Welcome to CSc-165 - Computer Game Architecture   READ CAREFULLY

I'm Scott Gordon, the instructor for CSc-165 – Computer Game Architecture. You are receiving this document because you are either enrolled or on the waitlist. You have probably heard that there is a planned faculty strike during the first week of classes, so I created this document (and the accompanying video) to let you know what is going on, my plans for the first week, to tell you about the course, and to let you know what you should do.

➢ **About the strike**

The strike is statewide, January 22-26, affecting all CSU campuses statewide. Assuming that the strike happens, I will strike too. A main reason for the strike is faculty pay. It affects all departments, including ours. My concern is not my own pay, but the great difficulty we have hiring and retaining CSC faculty because CSU salaries are not competitive with comparable schools. The effect is obvious: the number of professors in the CSC department at Sac State is HALF what it was 20 years ago, even though the number of students has at least tripled.

The word "strike" is very clearly-defined: it means we do no work, at all. That means <u>I will not hold courses during those five days</u>, and <u>I am not expecting you to attend</u>. I also won't do any advising, won't answer work-related emails, won't add or drop students, won't physically cross the picket line, etc. This is actually important, because legally we are not considered to be striking if we do any work at all - and any legal protections for striking disappear if I do any work. I will answer emails until this Sunday night, and then resuming Saturday the 27th.

I am VERY sorry to miss the first week of classes –anything that disrupts your learning is upsetting to me.

➢ **Are you trying to add CSc-165 ?**

If you wish to add CSc-165, send me an email, even if you are already on the waitlist. When classes resume on January 29th, try to attend. Do the assigned activities so that you aren't behind if I am able to add you. I cannot guarantee anyone a seat, but I will continue to maintain the waiting list, and I will work with the department chair regarding who should get priority in adding the class as spots open. But I have to know that you still want to add.

➢ **What are the prerequisites ?**

The prerequisites to CSc-165 are CSc-133, calculus, and physics. I will be checking prerequisites myself, and will drop anyone who hasn't met them, *because there are people on the waitlist who HAVE met the prerequisites*.

I have already checked prerequisites, and there are a few of you who have not passed CSc-133, and will be dropped soon either by me or the front office. If you think I should make an exception in your case, contact me.

➢ **What will happen when we return in week #2 ?**

Because there is a waiting list of people wanting to add CSc-165, I will take roll every day during weeks 2 and 3, until enrollment stabilizes. If you plan to skip class, please email and let me know if you want to stay in the class.

About the Course -- CSc-165

➢ **Game Architecture**

This is NOT a game design course; rather, game *architecture* – that is, how games are built, technically. We will not only learn how games are built, but also how game *engines* are built. Over the course of the semester, you will build a game, but the game itself isn't the main goal. For this reason, we are not using an off-the-shelf game engine such as Unity. Rather, we will be using a stripped down engine developed here at Sac State called TAGE.

This is a heavy programming class, similar in workload to CSc-133. You will be writing both game code and game engine code. All of our coding will be in Java, and TAGE is written in Java. If you are also taking CSc-155, you will have the opportunity to also extend the GLSL shaders at the heart of the TAGE renderer, if you want to learn more about that too. We will make heavy use of the RVR-5029 graphics computer lab.

This is a technology-heavy class with lots of coding and programming libraries to learn.

In short, this is a difficult class – if you signed up thinking it would be easy, DROP! If you are looking for a hard-core programming course that will stretch your mind, this is it. But you will need to apply yourself!

➢ **The Textbook**

There is no textbook. However, I will be posting a LOT of technical material and code on Canvas.

➢ **Where are the CSc-165 course materials ?**

CSc-165 course materials are on Canvas, and should be accessible now. For those students not yet enrolled and trying to add, I have placed the first set of materials here: **https://athena.ecs.csus.edu/~gordonvs/165/165ref.html**

➢ **What language(s) will we use?**

We will be using Java exclusively. Some students may also have the opportunity to write some GLSL code.

➢ **Should I use a PC ? Mac ? Linux ?**

The RVR-5029 lab is PCs with Windows 10 and Java 17. TAGE only works in that configuration, so you will need access to a PC to function in this course.

If you don't have a PC, you can check out a laptop from campus IRT. Several students have done this successfully. You can also get a key-fob for the RVR-5029 lab and use those machines when class isn't in session.

➢ **How do I prepare my PC for CSc-165 ?**

We will be using a lot of libraries (Java, JOGL, JOAL, JOML, SOIL2, JBullet, JInput, Vecmath), and the initial installation of TAGE is fairly involved. There is a detailed installation guide posted on Canvas (and my webpage) that you will need to follow step-by-step, carefully. Later in the semester we will also use Blender.

If you are also enrolled in CSc-155 (Advanced Graphics), installing these CSc-165 libraries will leave you already configured for CSc-155. The 165 libraries are a superset of the 155 libraries.

➢ **Will we be making cool games ?**

Yes! Examples of past years' student work: **https://athena.ecs.csus.edu/~gordonvs/165images/images.html**
Some of these examples are animated, so click on the links to view the games in action.

What to do During the Strike

I don't want you to waste the first week, so I have plenty for you to do! Don't be idle – do the following:

1. Read the syllabus thoroughly – it is full of critical information that I will assume you know and follow.
2. Watch the three CSc-133 matrix transform videos that I posted on Canvas and on my website.
3. Read the posted Chapter 0 and Chapter 1 notes.
4. If you need to check out a PC from campus IRT, get that process started now. If they need my approval, I should ideally send that email before the strike starts. So do that today if at all possible.
5. Install the libraries using the posted installation guide. All steps are necessary!
6. Test your installation using the "Hello Dolphin" posted code.
7. There are three posted videos about the TAGE engine – watch the first video.
8. Read the first two pages of the TAGE intro guide that is in the tage-build folder.
9. Start looking at the "HelloDolphin" code, comparing it to the code outline in the TAGE intro guide.

As you do each of the above items, write down any technical questions that you have. I plan to spend most of the time on Monday the 29th answering questions, so be proactive and come prepared with your questions!

I look forward to meeting you all in person on Monday January 29th!