ISyE 6644 Project Rubric & Requirements – Fall 2025

(Revised 9/3/25)

The course project is worth 10% of your semester grade. The project will be graded out of 100 points.

Milestone 1: Project Topic & Team Selection (5 points)

You must complete all steps in this assignment to receive credit for your project report. Failure to follow the instructions listed here may result in deduction of points from your project report. You must select a topic that matches the number of members in your group. The ONLY exception to this is if you want to do a project that is listed for more members than you have (e.g., you are 2 people and want to do a project meant for 3 or 4 people; THERE ARE NO EXCEPTIONS TO THIS). **Everyone needs to complete this assignment.**

Question 1: Select your project topic from a list of all available topics.
Question 2: List all team member names here. If you are a single group, just type your name.
Question 3: Provides instructions on how to create your group in Canvas. **(Every member of the team must complete this step even if you are a single person group.)**

Milestone 2: Project Progress Report (5 points)

All we're looking for here are a couple of paragraphs describing what you've done so far and what you still need to do. **Only one team member needs to turn in this assignment, but you must clearly and unambiguously list EVERYONE on the team**. Failure to do so will result in loss of points. The intent is not to provide an almost completed report as the TAs will not be grading anything beyond checking to see that you've provided the paragraphs. Please do not submit a rough draft copy of your project. **Also include the specific Project Topic number you have selected.**

Milestone 3: Final Report (90 points)

Please submit 2 files as a part of submission (if you chose a non-coding-based topic then you only need to provide your report).

One file will be a pdf file, which will cover your final project report. The PDF must be separate from the zip file.

The second file should be a zip file, which will cover all the code documents, Arena file, and any other file you may think important to submit. We do not need every single individual file that you have ever created while working on your project nor do we need the entire version control history of any source code. Please include a README file in the zip folder, explaining what each file is, so that we can evaluate your projects easily. If your download is failing to Canvas, then that means the file is too large and you have included files that are not required to adequately assess your project. You cannot submit links to Google Docs, GitHub, or any other online link to the content of your project.

For each group, only one person from that group needs to submit the project files.

Project Administration Duties (10 Points)

Task	Due Date	Points
Project Topic & Team Selection	**Friday, September 26th 11:59 PM Atlanta Time**	5
Progress Report (just a couple of paragraphs)	**Friday, October 17th 11:59 PM Atlanta Time**	5
Peer Review (for your team members)	**Tuesday, December 2nd 11:59 PM Atlanta Time**	1 (Extra Credit!)

Project Content (90 Points)

Due Date: Tuesday, December 2nd 11:59 PM Atlanta Time

Plan Ahead. Don't try submitting it to Canvas at 11:58 PM Atlanta Time!

Task	Points	Description
Title & Group Member Names	5	Include a descriptive title, the group number, and all group member names at the beginning of your project.
Abstract	5	A short synopsis (at most 200 words) of what problem you're working on, including major findings
Background & Description of the Problem	5	Some details of the problem under investigation (e.g., a literature review along with a description of the organization of what's coming up in the remainder of the write-up).
Main Findings	50	The main findings of a project will clearly depend on what type of project you're doing, how many people are in the group, etc. Here are some guidelines related to the broad categories from the original project list document: Applications-Oriented "Real-World" Problems. These projects will typically involve simulation using a simulation language like Arena (though you may have to use something like Python for, e.g., simulation of pandemic flu spread). Here are our expectations: • Describe in detail the applications area (e.g., all the potential ways that you can play with an inventory policy, why it's important, etc.). • Collect some data from someplace – e.g., an actual company, get it yourself, find it online, or (in an emergency) make it up, but with justification. • Do an elementary data analysis and maybe some curve fitting, if appropriate. • Simulate your model (e.g., in Arena), hopefully using the data analysis you undertook. • Analyze the output, make improvements/conclusions. Language- and Modeling-Oriented Problems. These projects usually involve learning a new simulation language or modeling paradigm. We'd like you to: • Explain how the language works (at least at a basic level). • Provide a tutorial / user guide with your own examples (please do not use the examples found in the online documentation). • Outline good points and not-so-good points. • Make a very quick comparison with Arena. Programming-Oriented Problems. These problems are often concerned with Monte Carlo analysis of a game or preparing an easy-to-use library for some simulation functionality for us. • Describe the problem at hand thoroughly and past efforts by others to solve it. • Develop and document your code. • Show how to run your program(s). • Give illustrations of what you can learn from your code (e.g., whether a PRN generator is any good, or whether a certain strategy will work better than others in blackjack). Make sure to be statistically rigorous (e.g., estimates, confidence intervals, hypothesis tests, etc.) if you're carrying out Monte Carlo experiments. Theory-Oriented Problems • Describe the problem at hand thoroughly and past efforts by others to solve it. • What are the techniques used to derive the main findings? • Describe some of the fundamental results (e.g., this paper gives an explicit expression for an estimator's expected value in terms of the covariance function). • Formulate (but you don't have to solve) a couple of research problems that might be derived from this work.

Task	Points	Description
Conclusions	5	What did you find/learn from the project? Provide ideas for future work that could be built using your project as a starting point.
Presentation, Writing Quality, and References/Citations (if appropriate)	20	Is the paper written clearly, succinctly, and professionally? Is it free of typPogrficLe errors? **All outside sources, including ChatGPT (and similar applications), used in the creation of your project need to be included and precisely described. Any direct quotes you use in your project must be clearly cited. It is not acceptable to copy and paste large portions of your project even if you cite it correctly. You can use any style of citations you want (APA, MLA, etc.). If you're not sure whether you should cite something, then cite it.**

And, finally, here are some hints/expectations about exposition:

- The idea is to have fun and learn something about a topic that interests you.
- Then convey that interest to your readers. So…
- Write in a style that is clear, interesting, and well-thought-out; get a friend or two to proofread – no typos allowed in 6644! 😊
- Bigger groups should generally tend to write more verbiage (but that is not mandated). Try to limit your report to 5 pages per person. (There is no need for tedious lists of data/tables or tons of code, unless that's the point of your report.)
- I'm guessing you can bat this off in <15 hours of work per group member (just a guideline).
- Copying code you have found online in whole, or part is not in the spirit of academic integrity. If you absolutely must utilize a piece of code you have sourced online, please be sure to cite it. Copying sections of code and changing variable names and claiming it as your own is not permitted.
- If you use ChatGPT, fully document precisely what you did!
- **NO PLAGIARISM** – we have seen EVERYTHING, and we will catch you! 😟