

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT301	GRAPHICS LAB	0	0	2	1

Course Category:

~~Foundation (0) / Program Core (1) / Program Elective (2) / Allied Elective (3) / University Elective (4) / Value Education Elective (5) / Independent Learning (6) / Industry Higher Learning Institute Interaction (7)~~

a.Preamble :

This course Graphics lab, programs will be implemented based on lab syllabus; All experiments are executed in Turbo Compiler.

b. pre-requisite:

- Basic concept of C Programming lab

c. Related Courses:

- Project Work

d. COURSE EDUCATIONAL OBJECTIVES

- To practice the graphics techniques and algorithms.
- To enable the students to develop their creativity
- To differentiate the 2D and 3D aspects in practical.

e. Course Outcomes:

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Able to acquire a background in descriptive geometry, orthographic Dimensions	K2,S3
CO2	Able to understand point line and plane relationships in projection; multi-view engineering drawings; auxiliary and section views.	K2,S3
CO3	To Design basic dimensioning; engineering applications.	K2,S3
CO4	To analyze and implement isometric projection, engineering drawing techniques.	K2,S3
CO5	To understand and implement computer-aided engineering graphics and zooming effects.	K2,S3

f. Correlation of COs with POs :

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M		M		L							
CO2	M		M		L							
CO3	M		M		L							
CO4	M		M		L							
CO5	M		M		L							

H- High; M-Medium; L-Low

g. Course Content

LIST OF EXPERIMENTS:

- 1) To implement output primitives.
- 2) To implement Bresenham's algorithms for line, circle and ellipse drawing.
- 3) To perform 2D Transformations such as translation, rotation, scaling, reflection and shearing.
- 4) To implement Cohen-Sutherland 2D clipping and window-viewport mapping.
- 5) To perform 3D and greater than 3D Transformations such as translation, rotation and scaling.
- 6) To visualize projections of 3D and greater than 3D images.
- 7) To convert between color models.
- 8) To perform animation using any Animation software.
- 9) To implement the Zooming effect.
- 10) Generating Fractal images

h. Learning Resources

i. Text Books :

1. Donald Hearn and M. Pauline Baker, "Computer Graphics C Version", Pearson Education, 2003.

ii. Reference:

1. Foley, Van Dam, Feiner, Huges, "Computer Graphics: Principles & Practice".
2. Digital Animation Bible – AVGERAKIF, Tata McGraw Hill.

iii. Online resources

1. www.graphics.cornell.edu/online/tutorial/
2. www.cs.wellesley.edu/~cs110/lectures/M01-color/graphics.pdf