| ETGG1801 | Lab 3 : **Importing + Pygame** | Points: **30** |
| Assigned: **8/30/2017** | Due: **9/15/2017 @ 8am (Friday)**[1] | |

Objectives:

- Gain some experience with importing and using modules, especially pygame
- Gain further exposure to the use of variables, expressions, and functions.
- Explore the concept of animating an object…the tedious way (later, with loops, we'll explore a much more elegant solution)

Tasks:

1. (**10 points**) Create a program called **lab03a.py**. Create a picture using only the pygame.draw.??? functions. You should use at least 5 types of shapes, and 30 total shapes to create a drawing. Also, make something (don't be lazy and just make 5 circles, 5 rectangles, etc.) Your program should stay open for 3 seconds and then shut down. Give your artwork a title and render that title (using the pygame font library) centered on the bottom-center of the screen.

2. (**10 points**) Create a program called **lab03b.py**. Create a variable for the size of a line. Using that variable, generate 7 connected "rainbow" line segments (red, orange, yellow, green, blue, indigo, and violet) at random positions on screen (but make sure they're connected). The drawing should be different upon each run. One run might look like this (my line-width was 2):
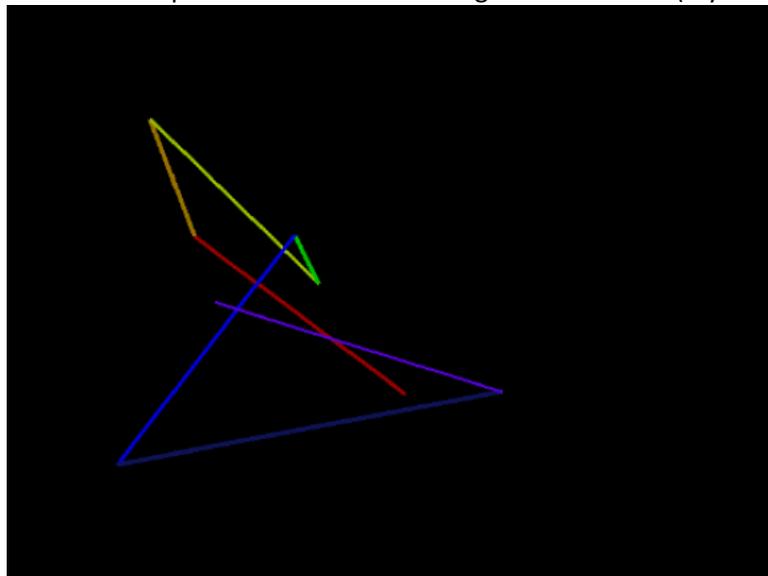
3. (**10 points**) Create a 3rd file: **lab03c.py**. Draw a circle to the center of the screen. After a half-second, move the circle slightly from its position. The amount moved should be 0 pixels, n pixels, or -n pixels both horizontally and vertically (possibly by different amounts). Don't let the center of the circle go off-screen (hint: you might find the min / max function useful here). Make n a variable that can be changed (without having to change all your code that uses it). Repeat this process for 10 seconds. Even if you know how to use if / while statements, don't (and yes, it can be done without them 😊). (**Bonus 3 points**): *center* an image you load from disk at the draw position – use that instead of a circle.

    Here's my solution (n was 20): **https://youtu.be/LNR7YhfWG2k**