

**CALIFORNIA STATE UNIVERSITY, HAYWARD
DEPARTMENT OF STATISTICS**

Statistics 3601 Introductory Statistics for Scientists and Engineers

Requirements for Computer Simulation Write-Up:

1. You are required to submit a printout of your computer code.
 - a. At the beginning of your program you should include your name and a short explanation of what your program is simulating.
 - b. Your program should be as simple and readable as possible – use comments to describe all hard to read code.
 - c. Within the program, explain the meaning of all the variables as they are declared. Most importantly, explain how you are checking for the occurrence of events, and what you are keeping track of in counter variables.
 - d. If you use subroutines, explain what these do and how they relate to the main program.
2. You should turn in the output of various executions of the program under different conditions (new seed for Random, different number of repetitions).
3. Comment on the output – is it reasonable? – how accurate is your output? – was this problem worth simulating should you have solve without simulation? – what might be the reason for doing such a problem? – does any of you output disturb you? – etc.

Suggestions for Avoiding Errors:

Do not begin writing your program until you have reflected on the problem and considered the possibilities. Draw a picture. See how far you can get with some simple mathematics. Consider a few extreme cases of the experiment. After some reflection you should have better insight into the problem and you will be less likely to make an error.

Try not to over-proceduralize your program. This can unnecessarily complicate the program and can make errors hard to trace. Also, whenever possible, give parameters in you subroutines the same mane as the original variable.

If you are uncertain about your program, try running it under a more controlled situation where you trace important variables or even perform a repetition or two where you input the “random” number.