

# Computer Graphics: Lab

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## Course Summary

Principles of computer graphics, graphics systems and models, graphics programming, graphic devices and their controls, color model, geometric objects and transformations, viewing, shading, clipping, and hiddensurface removal.

## Course Topics

### Chapter 1: Introduction

- What is OpenGL?
- openGL in python
- Installing dependencies
- Creating Window

### Chapter 2: Basic openGL

- Triangle with Fixed Function
- Triangle with programmable pipeline
- quad with GL\_TRIANGLE\_STRIP and window resize

### Chapter 3: 2D Drawing

- Translation
- Rotation

### Chapter 4: 3D Drawing

- Translation
- Rotational

### Chapter 5: Projection

- Perspective Projection
- Orthogonal Projection

## Chapter 6: pyGame

### Assessment

In class Lab Works:	15%
Assignments:	15%
Final Project:	20%

NOTE: Form a group of three and think of project Ideas

CLASSROOM: qlq3f6p

### Text Book:

Interactive Computer Graphics: A Top-Down Approach Using OpenGL, Edward Angel, fifth Edition, Addison-Wesley 2008