

MIT, Aurangabad

Department of Plastic and Polymer Engineering

Part II

Academic Year 2023-24

Class: Third Year (Autonomous)

Course Outcomes (Cos) and CO-PO Mapping

Course: Polymer Processing Technology

Course Code: PPE351

Course Outcomes

CO NO.	CO Statement
CO1	Describe the basics of different Polymer Processing Techniques (Remembering).
CO2	Explain the construction and working of polymer processing machines (Understanding).
CO3	Select the proper processing parameters for process optimization (Applying).
CO4	Solve the processing problems to provide cost effective and eco-friendly outputs (Analyzing).
CO5	Make use of the processing machines to produce the polymeric products considering all the safety measures (Applying).

CO-PO Mapping

CO No.	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	2											
CO 2	2											
CO 3	1	1	1		1							
CO 4	1	1										
CO 5	1				2				2			
Avg.	1.4	1	1		1.5				2			

Course Outcomes

CO NO.	CO Statement
CO1	Define the basic concepts of mold and product design (Remembering)
CO2	Explain the guidelines for tooling while manufacturing the mold (Understanding)
CO3	Select a suitable process, tool, and material for manufacturing of molds (Applying)
CO4	Categorize the plastic product as per its basic design features and manufacturing processes. (Analyzing)
CO5	Estimate the cost of the mold for new product. (Evaluate)
CO6	Design a new plastic component while considering basic design features. (Creating)

CO-PO Mapping

CO No.	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	2	-	-	-	-	-	-	-	-	-	-	-
CO 2	1	2	1	-	-	-	-	-	-	-	-	-
CO 3	-	2	1	-	1	-	-	-	-	-	-	-
CO 4	1	-	2	-	2	-	-	-	-	-	-	-
CO 5	1	1	-	-	-	-	-	-	-	-	-	-
CO 6	1	1	2	-	1	-	-	-	-	-	-	-
Avg	1.2	1.5	1.5	-	1.33	-	-	-	-	-	-	-

Course Outcomes

CO NO.	CO Statement
CO1	Define the basic terminologies of 3 D Printing technology with advantages and limitations for different applications (Remembering).
CO2	Outline the fundamentals of additive processes, advantages and limitations for different applications (Understanding).
CO3	Explain the principle, construction and working of additive manufacturing processes (Understand).
CO4	Analyze the proper processing parameters to optimize the process (Analyzing).
CO5	Identify the 3d printing applications in automotive, medical and pharmaceutical science, aerospace, defence, civil engineering etc. (Applying).
CO6	Determine the costing of 3D printing process and its advanced application (Evaluating).

CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	-	-	-	-	-	-
CO2	2	2	-	-	-	-	-	-	-	-	-
CO3	2	2	-	-	-	-	-	-	-	-	-
CO4	2	2	-	-	-	-	-	-	-	-	-
CO5	-	-	2	2	2	-	-	-	-	-	-
CO6	-	-	-	-	-	-	-	-	-	-	-
Average	2.0	-	-	-	-	-	-	-	-	-	-
Mapping Strength	2.0	2.0	2.0	2.0	2.0	-	-	-	-	-	-

Course Outcomes

CO NO.	CO Statement
CO1	Describe fundamental concepts of fluid mechanics, laws of fluids at rest and in motion (Remembering).
CO2	Classify different types of fluids, their flow behavior and pressure measurement in pipes or in closed channels (Understanding).
CO3	Relate the principles of fluid mechanics to the operation, design and selection of fluid flow machinery such as pumps, fans, blower and compressor (Understanding).
CO4	Apply the basic concepts & laws related to heat transfer by conduction, convection and radiation (Applying).
CO5	Analyze the working of fluid mechanics and heat transfer equipment (Analyzing).
CO6	Evaluate the principles of heat transfer to calculate heat transfer coefficients (Evaluating).

CO-PO Mapping

CO No.	PO1	PO2	PO3	PO 4	PO 5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	2	1	2							2		
CO 2	2	2								2		
CO 3	2	2	3							2		
CO 4	2	2	3							2		
CO 5	3	1						2		3		
CO 6	2	1								2		
Avg.	2.16	1.5	1.33					2		2.16		

Course Outcomes

CO NO.	CO Statement
CO1	Define key concepts related to the environmental aspects of waste management (Remembering) .
CO2	Explain the principles and goals of circular economy in plastics (Understanding) .
CO3	Outline international and national policies for sustainability in polymers (Understanding) .
CO4	Apply waste hierarchy principles for managing plastic waste (Applying) .
CO5	Analyze the suitability of sustainable additives and processing aids for energy-efficient polymer processing techniques (Analyzing) .
CO6	Evaluate plastic products based on recycling principles and circular economy business models (Evaluating) .

CO-PO Mapping

CO No.	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	-	-	-	-	-	-	1	-	-	-	-	-
CO 2	-	-	-	-	-	-	2	-	-	-	-	-
CO 3	-	-	-	-	-	-	2	-	-	-	-	2
CO 4	-	-	-	-	-	2	2	-	-	-	-	-
CO 5	-	-	-	-	-	-	3	-	-	-	-	-
CO 6	-	-	2	-	-	2	3	-	-	-	-	-
Avg.	-	-	3	-	-	2	2	-	-	-	-	2