

Probability and Statistics

Mr. Moody

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Conference Period 4

Available during period 5 and 7 by appointment.

Text:

Triola, Mario F., Addison Wesley (2001), Elementary Statistics, 8th Edition
http://wps.aw.com/aw_triola_stats_series

Yates, Moore, Starnes (2008) [*The Practice of Statistics*](#), 3rd Edition, New York: W. H. Freeman and Company.

Goals

- Develop Basic Understanding of Probability Theories
- Develop Basic Understanding of Data Analysis
- Develop Statistical and Quantitative Reasoning Skills
- Introduce Statistical Methods
- Introduce Statistical Software

Statistical Packages

MINITAB Will be available through cart # 5 in the media center and will be used throughout the course. Assignments and course announcements will be sent to you via e-mail or posted on the The Hilliard City Schools web page teachers pages www.hilliard.k12.oh.us . Data sets and Minitab worksheets will become available throughout the course on the teachers pages. I will not assume you have prior experience with statistical software so you do not need to be concerned about the use of technology in the classroom.

The Use of the TI- 83/84 Graphing calculators will take place on a daily basis and it is the students responsibility to procure their own calculator.

Homework & Labs

Homework and lab assignments will be given throughout the semester. Subsets of these assignments will be collected and graded frequently. You should work on as many problems as possible. This includes problems which have not been assigned. All papers that you turn in must be legible with problem numbers and solutions clearly marked. I encourage you to discuss the concepts and problem solving techniques presented in class with other students. However, you must submit your own solution for each of the assigned problems to be collected.

Grades

Your course grade will be based on your overall percentage and the Hilliard City Schools Grade policy.

Course Outline from Moore Book

- Chapter 1 Exploring Data.
displaying and describing Distributions with numbers
- Chapter 2 Describing Location in a Distribution.
Measures of relative standing and Density Curves. Normal Distributions
- Chapter 3 Examining Relationships.
scatterplots & correlation, Least squares regression)
- Chapter 4 Relationships with two variables
Achieving Linearity, Relationships between categorical Variables, Establishing Causation
- Chapter 5 Producing Data
Designing Samples, Designing experiments
- Chapter 6 Probability and Simulation
Simulation, Probability models, General probability rules
- Chapter 7 Random Variables
Discrete and Continuous random variables, Mean and Variance of Random Variables
- Chapter 8 Binomial and Geometric Distributions

- Chapter 9 Sampling Distributions
Sampling, Sample proportions, sample means
- Chapter 10 Estimating with confidence
Confidence intervals, Estimation Population means, Estimating Population Proportions
- Chapter 11 Testing a Claim
Significance Test the basics, carrying out significance test, Use and abuse of tests, Using inference to make decisions.
- Chapter 12 Significance Tests in Practice
Tests about population mean, Tests about a population proportion
- Chapter 13 Comparing two population parameters
Comparing two means, comparing two proportions
- Chapter 14 Inference for Distributions of Categorical Variables
Test for Goodness of Fit, Inference for Two-Way Tables