Spring 2008

CS 470/670: System Simulation

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Wright State University - Main Campus

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There are several goals in CS 470/670:
1. Learn basic tools and theory of simulation.
2. Understand how simulation can be applied to solve real problems.
3. Complete a substantial simulation project.
4. Have some fun!

Class Details

Lecturer: Eric Matson
Office: 336 Russ Engineering Center
Phone: 937-775-5108
Office Hours: Monday 9:30 - 10:30, Wednesday 12:30 - 1:30 at Russ 336 or by appt.
Email: eric.matson@wright.edu
Web: WebCT
Class: 4:10 - 5:50 (pm) MW, Rike Hall 058
Platform: All projects will be developed in Java or C++. If developing in Java, either command line or Netbeans 6.0. If developing in C++ Bloodshed Dev C++.
Prerequisites: For this class, the prerequisite is CS 400/600. Please let me know the first lecture if you do not meet this prerequisite, and we can talk about your preparation if it differs.

Grading

Homework Assignments 30%
Simulation Project 36%
Midterm Exam 20%
Final Exam 20%
The base scale is: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59. This is the highest requirement that will be used. The scales may be lowered or revised if necessary.

Schedule

(always subject to changes) Always have readings scheduled for that day complete prior to the class meeting

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<th>Week</th>
<th>Topic</th>
<th>Reading</th>
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<td>Introduction, Basic Simulation</td>
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<td>Methodologies</td>
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<td>Building Valid Simulations</td>
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<td>Probability and Simulation</td>
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<td>5</td>
<td>Statistical Simulation</td>
<td>6, 9.1 - 9.5</td>
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<td>6</td>
<td>Comparing Alternative Configurations, EXAM</td>
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<td>Variance Reduction Techniques</td>
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<td>Experimental Design</td>
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<td>Simulation Languages</td>
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<td>Project Demos</td>
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<td>Jun 9</td>
<td>Final Exam</td>
<td>5:45 - 7:45 pm</td>
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Policies and Notes

- Attendance: Attendance is not required, nor will it be taken after the first couple of lectures. If you are not a regular attendee, it will be your responsibility to seek out what material was covered in the lecture and learn it. Most of my exam questions will be taken directly from ideas covered during the lecture, so it greatly helps if you attend!

- I will utilize WebCT to post updates to the course, sample code, projects, announcements, schedule, etc. Get in the habit of checking it regularly.

- Always make back ups of all of you work. Never have just one copy of anything! This way, when your dog eats your laptop the day before the final project is due, you will not have a problem (except getting a new laptop).

- If you are going to miss an exam, for any reason, discuss it with me in advance. If it is an emergency situation, please notify me as soon as possible.

- You can reach me a number of ways. Email is normally the best as I check it about 18 hours a day normally. You can also reach me by phone during the day at 775-5108. If you need human contact either stop in during my office hours, make an appointment, or just come by my office. If I am in and not on a deadline to get something else completed, I will normally try to help as much as possible.

- The key to learning in this class will be spending time working through the problems. Do not wait until 2 hours before something is due to try to learn the concept and then write
the program. This normally ends in a disaster! Stay up with the readings and try to work through some of the examples in the book.

**Academic Misconduct**

In this class, the only way to truly learn the concepts is to do the work yourself. I encourage working with other people on the course concepts. When you begin to write the program, complete and submit your own work. With the project, you will work in teams, so make sure to do your part and contribute.

Work that has obviously been copied or in the more extreme case, when the original authors name has not even been changed, both parties will receive a 0 grade for that assignment. Both parties will also be turned over to the Office of Judicial Affairs.