

Stat 430 Syllabus – Fall 2009

Instructor	Karin S. Dorman
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Office Hrs	TBA
TA	TBA
Lecture	MWF 12:40 - 2:00 pm
Location	Pearson 1105
Webpage	http://thirteen-01.stat.iastate.edu/wiki/stat430/
Textbook	None required.
Final Exam	Thurs. Dec. 17 12:00 - 2:00 pm

Course Description

EMPIRICAL METHODS FOR COMPUTER SCIENCE RESEARCH. Cr. 3. *Prereq:* Stat 330 or an equivalent course. Programs and systems as objects of empirical studies; exploratory data analysis; analysis of designed experiments; analysis of variance, hypothesis testing, interaction among variables; linear regression, logistic regression, Poisson regression; parameter estimation, prediction, confidence regions, dimension reduction techniques, model diagnostics and sensitivity analysis; simulation techniques and bootstrap methods; applications to performance assessment; comparison of multiple systems; communicating results of empirical studies. Nonmajor graduate credit.

Course Policies

Disability: Iowa State University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact me within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Before meeting with me, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-6624.

Academic Dishonesty: This class will follow Iowa State University policy on academic dishonesty found in the Iowa State University Catalog. A score of zero will be given for the entire assignment in which the academic dishonesty occurred. If a pattern of academic dishonesty has been found to occur, a grade of F for the entire course may be given.

Exams: The first two exams will be given during regular class time. If you have a conflict for a particular exam, you must let me know before the time of the exam. Failure to do so will result in a 0 for the exam.

Final Exam: The final exam in Statistics 430 is cumulative with special emphasis on the material covered in the second part of the course. The tentatively scheduled time for the exam is posted above. Do not make plans for semester break until you know your final exam schedule.

Accessing Website: If you read this item, please email me kdorman@iastate.edu for your wiki password and extra credit.

Homework: Individual practice (homework) is an important part of learning. Homework assignments will be due by the end of lecture on the due date; 20% will be deducted if turned in late. Homework assignments turned in after midnight of the original due date will *not* be accepted at all. Solutions will be posted on the course website.

Computing: Some concepts taught in this class will be demonstrated using the statistical analysis package R. Please see the course webpage for instructions on downloading R to your own computer. You need not use R for your class work, but it is highly recommended.

Grading: Letter grades including plus/minus will be given based on performance on exams, homework, and a final project. The specific grading scale is not determined until after all grades have been calculated. The percentage importance of all work is as follows:

First Review Exam	5%
Midterm Exam	15%
Final Exam	20%
Homework	40%
Project	20%

Tentative Schedule

Tentative Dates	Material
Probability Review	4 lectures
T September 8	REVIEW EXAM
Basic Statistical Inference	4 lectures
Simple Linear Regression	2 lectures
Multiple Linear Regression	4 lectures
R October 15	MIDTERM
GLM, Logistic, and Poisson Regression	8 lectures
Stochastic Processes	2 lectures
M-F November 21-29	THANKSGIVING BREAK
Stochastic Processes	2 lectures
Project Presentations	2 lectures
R December 17	FINAL EXAM

August 25, 2009