Stat 586 Interpretation of Data I
(Modern Applied Statistical Modeling and Computing I)

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Office: Hill Center, Room 574
Office hours: Wed. 1:30pm - 2:30pm or by appointment

Lecture schedule/location: Wednesday 6:40pm - 9:30pm
Hill Center, Room 552, Bucsh Campus

Textbooks (recommended; not required):
- Venables, W.N. and Ripley, B.D., Modern Applied Statistics with S-Plus (Springer)
- Cody, R.P. and Simth, J.K. Applied Statistics and the SAS Programming Language (Prentice Hall)
- Elliott, R. J. Learning SAS in the Computer Lab (Duxbury Press)

Grading: Based on homework, final exam, and a project
Course website: http://www.stat.rutgers.edu/home/mxie/stat586/

Syllabus and Emphasis:

This is a course on statistical methodologies of data analysis, with emphasis on mordent applied statistical models and statistical computing. Topics include

- Univariate statistics
- Data visualization
- Robust statistics
- Bootstrap
- Linear models
- Generalized linear models (GLM)
- LASSO and high dimensional models

Students should expect to use either R/Splus or SAS statistical software packages in data analysis. Lectures will be mostly on statistical materials and theories, and we’ll not discuss SAS procedures or R (or Splus) functions in the class (other than provide some hand-outs of examples). Those who do not have any background in statistical computing are strongly urged to learn and practice how to use the SAS or R/S-plus software from the manuals (or referred textbooks) and your peer students. The best way to learn SAS and R/Splus is through practice. The R software package is free from http://www.r-project.org/ and you can install it to your home computer. SAS student copy can be purchased online or through Rutgers computing store.