

2008-2009 AP Statistics Syllabus Math 254

INSTRUCTOR: Evelyn McCoard, Pomeroy High School, Pomeroy, WA

COURSE PREREQUISITES: Students will have successfully completed second year algebra class or higher level math class.

COURSE DESCRIPTION:

AP Statistics is a two semester high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance phenomena. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students use a TI-83/84 graphing calculator, Fathom and Minitab statistical software, and Web-based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data.

COURSE GOALS: In AP Statistics, students are expected to learn

Skills

- To produce convincing oral and written statistical arguments, using appropriate terminology, in a variety of applied settings.
- When and how to use technology to aid them in solving statistical problems

Knowledge

- Essential techniques for producing data (surveys, experiments, observational studies, simulations), analyzing data (graphical & numerical summaries), modeling data (probability, random variables, sampling distributions), and drawing conclusions from data (inference procedures – confidence intervals and significance tests)

Habits of mind

- To become critical consumers of published statistical results by heightening their awareness of ways in which statistics can be improperly used to mislead, confuse, or distort the truth.

COURSE MATERIALS:

Primary Textbook:

The Practice of Statistics (3rd edition), by Yates, Moore, and Starnes, W. H. Freeman & Co., 2008. (Referred to below as TPS) and its accompanying supplemental materials, e.g.: The Platinum Resource Binder, Teacher's Solution Manual, Test Bank.

Supplemental Material:

Bock, Velleman, and De Veaux. Stats: Modeling the World. 2nd Edition. San Francisco: Pearson/Addison-Wesley, 2007.

Fathom Dynamic Data Software. Key Curriculum Press, 2005

Schaeffer, Watkins, Witmer, Gnanadesikan, and Erickson. Activity-Based Statistics: Instructor Resources, 2nd Edition. Key College Publishing, 2004.

Schaeffer, Watkins, Witmer, Gnanadesikan, and Erickson. Activity-Based Statistics: Student Guide, 2nd Edition. Key College Publishing, 2004.

TI-83+ or TI-84+ Graphing Calculators, Texas Instruments Company

AP EXAM REVIEW (10 days)

- TPS Part Review Exercises
- Practice AP Free Response Questions
- Mock Grading Sessions
- Rubric development by student teams
- Practice Multiple Choice Questions

AP STATISTICS EXAM (1 DAY)

AFTER THE AP EXAM (15 DAYS): Students complete a **final project**, alone or in teams, on a topic of their choosing. Both a written analysis and a brief oral presentation are required for this project.

Grade Weighting:

Grades will be weighted in the following way:

5% daily points, 15% assignments, 30% quizzes, 50% tests and projects.

Grade Scale:

92% - 100% = A

90% - 91.9% = A-

88% - 89.9% = B+

82% - 87.9% = B

80% - 81.9% = B-

78% - 79.9% = C+

72% - 77.9% = C

70% - 71.9% = C-

68% - 69.9% = D+

60% - 67.9% = D

Below 60% = F