

General Course Information

Course Name: Probability and Statistics	
Department: Mathematics	Grade Level(s): 11-12
Duration/Credits: 1 year/ 1.0 credit	Prerequisites: Concurrent or successful completion of Algebra II
BOE Approval Date: 12/19/19	Course Code: H2350
Course Description:	
<p>This course will build on the foundation of statistics and probability from Algebra courses. Throughout the year, the student will strengthen the use of descriptive statistics and begin building understanding and application of inferential branches of statistics and applications of probability. The student will analyze univariate and bivariate data by using measures of central tendency, measures of variation, linear regression, and the relationship to the normal distribution. The student will make inferences about one and two sample data using confidence intervals and hypothesis tests. The student will study probability, probability distributions, combinations, and permutations, odds, and mathematical expectation. Each student is required to have a scientific calculator (TI-84 recommended).</p>	
Course Rationale:	
<p>The need to understand and be able to use data analysis, statistics, and probability in everyday life and in the workplace has never been greater and will continue to increase. The underpinnings of everyday life are increasingly mathematical and technological. Just as the level of mathematics needed for intelligent citizenship has increased, so too has the level of mathematical thinking and problem solving needed in the workplace. Those who can problem solve, think critically, and communicate will have significantly enhanced opportunities and options for shaping their futures. A competence with data analysis opens doors to productive futures.</p>	
Course Objectives:	
<ol style="list-style-type: none">1. The student will read scenarios and explore data by analyzing shape, center, and spread. (A+ Reading)2. The student will describe patterns and departures from patterns both verbally and in written form. (A+ Speaking and Listening).3. The student will plan and conduct a study.4. The student will anticipate patterns.5. The student will explore random phenomena using probability and simulation.6. The student will read scenarios and perform statistical inferences7. The student will conduct research to estimate population parameters based on experimentation. (A+ Research)8. The student will test hypotheses and write a report of their findings. (A+ Writing)	