



Introduction to Statistical Reasoning: Carnegie Mellon University

(For a list of materials used in the course, please see http://www.theNCAT.org/R2R/AcadPrac/CM/CMU_IntroStatRes_Mat.pdf.)

Introduction to Statistical Reasoning is a one-semester, three-credit course. The course topics covered by *StatTutor* (the software used in the redesign) are the following:

Sampling

Experimentation

Displaying Data Distributions)

Measures of Center and Spread

Examining Relationships, scatterplot, correlation and two-way tables

Regression, prediction and causation

Significance Test Concepts

- Hypotheses
- Test statistic
- P-value
- Conclusions

Significance Test Methods

- Z-test for the population proportion
- Z-test for the population mean
- T- tests (population mean, 2 samples, paired)
- Chi-square tests for independence
- ANOVA
- Inference on regression