

Course of Study: Probability & Statistics (STATS1010)

Course Description:

This course provides the student with an overview of probability and statistics. The course is taught as a CCP class, allowing students the option of earning 3 semester credits at NC State. At the high school level, this course is one semester of a year-long math course.

Course Credit:

This course counts as $\frac{1}{2}$ of the 1 credit of Mathematics at a high school level. Students electing to take the full-year course at the college level can earn up to 2 credits of high school math and up to 6 semester credits.

Prerequisites:

- High School: Algebra 2
- College: MATH 0086 with a minimum of C- grade or a Compass algebra 52 or higher or ACT Math 22 or higher or
Co-requisites: STAT0086

Purpose of Course:

This course provides the student with an overview of probability and statistics. Probability terminology, concepts and rules are emphasized in solving probability problems. Descriptive statistics, including measures of central tendency and dispersion, charts, tables and diagrams are used to summarize data. The student is introduced to the binomial, poison, hyper-geometric, normal and t-distributions. Confidence intervals, hypothesis testing, correlation, and linear regression are used to make conclusions concerning population parameters from sample data.

Course Content:

Domains	Standard Clusters
Statistics & Probability	<ul style="list-style-type: none">• Define foundational terms used in statistics.• Collect, organize, and summarize data in tables, charts, and with statistics/parameters.• Describe the relationship between two variables both visually and numerically.• Apply the rules and concepts of probability to solve a variety of problems.• Apply the binomial, poison, and hyper-geometric discrete probability distributions to solve appropriate statistical problems.• Apply the normal distribution to solve appropriate statistical problems.• Define sampling distributions.• Calculate confidence intervals for means and proportions using the z and t distributions.• Compute one population tests for means and proportions using the z and t distributions.