

“I can see nothing” said I, handing it back to my friend. “On the contrary, Watson, you can see everything. You fail, however, to reason from what you see. You are too timid in drawing your inferences.”

Dr. Watson and Sherlock Holmes

The Adventure of the Blue Carbuncle

Stat 452/652: STATISTICS I

TR 9:30 AM - 10:45 AM; FH 219

Instructor: U. Tuncay Alparslan (augur@unr.edu)

In the broadest sense, statistics is the science of collecting, organizing, and analyzing information, and making mathematical conjectures/predictions/decisions based on this information. It is used wherever data is present, which makes it an essential mathematical tool both in academia and in industry.

This course will be an intermediate treatment of statistical principles and techniques for choosing, analyzing, and interpreting appropriate models for real-life problems. There will be a significant emphasis on the use of computer techniques, and a statistical software package (MINITAB) will be used in class for hands-on experience. (No prior programming experience will be required.)

A subset of the following topics will be covered: Exploratory data analysis, estimation techniques, model fitting, correlation and other measures of association between variables, general linear regression analysis, trend analysis, multiple regression and principal components, analysis of variance, design of experiments, and nonparametric methods.

Text: W. Navidi *Statistics for Engineers and Scientists*, McGraw-Hill. (In addition to the text, we will use supplementary material available on the web, and instructor’s notes.)

Prerequisites: MATH 283 R; MATH/STAT 352; or consent of the instructor.