STAT 510: Regression Analysis   (3-0-3)

Course Description:
Simple linear regression and multiple regressions with matrix approach. Development of linear models. Inference about model parameters. Residuals Analysis. Analysis of variance approach. Selection of the best regression equation. Using statistical packages to analyze real data sets.

Prerequisites: STAT 501.

Textbook
> M.H. Kutner, C.J. Nachtsheim, J. Neter and W. Li (2005). Applied Linear Statistical Models. Fifth Edition, McGraw-Hill International.

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Office Hours: Sunday & Tuesday 2:00 – 3:00 pm
Wednesday 11:00 am – 1:00 pm

Assessment

Assessment for this course will be based on homeworks, term project, a major exam and a comprehensive final exam, as in the following:

Activity	Weight
Homework	20%
Midterm	20%
Project	20%
Final Exam (Comprehensive)	40%

Syllabus
The course will cover chapters 1 – 10 of the textbook, chapter 11 if time permits.

Chapter	Title
1	Linear Regression with One Predictor Variable
2	Inferences in Regression and Correlation Analysis
3	Diagnostics and Remedial Measures
4	Simultaneous Inference and Other Topics in Regression Analysis
5	Matrix Approach to Simple Linear Regression Analysis
6	Multiple Linear Regression
7	Multiple Regression II
8	Regression Models for Qualitative Predictors
9	Building the Regression Model I: Model Section and Validation
10	Building the Regression Model II: Diagnostics
11	Building the Regression Model III: Remedial Measures