Traditional Machining Processes	3	0	0	3	50	50	100	PE
21PP35	Optimization Techniques	3	0	0	3	50	50	100	PE
21PP36	Plasticity of Metal Forming	3	0	0	3	50	50	100	PE
21PP37	Precision Machining	3	0	0	3	50	50	100	PE
21PP38	Product Development Strategies	3	0	0	3	50	50	100	PE
21PP39	Production and Operations Management	3	0	0	3	50	50	100	PE
21PP40	Statistical Quality Control and Factorial Experiments	3	0	0	3	50	50	100	PE
21PP41	Sustainable Manufacturing	3	0	0	3	50	50	100	PE
21PP42	Tool Design	3	0	0	3	50	50	100	PE
21PP43	Research Methodology	3	0	0	3	50	50	100	PE

<b>List of Open Electives (one to be opted)</b>									
21PP91	Leadership Qualities for Organization	3	0	0	3	50	50	100	OE

\*Indicated is the minimum number of credits to be earned by a student.

**CAT – Category; PC – Professional Core; PE – Professional Elective; EEC – Employability Enhancement Course; RMC – Research Mandatory Course; Grade – Completed / Not Completed; MC – Mandatory Course; OE – Open Elective**