

Custom Individual/Team Final Project Guidelines

(0 pts)

Due Date: Oct 12th, 2025 by 11:59 PM

Final Project Requirements:

In order to do a special project either individual or team, the project must meet the following criteria:

1. The results of your project must be verifiable. You can do either “a” or “b”
 - a. Submit a video showing your project running and any final results. Submit all code files and any output files.
 - b. If you do not submit a video of your code running, then the TAs will need to be able to compile your code, therefore the software must compile and run on the PACE-ICE system.
 - c. You will need to include a “readme” text file describing the steps needed to compile and run your code
 - i. Include what OS was used and any third-party libraries along with links.
 - ii. The TAs and I must be able to reproduce what is seen in the video (if submitted), so it is your responsibility to provide us with instructions on how to build your code.
 - iii. It is also important that your code is well commented and easy to follow and understand.
2. Submit all your code files into a single zip file with the name Final_Project.zip. For team projects make sure that the readme file has a list at the top of all the students on the team. All the students need to submit the same Final_Project.zip. All the students will get the same grade for a team based final project.
3. Your code must make use of custom class(es) that you create plus one of the following:
 - a. Multi-threading std::thread or OpenMP
 - b. OpenGL
 - c. Sockets
 - d. MPI
 - e. GPU (CUDA)
4. **You must submit a report (statement of work) detailing what your project entails, including which of the previous topic(s) is used. You must have measurable results for the purpose of grading your project. The TAs will review your project submission and may ask you to make changes or completely reject your project. If your project is rejected you will need to do the default class final project.**
5. If doing a team project the names of each student must be listed and a detailed account of each student’s role on the Team. Each student’s individual role (effort) must be equivalent to single student’s project effort.
6. **For each student the amount of effort should be similar to twice that of a typical homework assignment.**

7. I hope you use this opportunity to investigate or work on a topic that you are interested in exploring. However, you cannot just turn in an old project from another class.
8. You are free to use third party libraries, but only if submitting a video showing code running. These third party libraries may not be available on PACE-ICE.
9. Do not over commit and propose something too difficult. Make sure you have a clear plan and your results are achievable.
10. Optional, generate a grading rubric for your project. A general grading rubric is listed below, but in order to have a more detailed method of grading your code you are allowed to create a grading rubric. The grader has the choice of using the general rubric or the one you provide.

Grading Rubric

AUTOMATIC GRADING POINT DEDUCTIONS PER PROBLEM:

Element	Percentage Deduction	Details
Project Functions as expected.	Up to 50%	The project produces the results stated in the preliminary project statement of work.
Custom Class(es) were used.	Up to 50%	You create custom class(es) as part of your project.
One of the special topics was used. <ol style="list-style-type: none"> a. Multi-threading std::thread or OpenMP b. OpenGL c. Sockets d. MPI e. GPU (CUDA) 	Up to 50%	You must use at least one of the 5 topics covered this semester
Clear Self-Documenting Coding Styles	10%-25%	This can include incorrect indentation, using unclear variable names, unclear/missing comments, or compiling with warnings. (See Appendix A)

LATE POLICY

Late final projects will not be accepted. All final projects must be submitted on canvas by midnight the last day of class.