SUMAN RAMESH TULSIANI TECHNICAL CAMPUS – FACULTY OF ENGINEERING, KHAMSHET

An ISO 9001:2015 Certified Institute

DEPARTMENT OF COMPUTER ENGINEERING

APF-10E Issue No.:02 Revision No: 0 Rev. Date: 15/06/2018	**CO-PO mapping & Attainment Record**	Academic Year: 2021-2022 Semester: I

Program	**Form No.**	**OBE 1**
CG	**Revision No.**	**0**

Program Outcome (POs)

PO 1	Define basic terminologies of Computer Graphics, interpret the mathematical foundation of the concepts of computer graphics and apply mathematics to develop Computer programs for elementary graphic operations.
PO 2	Define the concept of windowing and clipping and apply various algorithms to fill and clip polygons.
PO 3	Explain the core concepts of computer graphics, including transformation in two and three dimensions, viewing and projection.
PO 4	Explain the concepts of color models, lighting, shading models and hidden surface elimination.
PO 5	Describe the fundamentals of curves, fractals, animation and gaming.

Program Specific Outcomes (PSOs)

PSO 1	To acquaint the learner with the basic concepts of Computer Graphics
PSO 2	To learn the various algorithms for generating and rendering graphical figures.
PSO 3	To learn the various algorithms for generating and rendering graphical figures.

(Academic Coordinator) **(HOD)**

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Course:	**CG**	**Form No.**	**OBE 2**
Course Code:	**210244**	**Revision No.**	**00**

CO-PO/PSO Mapping

Course Outcome (COs)

CO Code	CO statement	Mapping with Course Content (Unit No.)
CE403.1	Define basic terminologies of Computer Graphics, interpret the mathematical foundation of the concepts of computer graphics and apply mathematics to develop Computer programs for elementary graphic operations.	01
CE403.2	Define the concept of windowing and clipping and apply various algorithms to fill and clip polygons.	02
CE403.3	Explain the core concepts of computer graphics, including transformation in two and three dimensions, viewing and projection.	03
CE403.4	Explain the concepts of color models, lighting, shading models and hidden surface elimination.	04
CE403.5	Describe the fundamentals of curves, fractals, animation and gaming.	05
CE403.6	Computer Graphics, interpret the mathematical foundation of the concepts of computer graphics and apply mathematics to develop Computer programs for elementary graphic operations.	06

Enter correlation levels 1, 2, or 3 as defined below:
1: Slight (low) 2: Moderate (Medium) 3: Substantial (High)
If there is no correlation, put " - "

CO-PO matrix

CO Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CE304.1	1	3	3	-	-	1	-	1	-	-	-	1
CE304.2	1	3	3	-	-	1	-	1	-	-	-	1
CE304.3	2	3	3	-	-	1	-	1	-	-	-	1
CE304.4	1	-	3	-	-	1	-	1	-	-	-	1
CE304.5	1	-	3	-	-	1	-	1	-	-	-	1
CE304.6	1	-	3	-	-	1	-	1	-	-	-	1

CO-PSO matrix

CO Code	PSO1	PSO2	PSO3
CE304.1	3	1	1
CE304.2	3	1	1
CE304.3	3	1	1
CE304.4	3	1	1

CE304.5	3	1	1
CE304.6	3	1	1

(Academic Coordinator) **(HOD)**

Form No.	OBE 3
Revision No.	0

CO Attainment Evaluation Sheet

External

Roll No.	Name of Students	TH (70)	CO1	CO2	CO3	CO4	CO5	CO6
1	DHOBLE TEJASVINI MACHINDRA	37	617	616	617	617	617	617
2	KOKATE TANMAY HEMANT	30	500	500	500	500	500	500
3	PATIL BHAGYASHREE CHANDRAKANT	40	667	667	667	667	667	667
4	SUKHU PARTHA SUNIL	34	567	567	567	567	567	568
5	DHOBLE TEJASVINI MACHINDRA	34	568	567	567	567	566	567
6	MULEY ATHARVA DHANANJAY	36	600	600	600	600	600	600
7	WARE RUTUJA DADASAHEB	36	600	600	600	600	600	600
Average			589	587	588	588	587	589

Internal

Roll No.	Name of Students	Assignment (100)	TH (30)	CO1	CO2	CO3	CO4	CO5	CO6
1	DHOBLE TEJASVINI MACHINDRA	8	18	212	212	212	212	212	212
2	KOKATE TANMAY HEMANT	9	11	146	146	147	146	146	147
3	PATIL BHAGYASHREE CHANDRAKANT	8	12	152	152	152	152	152	152
4	SUKHU PARTHA SUNIL	8	12	153	152	152	152	152	152
5	DHOBLE TEJASVINI MACHINDRA	8	6	92	92	92	92	93	92
6	MULEY ATHARVA DHANANJAY	9	18	216	217	216	217	216	216
7	WARE RUTUJA DADASAHEB	9	13	166	166	166	166	166	166
Average				163	163	163	163	163	163

Attainment levels shall be determined as below:

Avg. of past three years SPPU course result (% marks obtained)	Percentage of appeared students securing more than avg. marks	Attainment Level
43	< 50%	1
	50 % to 70%	2
	> 70%	3

Overall Attainment of CO's = (0.3*avg of Internal Tools + 0.7*avg of external ools).
* avg of internal or external tools which are applicable

Form No.	OBE 4
Revision No.	0

Course wise PO Attainment Evaluation Sheet

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	35.33	53	35.33	53	35.33		-	-	-	-	-	17.67
C301.2	35.33	53	35.33	35.33	35.33		-	-	-	-	-	17.67
C301.3	35.33	35.33	35.33	53	17.67	35.33	-	-	-	-	-	17.67
C301.4	35.33	53	17.67	35.33	17.67	35.33	-	-	-	-	-	17.67
C301.5	17.67	35.33	17.67	16.67	35.33	17.67	-	-	-	-	-	17.67
C301.6	17.67	35.33	17.67	35.33	53	53	-	-	-	-	-	17.67
Average	28.44	45.165	27.5	39.11	33.39	34.33						17.67
Attainment Level	1	1	1	1	1	1						1

Notes:

1. **For calculating PO attainment Referform no. OBE 2 & form no. OBE 3**
2. $\text{PO Attainment} = \frac{\text{Mapping Strength}}{3} \times \text{CO attainment}$

Form No.	OBE 5
Revision No.	0

Course wise PSO Attainment Evaluation Sheet

CO	PSO1	PSO2	PSO3
C301.1	53.00	35.33	-
C301.2	53.00	35.33	-
C301.3	53.00	17.67	-
C301.4	53.00	17.67	17.67
C301.5	53.00	17.67	17.67
C301.6	53.00	17.67	17.67
Average	54.00	24.56	18.67
Attainment Level	2	1	1

Notes:

1. **For calculating PSO attainment Refer form No. OBE 2 & form no. OBE 3**
2. $\text{PSO Attainment} = \frac{\text{Mapping Strength}}{3} \times \text{CO attainment}$

(Faculty Members) **(Academic Coordinator)** **(HOD)**