

STAT 6602 SYLLABUS

Course Title : Problems in Statistics - Regression Analysis
Course No. : STAT 6602-001 **CRN**: 15948 **Class** in KOM 200

Instructor : Dr. Dennis P. Walsh **Office**: KOM 273
Phone: 615-898-2224
E-Mail: dwalsh@mtsu.edu **Web page**: www.mtsu.edu/~dwalsh
Math Department: 615-898-2669 **Dept. fax**: 615-898-5422
Office Hours: Monday, Wednesday 8:00 - 10:00, 12:00 - 1:00
Tuesday, Thursday 1:00 - 4:00
Friday 8:00 - 10:00
(other hours by appointment)

Text : *Applied Linear Statistical Models*, 5th Edition, by Kutner, Nachtsheim, Neter & Li, 2005, McGraw-Hill/Irwin, New York

Purpose : This course presents the theory and application of statistical regression models. Approaches to model building and data analysis are emphasized. Computation and interpretation of results are facilitated through the use of statistical software.

Objectives : Upon completion of this course, students will have

1. Understood the importance of regression models in describing statistical relationships, in prediction problems, and in testing hypotheses;
2. Acquired the ability to build models for both simple and multiple regression situations;
3. Learned techniques of residual analysis and other diagnostic measures;
4. Applied transformations to satisfy necessary model assumptions;
5. Gained familiarity with statistical software that facilitates regression analysis;
6. Appreciated the power of matrix algebra in the context of linear regression;
7. Recognized the importance of visual displays in analyzing data;
8. Used linear regression in problems drawn from many areas of application including advertising, engineering, genetics, law, medicine, nutrition, pharmacy, psychology, sociology, etc.

Topical Outline: The course covers selected topics from Chapters 1-14 in the text, including:

1. Review of some basic results in statistics and probability; introduction to MINITAB statistical software.
2. Method of least squares and simple linear regression
3. Correlation between random variables
4. Analysis of variance and testing for a regression relation
5. Diagnostic/remedial measures, residual analysis, and variable transformations
6. Matrix approach to linear regression
7. Multiple regression models
8. Model building, assessment, and refinement

Attendance:

Attend every class. Prompt notification of an absence is required. A grade of W or I will be given only in accordance with the University policy. The highest score possible on an assignment/test that is turned in late is the lowest score of the students who were not late. If a student misses a class, it is the student's responsibility to obtain class notes from a classmate.

Evaluation:

The semester grade will be based on tests (75%) and on the final exam (25%). Letter grades will be assigned according to the scale:
A for [90,100], B for [80, 89], C for [70, 79], D for [60, 69], F for [0, 59].

Disability:

If you have a disability that may require assistance or accommodation, or if you have questions related to any accommodations for testing, note takers, readers, etc., please speak with me as soon as possible. Students may also contact the Office of Disabled Students Services (898-2783) with questions about such services.

Important Dates

January 19	...	Classes begin
January 26	...	Last day to drop or withdraw without a grade
March 7-13	...	Spring Break
March 25	...	Last day to drop or withdraw with a grade of "W"
April 20	...	Last day to withdraw from the University
April 27	...	Last day of classes
April 28	...	Study Day
May 2	...	Final Exam for STAT 6602 (Monday 6:10-8:10)
May 7	...	Commencement

