

Term Project

Proposal due 1:30 PM, Monday, April 6

Power Point Presentation File due 11:00 PM, Saturday, May 2

Presentation in class on April 22 or May 4

Report due 1:30 PM, Monday, May 4

First of all, let me remind you that the Term Project weights 30% of the overall grade. The term project will be graded as follows:

- Proposal 10%
- In-class Presentation 35%
- Project Report 55%
 - Motivations & simulated problem description (6%)
 - Input data analysis & model assumptions (10%)
 - Simulation model/codes (15%)
 - Output statistical analysis
(10%, including # of replications and simulation accuracy)
 - Discussions and optimization (14%)

POSSIBLE TOPICS:

Generally speaking, you can do any simulation related subjects; it is not strictly necessary to include computer work.

1. Apply simulation approaches to your research or application problems
2. Cook up an example (at least 5 nodes) and apply simulation approaches to your example
3. Any other simulation related topics with permission of instructor

While you have flexibility to select the topic you want to work, you are strongly encouraged to work on some problems related to your research, your work, or your life. Try to imagine that you are hired to conduct some simulation studies on a system. At the end of the project study, you have to give a recommendation about how to improve the system or how to redesign the system. Suppose you are paid \$1M for your study. You are requested to use simulation as the primary tool to come up with your recommendation and to justify your reward of \$1M.

SIMULATION EXAMPLES IN PREVIOUS YEARS:

Bank, elevators, restaurants, manufacturing plants, offices, traffic intersection, computer lab, telecommunication networks, airports, railroad stations, barber shop, party.....

COLLABORATION:

Team work is encouraged, the ideal size is 2~3 students in a team. The maximum is 3 persons in team and a bigger project is expected for a 3-person team. Each member will have the same grade except when the contribution by each individual is clearly explained.

PROPOSAL:

In your proposal, please illustrate what you plan to do and what results you anticipate to obtain when you finish. The proposal is limited to two pages. As your project proceeds, you can always change the topics or do something which is not described in your proposal. The main purpose of the proposal is to force you to start to think about your project seriously and to find your partner. In specific, each team has to submit a proposal which must include the following items:

1. Title of the project
2. Names/email addresses of all team members
3. Project description
4. Presentations will be scheduled on May 4. If any of your team members can come on May 4, the alternative presentation date is April 22. Indicate your preference for your presentation date, either April 22 or May 4. For proposal without indicating date preference, it will be assumed that the team prefers the later date, i.e., May 4.

PRESENTATION:

Each team has to give a 6-minute presentation. The suggested contents for your presentation include:

1. Cover page including names/topics (and introduce yourselves)
2. Simulated problem description
3. Input data analysis & model assumptions
4. Simulation model/codes (and snapshots of simulation)
5. Output statistical analysis
6. Optimization/Recommendation/Conclusions

There is no page limit on your presentation; but you must be able to finish it in 6 minutes. Everyone in the team must speak during the presentation. Your power point file is due 11:00 PM, Saturday, May 2. Please email your power point presentation to the instructor at cchen9@gmu.edu. Please use members' *last* names as the file names with "-" between names. For example, the file name for a 3-member team should be "LastName1-LastName2-LastName3.ppt".

Please remember that "practice makes a big difference."

PROJECT REPORT:

Each team has to make a project report. The suggested contents for your report include:

- Motivations & simulated problem description
- Input data analysis & model assumptions
- Simulation model/codes
- Output statistical analysis, including # of replications and simulation accuracy
- Discussions and optimization

In addition to the written report, please turn in your simulation models (the electronic file in CD-ROM or floppy disk).

PAGE LIMIT:

- 1. Proposal:** one or two pages.
- 2. Presentation:** No page limit; however, there is a time limit of 6 minutes.
- 3. Final Report:** The ideal size is 10~15 pages, but no longer than 20 pages (not including appendix).