Math 314: Statistical Applications
May 2008

Class Meets:	MTWHF 10:00–11:30, 1:00–2:30
Instructor:	Neil Martinsen-Burrell (Science Center 363, 319-352-8420, nmb@wartburg.edu)
Class Web Page:	http://mcsp.wartburg.edu/nmb/math314
Office Hours:	MTWHF 9:00-10:00, 12:30–1:00 and by appointment

Prerequisites: MA 214 or MA 313

Text: None, really.

Catalog Description: The application of statistical techniques currently used in many different disciplines. Students will have the opportunity to talk with professionals in a variety of fields. Gather data, develop a statistical model, draw conclusions or make predictions in order to assist in developing a solution.

Objectives: Upon completion of this course, students should

1. be able to use computers to simulate statistical models of real-world problems.
2. be familiar with commonly used modeling frameworks such as Markov Chains and Monte Carlo techniques.
3. be able to present about the process and results of statistical modeling experiments.

Tentative Schedule:

Week 1 (4/28–5/2)	Probability and Statistics review, computer software, random number generation, simple statistical models
Week 2 (5/5–5/9)	Markov Chains
Week 3 (5/12–5/16)	Monte Carlo simulation
Week 4 (5/19–5/22)	Projects

Homework, Exams, Projects: There will be homework problems due every couple of days and weekly project presentations on Fridays.

Grading: The breakdown of the final grade will be as follows: Attendance 20%, Problems 40%, Project Presentations 40%.

Academic Honesty: By attending Wartburg College, students pledge their dedication to the Honor Code.

> As a matter of personal commitment, students, faculty, and staff of Wartburg College are expected to demonstrate four simple principles.
>
> 1. All submitted work must be your own.
> 2. When using the work or ideas of others, including fellow students, provide full credit through accurate citations.
> 3. Ask for clarification if there is uncertainty about citation rules on a particular assignment.
> 4. Maintain academic honesty on examinations and class assignments.

Academic dishonesty will result in consequences between a failing grade for that assignment and a failing grade for the course.

Special Needs: The Americans with Disabilities Act of 1990 (ADA) provides protection from illegal discrimination for qualified individuals with disabilities. Students requesting instructional accommodations due to disabilities must arrange for such accommodations by contacting Pathways Associate for Testing and Advising Carla Coates. She can be reached at the Pathways Center, 314 Vogel Library, Wartburg College, Waverly, IA 50677, 352-8230, Carla.coates@wartburg.edu. Presenting documentation of a student's disability early (before the beginning of classes) is helpful and often necessary to secure needed materials in a timely way. Accommodations should be requested *prior* to affected assignment due dates. For more detailed information, please see `http://www.wartburg.edu/pathways/testing/AccomodationProcessStudents.pdf`