Stat 602X Syllabus  
Modern Multivariate Statistical Learning  
Spring 2011

Topics: Among the topics considered will be linear methods of prediction and classification, basis expansions and regularization, kernel smoothing methods, variance-bias trade-offs, inference and model averaging, additive models and trees, boosting, neural nets, support vector machines, prototype methods, unsupervised learning, random forests, and ensemble learning.

Instructor: Prof. Stephen Vardeman  
3022 Black Engineering  
2212 Snedecor Hall  
vardeman@iastate.edu  
http://www.public.iastate.edu/~vardeman/  
Phone: 294-9069 (Black) 294-2535 (Snedecor)  
Fax: 294-3524 (Black) 294-4040 (Snedecor)  
Official Office Hours: 10-11 MWF in Black Engineering  
(Outside of class and official hours, Vardeman is usually in Black Hall)

Course Assistant: Wei-Chen Chen

Course Web Page: http://www.public.iastate.edu/~vardeman/stat602/stat602vard.html

Textbooks: A list of useful books can be found on the course web page. None of them is really appropriate as a single text for the course. Topic selection will be more or less in line with HTF. The precision, care, and (notational and other) consistency of Izenman and CFZ is far better than that of HTF.

Class Schedule: 9AM 3121 Snedecor Hall

Final Exam: M May 2, 7:30-9:30 AM 3121 Snedecor Hall

Course Grading:  
Mid-Term Exam 35%  
Final Exam 35%  
Homework 30% (As posted on the Web page)

Assignments: Individual students will prepare and turn in the Homeworks. You may discuss these assignments with fellow students and ask both Vardeman and Wei-Chen for limited help with them. But each individual must write up his or her own assignments for turning in. This is an integrity issue. Do not copy what someone else has written and turn it in as your own.
Accommodation for Students with Disabilities

Iowa State University compiles with the American with Disabilities Act and Sect 504 of the Rehabilitation Act.

If you have a disability and anticipate needing accommodations in this course, please contact Vardeman before the end of the 2nd week of the semester. Later requests for accommodations may not be honored. Anyone requesting an accommodation will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 of the Student Services Building.