• What did we talk about last class?
• Minute essay comments
  - What should you use to analyze stats?
• Lots of stuff moved back.
Verification, Validation, and Credibility

- Verification is determining if the program that was created actually does what the original design intended.
- Validation is determining if the original design mirrors the system in question.
- Credibility is if people believe the simulation results.
- These three don't always go together, but the ideal simulation study should have all three.
Level of Detail

- Models should have the proper level of detail to answer the relevant questions.

- Too much detail increases cost and computation time. Too little won't let you answer the proper questions.

- Subject-matter experts (SMEs) can help to determine what is needed.

- Extra detail sometimes required for credibility.
Verification Techniques

- Do unit testing.
- Code reviews. Pair-programming would work well too.
- Check logical consistency using different inputs.
- Trace the simulation.
- Run a “toy” model.
More Techniques

- View an animation.
- Compare generated random variables to what they should be.
- Use a simulation package.
With the remaining time let's look at what I have added to the in-class simulation code.
Minute Essay

- How are you going to verify the code for your project?