ETGG3802 Assigned: **4/13/2017**	Lab n: **In closing**… Due: **Tuesday 5/2/2017** (finals week) @ noon (I want parts of this a bit earlier)	**75 points**[1]

1. (**25 points**) **Part I**: (I want this by 4/27/2017, the last day of class so I can collate the results for our "final")
    a. Research 25 games you've played
        i. If you don't play games, just pick games that you've heard people talking about.
    b. Preferably pick games:
        i. From a variety of publishers / studios
        ii. From a variety of genres
        iii. From a variety of times
    c. ***Find the engine (and version, if available) that the game was created in***.
        i. I realize many games don't publicize this information.
        ii. If you really can't find it, just pick another game
        iii. Many games are created without an engine (they might be called "in-house" engines or "custom" engine (or even no engine)) – <u>definitely</u> include these.
    d. For each game that's made it here, collect this information:
        i. The name of the engine (and version information – e.g. Unreal 3.5)
        ii. When was it released?
        iii. Name of the publisher and studio (including your estimate of whether this is a AAA studio or more of an indie studio)
        iv. What platforms did the game release on?
    e. *I'll collate this information from everyone and present it during our discussion session on 5/2/2017.*
2. (**25 points**) Write a **paper** discussing your thoughts on the current state of the industry in regards to game engines. Some criteria:
    a. The paper should be at least 2 pages long (12-point font, 1" margins, 1.5x spacing)
    b. Discuss the relative strengths of each of our 3 engines (ssuge, Unreal, Unity)
    c. Discuss the situations in which a custom game engine makes sense (if you feel it doesn't ever make sense, make your case for that)
3. (**25 points**) Attend and participate in our **discussion** on 5/2/2017
    a. From noon – 1pm, we'll be discussing this paper.
    b. (optional) From 1 – 2pm, we'll be performing an ETGG3801/3802 post-mortem. You can skip this if you don't wish to participate (and there will be <u>no</u> penalties for doing so)
4. (optional) Reflect on your ETGG3801/3802 experience and come up with ways to improve it.
    a. The **problems** (that I see):
        i. Two "camps" – the people that:
            1. Want to focus on game creation. Learning Unreal / Unity exclusively would satisfy them.
            2. Don't like gaming and / or engines. Skipping Unreal / Unity would satisfy them.
        ii. Lack of C++ or general programming experience.
        iii. The engine gets big quick – many people aren't able to keep the big picture in mind.

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[1] In this class, we're just taking all points earned / points possible to get your overall percentage in the class.

        iv.   Not enough time to satisfy both camps. Over the years, I've *tried* to satisfy both, but I think I end up satisfying neither.

        v.   [Identify others]

b. **Reflection** – were these good or bad things?

        i.   Some (limited) exposure to Unity early in 3801 as an engine example.

        ii.   The structured nature of 3801

        iii.   The very unstructured nature of 3802 (after the first few labs)

        iv.   The group work component of 3802

        v.   The rotating groups in 3802

        vi.   [other class aspects]

c. Possible ways to **improve** (maybe?)

        i.   Split off the engine exploration into its own course sequence.

           1.   ETGG3803/3804 (Fall / Spring) – maybe 1 credit.

           2.   Both could involve exploring commercial engines (and maybe look at more [GameStudio, Lumberyard]

           3.   A component of ETGG3804 could be planning for senior project

           4.   [Maybe…] get the artists to take this class as well?

           5.   It could be team-taught by Greg / Travis?

           6.   Problems:

               a.   We'd have to drop something from the major (MATH1250?)

        ii.   Make ETGG3803/3804 a full 3 credit hours each and allow students to pick a "track" or "concentration"

        iii.   Make ETGG3801 (and to some extent 3802) more low-level

           1.   Get rid of some of the libraries we use and do it ourselves.

           2.   E.g. Write memory management / scene-graph / etc. using OpenGL only.

        iv.   [Your ideas here]