SYLLABUS: STAT 5511, REGRESSION ANALYSIS, SPRING, 2008

INSTRUCTOR:	Kang Ling James
OFFICE:	Solon Campus Center 158, Phone: 726-6241
OFFICE HOURS:	MWF 2:00- 3:00, Th 1:00-3:00, or by appointment.
LECTURES:	MW 12:00-12:50 , Cina 102
TEACHING ASSISTANT:	Brad Jannsen
LABORATORY:	F 12:00-12:50, MonH 209 – Brad Jannsen The main objectives of the lab are to learn the statistical software SAS and to discuss homework problems. One lecture will be dedicated to reviewing the prerequisites.
TEXT:	Introduction to Linear Regression Analysis, Fourth Edition, by D. Montgomery ,E. Peck and G. Vining (2006).
PREREQUISITE	Stat 3611 and Math 2326 or 3280 or Math 4326
COURSE TOPICS:	Chapters 1 - 7 and 9 of the textbook, plus selected topics in Chapter 10,11,12, if time permits. The main topics are: (1) Simple linear regression: Least squares estimates, confidence intervals, hypothesis testing for the slope and intercept, prediction of new observations, coefficient of determination, correlation. (2) Multiple linear regression. (3) Residual analysis, detection and treatment of outliers, transformations, weighted least squares estimates. (4) Polynomial regression. (5) Variable selection and model building. (6) Selected topics in robust regression.
GRADING:	Midterms (2) 40% (20% each) Final exam 30% Assignments 20% Group project 10%
EXAMS:	There will be two midterm exams and a cumulative final. The first exam will be on Monday, March 3 ; the second will be on Friday , April 18. The final exam is scheduled for Thursday, May 15 at 10:00 - 11:55. All exams are in Cina 102
ASSIGNMENTS:	There will be written homework assignments which will be graded. Make every effort to hand in homework on time; late homework will only be accepted under exceptional circumstances.
SPECIAL NEEDS:	Individuals who have any disability, either permanent or temporary, which might affect their performance in this course are encouraged to inform me at the beginning of the semester. Adaptation of methods, materials, or testing may be arranged in order to facilitate learning.