# Project 1: Gaming in 3D-The first Step

# (Comp 446)

Spring, 2014

## The Assignment

The purpose of this assignment is to create a 3D game using DirectX 10. The game is up to you to define, but I strongly suggest that you develop something that you are confident will work and is fun to play.

I also suggest that you keep things simple for this project. For example, you might consider a game that is “almost 2D” (e.g., locked camera and simple collision detection). There are excellent examples of shooters and platformers that work this way. Be creative!

You need only develop a single level for this project.

This is a group project: please form a group of three persons.

The assignment will have the following parts:

* Game Pitch: a document to cover the following:
  + game name
  + a description of the game you will implement,
  + level map,
  + storyboard or other artwork to help describe your game, and
  + a description of gameplay and game mechanics.
* A poster for your project to post in class. Please bring a hardcopy to class.
* Final game due along with accompanying documents and video posted to Tumblr (described below).

Remember: Divide the work evenly among group members; all group members must program and must contribute some sound FXs and some graphics. Please use the following file naming convention:

* LastName\_arbitrary.ext where *LastName* is the name of the file’s author and *\_arbitrary* is whatever file name you want to use, and *.ext* is the proper file extension. Here’s an example of a file: Birmingham\_1stPersonCamera.cs.

A reminder:o*riginality is very important: do something creative and different!*

## Dates and Deliverables

1. 6 February: proposal due
2. 27 February: Please turn in the following as a single zip file (code and reports).
   1. Complete game with executable. Game source, resources, and executable are to be uploaded to mygcc.edu. Be sure to document your code well**.**
   2. A one-page report that includes what each team member contributed, the tools used for graphics and sounds (e.g., Audacity to create sound FXs), the group’s appraisal of the project: what was good and what needs more work.
   3. Completed grading rubric with your evaluation of your game. State specifically who contributed what to the project.
   4. Peer evaluation.
   5. Video uploaded to Tumblr.

## Grading Rubric and Course OUtcomes

1. (20%) Good quality graphics, appropriate to the game or story. **Supports Course Outcome 2**. Nominal requirements are as follows:
   1. At least one mesh (can be a simple rectangle) with texture per person in the group.
   2. Texture must be appropriate to the game.
   3. An appropriate background.
   4. Additional points awarded for interesting (non-rectangle) meshes, variety of objects, etc.
2. (10%) Good quality background music and sound fxs. **Supports Course Outcome 2**. Nominal requirements are as follows:
   1. At least one sound fx per person in group.
   2. Background music appropriate to the game.
   3. Additional points awarded for extra sound effects, particularly those that enhance the quality of the game.
3. (10%) Originality in either game or story. The best score will be for a completely original game, but high scores will also be given for interesting and original remakes of existing concepts. Low scores will be given to trivial remakes, such as an asteroid game that uses 3D rocks in wireframe. **Supports Course Outcomes 1 and 3**. Nominal requirements are as follows:
   1. Recognizable novel game elements, at least three per level.
   2. Reasonable gameplay and flow.
   3. Additional points awarded for additional novel gameplay elements.
4. (Acceptable/Unacceptable) The game must be stable, must be playable and must be complete. If the project fails on any of these, it will be unacceptable and a failing grade will be given on the project. **Supports Course Outcome 3 and 6**.
5. (10%) The game should be easy to play and the controls, strategies and tactics self evident. If you need to show the user how to control the game, consider some training tasks before allowing the user to play the full game. **Supports Course Outcomes 3 and 6**. Nominal requirements are as follows:
   1. Controls flow accepted conventions for the game type. For example, the use of WASD for movement.
   2. Controls are easy to learn, and make sense for what the player needs to do.
6. (50%) Quality of game play. Simple and fun—all of you have a sense for what makes for good game play. **Course Outcome 1**. Nominal requirements are as follows:
   1. All the game elements must come together to make a fun game experience.
   2. The game should have an organic feel, where controls, mechanics, rules, and scoring all work together to make the game enjoyable
   3. The game must exhibit flow and present the player with a compelling reason to keep playing the game.
   4. Additional points awarded for games that have quality graphics, sound, and gameplay.
7. (Acceptable/Unacceptable) All team members must be cooperative and contribute their fair share to the project. In addition, all members must participate in coding, sound FX, and graphics development. This outcome will be measured in large part by peer evaluations. If a student fails to contribute to the group or act in a unprofessional manner (late to meetings, failure to meet deadlines, failure to produce things of good quality), he or she may lose all credit for the project. **Supports Course Outcome 5**.

Project meeting the **nominal** criteria will score between 85% to 89% (B to B+). Games that exceed the nominal criteria with improved graphics, sound, game play and are generally high quality will score between 90% to 100%.