Department: Mathematics
Course Name: Advanced Placement Statistics

Course Description:
This course is a one-year study of college-level statistics. This course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, planning a study, probability, and statistical inference. All students are required to take the Advanced Placement Statistics Examination. An emphasis on critical thinking, complex communication, collaboration, creativity, and risk-taking will prepare students for rigorous college work. A TI-84 graphing calculator is required.

Content:
Exploratory analysis
Planning a study
Probability
Statistical inference

Skills:
Interpret graphical displays of distributions of univariate data
Summarize and compare distributions of univariate data
Explore bivariate and categorical data
Recognize correct methods of data collection
Plan and conduct surveys and experiments
Generalize results from observational studies, experimental studies, and surveys
Develop an understanding of probability to include relative frequency, independent random variables, normal distributions, and sampling distributions
Develop the ability to perform statistical inferences using confidence intervals, tests of significance, and other special cases of normally distributed data

Text and Materials:
Statistics in Action: Understanding a World of Data 2nd Edition by Watkins, Scheaffer & Cobb Key Curriculum Press 2008

Methods of Instruction:
Group Projects and Activities
Lecture
Experiments
Surveys
EFFL format

Methods of Evaluation:
Tests
Quizzes
Classwork
Homework
Projects
Informal questioning
Observation