Welcome! I'm happy to be here, I hope you are too!

Mike Bailey
mjb@cs.oregonstate.edu

Concerns Taken from the Pre-Quarter Qualtrics Survey, I

- You don't like having to commute 2 hours each day for class. This class is also offered online (Canvas) -- that should help you some.
- You're concerned about having to do Group Projects. There are no Group Projects in the class (I dislike them too).
- You're concerned because you're not a CS major. This course has been deliberately tailored so that those outside of CS can still succeed in it. CS is for everyone!
- You're concerned that you have no prior background in CG. No problem -- that's what I am assuming. We start from zero.
- You're concerned that OpenGL is complicated to understand quickly. We will use what I would call "C++-lite", and there will be lots of sample code, and lots of professor/TA help.
- You're concerned because you are not a good test-taker or memorizer. The quizzes and tests are all open-notes.

Concerns Taken from the Pre-Quarter Qualtrics Survey, II

- You're concerned that CG is for everyone! It's not. However, if you are concerned with your grades in other classes, you might have the same grades in this class. It's all about how you worked at it.
- You're concerned that the projects look too challenging. We are deliberately starting with the simplest way of using OpenGL so that everyone gets comfortable right away. By the time the quarter starts, all lectures will have been pre-recorded, mostly for the online section, but really for everyone. If you see an on-campus student, you will get more out of being there, though.
- You're concerned about the workload. This is the summary of what several years of this class have told me about the hours/week workload.
- You're concerned that you are not a CS major. This course has been deliberately tailored so that those outside of CS can still succeed in it. CS is for everyone!
- You're concerned that you have no prior background in linear algebra. They are challenging. You wouldn't want it any other way. But, the challenge is just with respect to what you know now. We will start with Project #1 (pretty straightforward) and build from there. No projects.
- You're concerned that there is no Group Projects in this class – I dislike them too.

Concerns Taken from the Pre-Quarter Qualtrics Survey, III

- I have just moved to the USA. It is my first time here. I am still figuring out the rules and regulations. I am happy to be here. Not much I can do to help you with this. But, there is a lot of flexibility in the way the class is structured, so that should help. BTW, send me a photo!
- You're concerned that drawing by hand, but I found I could "draw" in 3D by using what I know now. It didn't matter who you are or how you got here. It's the use of the transformations in an application that really matters in this class. Personally, I can't draw to save my life! That was one of the things that attracted me to CG in the first place. I suck at drawing by hand, but I found I could "draw" in 3D by using what I know now.
- You're concerned because you're not a US student. Welcome to the USA! I hope you enjoy your time here.
- You're concerned that you don't know C++. No problem -- that's what I am assuming. We start from zero.
- You're concerned that you have no prior background in CG. No problem -- that's what I am assuming. We start from zero.
- You're concerned that the A grade window is small. That's because we do a "soft grade" on your projects. No counting the number of comments. No timing how long it ran for. "Did it work as required?" If yes, then full credit. No problem – we use library functions to handle transformations. The underlying implementation of transformations is hidden and is, frankly, unimportant. It's the use of the transformations in an application that really matters in this class.

Mike Bailey
Kelley Engineering Center at Oregon State University, home of CS

Summary

- We will use what I would call "C++-lite", and there will be lots of sample code, and lots of professor/TA help.
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IntroToCS450-550.pptx

Concerns Taken from the Pre-Quarter Qualtrics Survey, II

- You're concerned that this class will be math-heavy. We will use some math, but I wouldn't call it "math-heavy".
- You're concerned that CG is for everyone! It's not. However, if you are concerned with your grades in other classes, you might have the same grades in this class. It's all about how you worked at it.
- You're concerned because you're not a CS major. This course has been deliberately tailored so that those outside of CS can still succeed in it. CS is for everyone!
- You're concerned that there is no Group Projects in this class – I dislike them too.
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The CS 450/550 Class Resources Page

Class materials will be linked into various Canvas pages, but you can find everything here:

http://cs.oregonstate.edu/~mjb/cs550

(It doesn't matter if you are in CS 450 or CS 550. It doesn't matter if you are on-campus or online. We all use the same Class Resources Page.)

Course Topics
1. Summary of the computer graphics process
2. Coordinate systems and the graphics pipeline
3. Drawing a 3D scene using OpenGL
4. Single and hierarchical transformations
5. Projection from 3D to 2D
6. Altering the 3D viewing
7. Framebuffers and color
8. Lighting
9. Texture mapping
10. Transparency (blending)
11. Various approaches to 3D modeling
12. Various approaches to 3D rendering
13. Various approaches to 3D animation
14. Various Buffers Objects
15. GLM
16. Shaders (Vertex and Fragment)
17. Shadows
18. Stereographics
19. Virtual and Augmented Reality
20. A look into the computer graphics future – Vulkan

Grading: Points and Cutoffs
• 10 Quizzes @ 10 points each
• 2 Tests @ 100 points each
• 7 Projects, worth a total of 650 points
• CS 550ers will also do a 100-point Paper Review Project (450ers get a free 100 points for that assignment)

Grade cutoffs will be no higher than:

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Total Points = 1050

Note that this is not 90-80-70-60! I do it this way because we do such a soft grading on the programming projects.

Quizzes
• Quizzes will go live on Canvas every Friday at 12:01 AM Pacific Time (one minute after midnight).
• Each quiz is due at 23:59 Pacific Time Sunday evening (one minute before midnight).
• Exception: Quiz #0 is due at 4:00 PM on Wednesday, October 4.
• There is no quiz on the Friday of Thanksgiving week (Week #8).
• Part of what is being quizzed is the time management skill to remember to take the quizzes. If you forget to take the quiz, there is no make-up.
• I really recommend that you take the quiz before the end of Friday! That way, your weekend activities won’t distract you from getting the grade.

EECS Information for You:
Calendar of Events:
(EECS events are in orange, career events for students are in green)
https://eecs.oregonstate.edu/eecs-calendar

Resources for students looking for internships and jobs:
https://eecs.oregonstate.edu/eecs-student-portal

More Information, I:
Link to the Code of Student Conduct:
https://beav.es/codeofconduct
Students With Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval, please contact DAS immediately at 541-737-4098 or at disability.services@oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Religious Holidays

Oregon State University strives to respect all religious practices. If you have religious holidays that are in conflict with any of the requirements of this class, please see me immediately so that we can make alternative arrangements.

Counseling and Psychological Services

Oregon State University’s Counseling and Psychological Services (CAPS) provides OSU students with individual, relationship, and group counseling. I have met some of these people, and they are really good. If you are in any type of emotional difficulty, don’t hesitate to contact them. If it makes it easier for you, I will walk over with you.

MySSP: Mental Health Support for Students

MySSP @ OSU is an app that gives all OSU students, including Ecampus students, 24/7 access by text or phone with a licensed mental health counselor (MySSP stands for My Student Support Program). The app makes it easy to schedule short-term counseling appointments with the same ongoing counselor and provides educational materials covering mental health topics. Students can communicate with a counselor in five different languages (Mandarin, Cantonese, French, Spanish or English); additional language options are available upon request. Students can download the Anytime Anywhere: MySSP @ OSU and learn more about the service at http://beav.es/anytime anywhere. For questions, please contact Bonnie Hemrick (bonnie.hemrick@oregonstate.edu), Director of Mental Health Promotion.

Life Events

As John Lennon or Allen Saunders? has said: “Life is what happens to you while you’re busy making other plans”. I care about you as a person. When life happens to you, send me an email and come see me. I might be able to help, I might not. But I surely can listen. You are not alone.

Reach Out for Success

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it’s important to reach out. Consider discussing the situation with me or an academic advisor. Learn about resources that assist with wellness and academic success at http://oregonstate.edu/ReachOut. If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).

Basic Needs

Success at OSU means knowing and using your resources. One helpful resource is the community of staff available at the Basic Needs Center (BNC) for support (bnc@oregonstate.edu, 541-737-3747). Students can drop in during open hours and talk with a BNC student leader for resources, ideas and strategies connected to basic needs challenges. The BNC is often known for its food pantry, but there are other resources connected to groceries and affording food often available and staff who can help you work through housing stressors. Undergraduate students, living in Oregon, are especially encouraged to explore SNAP as a resource. BNC staff are skilled with helping students navigate this process.

Additionally, the BNC Textbook Lending Program offers students the opportunity to check out required textbooks for the academic term. Furthermore, if you are comfortable doing so, please talk with me. I will do everything I can to help you.