

14CSC61 GRAPHICS AND MULTIMEDIA (Common to CSE & IT branches)

3 0 2 4

Pre-requisites: Mathematics I

UNIT – I

Introduction to Graphics: Introduction - Graphics applications -Graphics systems – Output Primitive: Line, Circle and Ellipse drawing algorithms – Attributes of Output Primitives

UNIT – II

Two Dimensional Modeling: Two Dimensional Geometric Transformations – Two Dimensional Clipping and Viewing – Structures and Hierarchical Modeling.

UNIT – III

Three Dimensional Modeling: Three dimensional geometric and modeling transformations - Visible surface detection methods - Color models and Color applications

UNIT – IV

Introduction to Multimedia: Introduction – Uses of Multimedia – Interaction Technologies and Devices – Text – Digital Images

UNIT – V

Animation: Digital Audio – Audio-Visual Media: Video and Animation – Creating Animation in Flash – Designing Multimedia

Lecture: 45, Practical: 15, TOTAL: 60

TEXT BOOKS:

1. Hearn Donald and Baker M. Pauline, —Computer Graphics C Version□, 2nd Edition, Pearson Education, 2008
2. Ashok Banerji and Ananda Mohan Ghosh, —Multimedia Technologies□, 1st Edition, Tata McGraw Hill, 2010.

REFERENCE BOOKS:

1. Jeffcoate, Judith, —Multimedia in Practice: Technology and Applications□, 1st Edition, Prentice Hall of India, 2007.
2. Foley James D., Van Dam, Andries, Feiner Steven K. and Hughes John F., —Computer Graphics: Principles and Practice□, 2nd Edition, Pearson Education, 2005.
3. <http://www.entheosweb.com/Flash/default.asp>

Course Outcomes:

On completion of the course the students will be able to

- Teach the fundamental concepts of computer graphics along with the output primitives
- Manipulate the 2D and 3D objects by applying the transformation, clipping and viewing from world to device coordinates
- Elaborate the various methods for detecting visible surfaces and color in a 3D scene
- Describe the theoretical foundation about the multimedia technology
- Design a 2D animations using multimedia components
- Make use of various graphics drawing algorithms for drawing 2D Primitives
- Experiment with transformation and clipping methods for deformation of 2D objects
- Design a multimedia website using basic multimedia elements