

## **COMPUTER SIMULATION IE413 / CS482**

### **COMPUTER SIMULATION --- Project Guidelines**

The following are some general guidelines that you are advised to follow when you write up the final report for your project. The project write-up should be a formal document. For example, a loose pile of papers accompanied by a thick computer printout will not be graded and will receive 0/20. All reports should be typed, 1.5 spaced. Your report should not exceed 10 pages total (excluding appendices), so be concise, and think carefully over what you need to present to convince me that you have addressed the problems stated in the project description. Note that only the 10 pages (1.5 spaced) will be graded, with the appendices used to support and clarify the 10 pages. Include in your write up a statement on how the work done for the project was distributed among the group members, and a rough distribution of the total effort contributed by each group member. Once the project is submitted, this information cannot be changed, so it is each group member's responsibility to ensure that his/her effort has been recognized and documented.

The content should include, though is not limited by, the following:

- 1) Problem Description: This is a short statement of the objectives of the study and a verbal description of the system being modeled
- 2) Assumptions: State any assumptions made in modeling the system (beyond what are described in the project description), and your justification for making each assumption.
- 3) Model Description: List the system entities and their attributes as well as the names of the variables in the code which represent the entities. You should also discuss how you validated the simulation model and how you verified that the model code was correct.
- 4) Event Descriptions: Describe the events in your simulation model.
- 5) Results: Should be presented in tables and/or using graphs, as appropriate. You should also provide a discussion of the results and conclusions. You should describe how you ran your simulation experiments to obtain the stated results and make the stated conclusions. Issues such as variance reduction, run lengths, and other simulation output analysis issues, if appropriate, should be noted.
- 6) Possible Sources of Error: Include any assumptions made in the analysis and their justifications. Identify any possible sources of error in your model or your analysis.
- 7) Appendices: Program listings, list of outputs, any calculations statistical tests, and/or formulas used to compute output measures (means, variances, confidence intervals). Be precise.

The project is due at the specified date and time. For each 24 hour period (full or partial) that the project is late, 4 points (out of 20 points) will be deducted from the project grade. For example, if you earn 18 out of 20 points for the project, but it is handed in 26 hours after the deadline, your actual grade for the project will be reduce by 8 points, to 10 out of 20.