CSCI 39541 "Basics of Game Engines"

Summer 2021

by Pavel Shostak

Classes : Classes will happen through the Blackboard Collaborate. A link to the class will appear on our course page on the Blackboard before the class itself.

During the class, I'm always happy to hear questions. Feel free to pause me if you need time to make notes.

I found out that Blackboard Collaborate wants to have 3-rd party cookies enabled in your browser.

Office hours :

Pavel: Monday 3:15pm - 5:15pm

Office hours don't happen on holidays.

Office hours will be held through a special room on the Blackboard Collaborate. The Slack channel can be used to ask questions at any time. I will answer Slack during the office hours. I will ignore email communications. Again, use Slack to write to me.

Textbook : There will be no official textbook for this course.

Learning Goals : The purpose of this course is to use the previously acquired knowledge and skills to create a larger C++ project. Game engine will be only an excuse to build a multi-component program. Ideally, after the course, you should be able to look at the real C++ projects without entering deep stupor.

Grades : Grades will be based on the single course project. You will be required to repeat everything that we do in class yourself. I will also require some minor cosmetic and structural changes to enforce active thinking and analysis when creating your copy of our class project.

The course project and its in-progress versions (if required) must be submitted on time. Late submissions won't be accepted.

There will be no "extra credit" assignments. There will be no chance to pull up your grade by doing additional work. All grades are assigned following the same criteria.

Topics to be covered (APPROXIMATE list) :

Current C++ techniques and practices. Larger project planning and set-up. Solutions/workspaces. Dynamic libraries Building. Cross-platform development. CMake. Drawing windows. GLFW. Project's own wrappers of 3rd-party tools. Event driven programming. Graphics. OpenGL. Dealing with user input. Real-time programming. Multithreading. Debugging. Profiling. Logging.

Course follows Hunter policies on Academic Integrity:

"Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures."

ADA compliance:

In compliance with the ADA and with Section 504 of the Rehabilitation Act, Hunter College is committed to ensuring educational access and accommodations for all its registered students. Hunter College's students with disabilities and medical conditions are encouraged to register with the Office of AccessABILITY for assistance and accommodation. For information and appointment contact the Office of AccessABILITY located in Room E1214 or call (212) 772-4857 /or TTY (212) 650-3230.

Hunter College Policy on Sexual Misconduct

"In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf .