Introduction to Computer Graphics - Video course

Course objective
To introduce students to the basics of computer graphics.

Prerequisites: Basic programming, Data structures and Basics of linear algebra and matrices.

Course contents

Lecture Outline with topics (and no. of hours)
1. Graphics display devices, Input devices, Rendering pipeline (3)
2. Raster graphics, windowing and clipping (6)
3. Transformations (5)
4. Curves and surfaces (7)
5. Hidden surface elimination (6)
6. Illumination and Shading Models (4)
7. Introduction to Ray-tracing (4)
8. Animation (5)

Brief description of laboratory activities
1. Implementation of viewing/rendering pipeline
2. Hierarchical modeling using transformations
3. Basic ray tracing
4. Programming practices with standard graphics libraries like open GL.

Suggested texts and reference materials