

COURSE OUTCOME ASSESSMENT AND ATTAINMENT(R16)

COURSE NAME: ADDITIVE MANUFACTURING

CODE:R164103A

COURSE OUTCOMES: Students are able to

CO	STATEMENT
CO 1	Apply the basics of rapid manufacturing techniques in manufacturing
CO 2	Apply the liquid and solid based rapid prototyping system in suitable applications
CO 3	Apply powder based rapid prototyping system in suitable applications
CO 4	Apply the different materials for rapid prototyping system
CO 5	Apply the new technologies in rapid prototyping for various applications

MAPPING CO'S WITH PO'S

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C01	3	2	-	-	-	2	2	-	-	-	-	3	3	
C02	3	2	-	-	-	-	-	-	-	-	-	3	3	
C03	3	-	-	-	-	2	2	-	-	-	-	3	3	
C04	3	-	2	-	-	-	-	-	-	-	-	3	3	
C05	3	2	-	-	-	1	1	-	-	-	-	2	3	
Avg.	3	2	2	-	-	1.6	1.6	-	-	-	-	2.8	3	

MAPPING COURSE WITH PO'S

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
MMS	3	2	2	-	-	1.6	1.6	-	-	-	-	2.8	1.5	3

COURSE OUTCOME RUBRIC

Course	Assessment Methods with weightage	Method	Attainment Level 1 (Average)	Attainment Level 2 (Good)	Attainment Level 3 (Excellent)
Theory Course Outcome	Internal tests (30%)	Direct	60% students scoring more than 15 marks out of the maximum marks	70% students scoring more than 15 marks out of the maximum marks	80% students scoring more than 15 marks out of the maximum marks
	University Average Mark (70%)	Direct	50% students scoring more than 35 % of University Max marks	60% students scoring more than 35 % of University Max marks	70% students scoring more than 35 % of University Max marks

Course Name: ADDITIVE MANUFACTURING
Target for Course Outcome: **2.5**

Code: R164103C
Batch:2016-20

MEASURING CO ATTAINMENT THROUGH INTERNAL ASSESSMENTS	
INTERNAL TEST	
Attainment	: 50 out of 61 students got more than 15 (50% of max internal Marks 30) marks. So, 81.96% of students got marks more than target marks.
Attainment level	: 3
MEASURING COURSE OUTCOMES ATTAINED THROUGH UNIVERSITY EXAMINATIONS (DIRECT METHOD)	
Attainment	: 50 out of 60 students got more than 24 (35% of University Max Marks 70) marks. So, 83.3 % of students got marks more than target marks
Attainment level	: 3

Total Attainment of Additive Manufacturing Theory Course

Assessment Tool with weightage	Method	Level of attainment			
		3	2	1	0
Internal Exam (30%)	Direct	3			
University Exam (70%)	Direct	3			

Course Attainment = $0.3 \times 3 + 0.7 \times 3 = 3$. Since the attained level (3) is greater than the target level (2.5), all specified outcomes are achieved.

Course-PO Attainment for Additive Manufacturing:

Final PO attainment value = $\frac{CO-PO \text{ Mapping Average} \times \text{Course Attainment Value}}{3}$

Final COURSE Attainment WITH PO'S

Final Course PO attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C314	1.94	2.42	2.26	1.45	0.97	1.94	1.45	0.97	0.97	0.97	1.45	0.97	2.91	-