

“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 11:00 AM - 12:15 PM; AB 634

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 with continuous data. 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: Basic probability and statistics review; model fitting and testing; correlation and other measures of association between variables; simple linear regression analysis; multiple linear regression; analysis of covariance (ANCOVA); analysis of variance (ANOVA); design of experiments; nonparametric methods.

Text: Instructor’s lecture notes along with a list of references.

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