

Course

4813/5813: Regression Analysis

Spring 2008

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Office Hours: Monday: 11:00 - 3:00pm

Tuesday: 10:30 – 11:00 am and 3:15 - 5:15 pm

Thursday: 10:30 - 11:00 am and 3:15 – 5:15 pm

Any change in office hours will be notified in class

Course Number: MATH 4813/5813

Course Title: Regression Analysis

Hours Credit: 3 hours

Prerequisites: MATH

Course Description: In this course, simple linear regression as well as multiple regression will be studied. Attention will be given to methods of model building, diagnostics for examining the appropriateness of a model, and remedial measures that may be helpful when the model is not appropriate. An understanding of introductory statistical concepts is required.

Text: Applied Linear Statistical Models, Fifth edition by *Kutner, Nachtshein, Neter and Li*. (McGraw-Hill)

Objectives. The objective of this class is to study and analyze regression models. In this study, familiarity with hypothesis testing, confidence intervals, scatter plots, correlation coefficients, and the coefficient of determination will be necessary. After completion of this course, the student will be able to analyze and develop their own regression models.

Syllabus

Chapter 1 Linear Regression with One Predictor Variable

Chapter 2 Inferences in Regression and Correlation Analysis

Chapter 3 Diagnostics and Remedial Measures

Chapter 4 (4.1 – 4.3) Simultaneous Inferences and Other Topics in Regression Analysis

Chapter 6 Multiple Linear Regression I

Chapter 7 Multiple Regression II

Chapter 8 Regression Models for Quantitative and Qualitative Predictors

Chapter 9 Building the Regression Model I: Model Selection and Validation

Grading:

You will be asked to turn in certain homework questions each week, which will be graded and will count towards your final grade.

Test dates will be announced in class one week in advance.

4 Test/ Projects

1 Final

Final Marks = 30% Homework + 45% Tests/Projects + 25% Final Exam

Grading Scale:

- A = 90-100%
- B = 80% to < 90%
- C = 70% to < 80%
- D = 60% to < 70%
- F= below 60%

Class Policies:

- *You get to drop your lowest homework grade.*
- *The final exam is **COMPULSORY** and **COMPREHENSIVE**.*
- *If you miss less than 5 days of class, you will earn two bonus points at the end of term.*
- *Please turn your homework and projects in on time to earn full credit. Late submissions will incur penalties.*
- *There are **NO** other extra credits available for this course.*
- *There are **NO** make up tests. In case of an illness (with medical certificate) or dire emergency, the instructor must be contacted prior to the test or quiz, via phone or email. Accommodations for missed tests and quizzes will be handled depending on the severity of the situation between the student and the instructor.*

- *If you need to arrive late or leave early, please clear it with the instructor BEFORE the class begins.*
- *Cheating of any sort will not be tolerated. If you are found cheating or assisting in any form of cheating, you will be awarded a failing grade in that test or quiz.*
- *Turn off cell phones and other devices when you enter the classroom.*
- *If using email, you must use your university email account (@westga.edu) for any communication; also check your university email account for any announcement regarding the class.*
- *You can come and see me during my office hours or by appointment. Please free to come and talk to me about any problems related to the course.*