

An Introduction to CS 450/550

"Computer Graphics is the world's #1 enabling technology." -- Mike Bailey

"What will matter is what you learned and how you used it." -- poster outside my office



Oregon State
University

Mike Bailey

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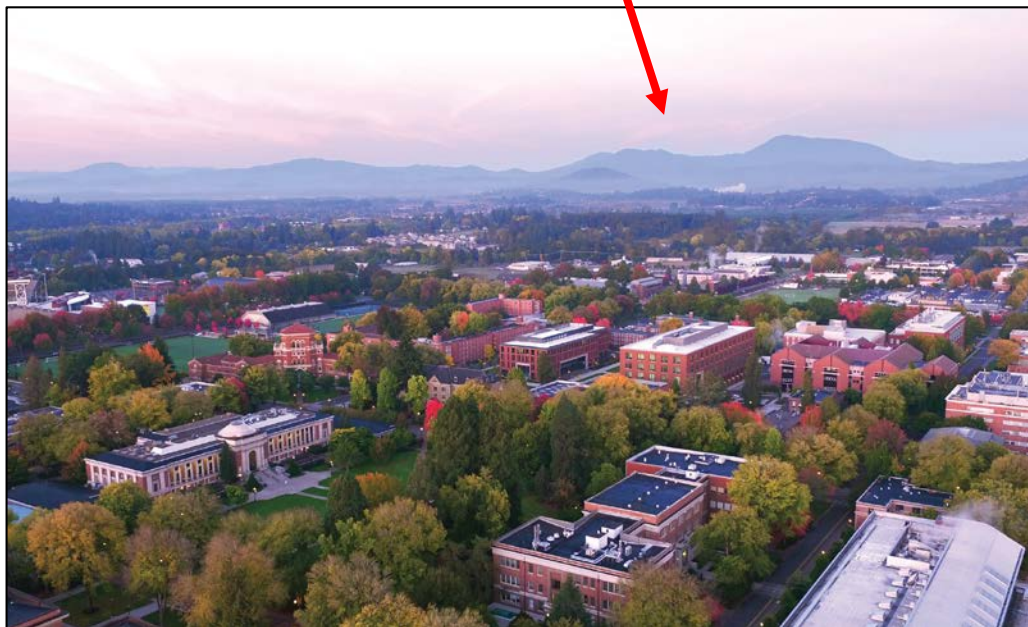
Oregon State
University

Computer Graphics

Mike Bailey

- Professor of Computer Science, Oregon State University
- Has been in computer graphics for over 30 years
- Has had over 8,000 students in his university classes
- `mjb@cs.oregonstate.edu`

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



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Computer Graphics

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. Vertex Buffer Objects
15. GLM
16. Shaders (Vertex and Fragment)
17. 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)

Total Points = 1050

Grade cutoffs will be no higher than:

Points	Grade
1020	A
1000	A-
980	B+
960	B
940	B-
920	C+
900	C
880	C-
860	D+
840	D
820	D-



Quizzes

- Quizzes will go live every Friday afternoon at 2:00 Pacific Time.
- There *is* a quiz on Friday of Week #0.
- There is *no quiz on* the Friday of Thanksgiving weekend (Week #9).
- Each quiz will close at 23:59 Pacific Time Sunday evening.
The exception is Quiz #0, which is due a week from that Friday.
- Part of what is being quizzed are the time management skills to remember to take the quizzes. Thus, 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!



More Information, I:

Link to the Code of Student Conduct:

https://studentlife.oregonstate.edu/sites/studentlife.oregonstate.edu/files/code_of_student_conduct_final.pdf



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More Information, II:

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 <http://ds.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.



More Information, III:

Life Events

As {John Lennon? 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

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, is urged to contact the [Human Services Resource Center \(HSRC\)](#) for support: hsrc@oregonstate.edu, 541-737-3747. The HSRC has a food pantry, a textbook lending program, and other resources to help. Furthermore, if you are comfortable doing so, please talk with me. I will do everything I can do to help you.

