



PLANNED COURSE STATEMENT

Course Title: Sports Statistics	Grade Level(s) 9-12
Length of Course: Year	Credit Area: Math/Elective
Prerequisite: Algebra 1	Amount of Credit: 1.0
Adopted/Supplemental Materials: <ul style="list-style-type: none"> Statistical Reasoning in Sports, Second Edition (2019)- Josh Tabor & Chris Franklin Workbooks and online resources 	
Dual Credit Articulation: NA	

COURSE DESCRIPTION:

Offering a unique and powerful way to introduce the principles of statistical reasoning, this course makes statistics exciting with high-interest sports and real-life examples that show how statistics is a part of everyday life. Examples of real-life applications include--Did Cam Newton choke in the Super Bowl? Can a swimsuit make you faster? Who should I draft for my fantasy baseball team?

COURSE GOALS:

Students will:

- Develop an understanding of statistical reasoning and its applications in real-world contexts.
- Use data to make informed decisions and predictions.
- Build analytical, problem-solving, and reasoning skills through sports-related data sets.

ASSESSMENT STRATEGIES:

- Summative assessments at the end of each unit.
- Formative assessments through in-class activities and homework.
- Projects applying statistical reasoning to sports data.

ACCOMMODATIONS AND MODIFICATIONS:

- Students demonstrating mastery may pursue more rigorous alternate assignments or projects.
- Students with special needs will be accommodated or modified according to IEP/504 plans.
- Assignments and expectations adjusted as appropriate to ensure equity and access for all learners.

CAREER RELATED LEARNING STANDARDS:

- Problem Solving – Develop and use productive and socially responsible approaches for resolving problems.
- Communication – Select and use appropriate communication strategies in school, community, and workplace settings.
- Teamwork – Develop and use interpersonal skills that contribute to cooperation and teamwork.
- Employment Foundations – Integrate academic, technical, and organizational knowledge and skills to work successfully.

ALIGNED STATE STANDARDS

Data Reasoning and Probability (HS.DR)

HS.DR.A Formulate Statistical Investigative Questions.

HS.DR.A.1 Formulate multivariable statistical investigative questions and determine how data from samples can be collected and analyzed to provide an answer.

HS.DR.A.2 Formulate summative, comparative, and associative statistical investigative questions for surveys, observational studies, and experiments using primary or secondary data.

HS.DR.A.3 Formulate inferential statistical investigative questions regarding causality and prediction from correlation.

HS.DR.A.4 Use mathematical and statistical reasoning to formulate questions about data to evaluate conclusions and assess risks.

HS.DR.B Collect and Consider Data.

HS.DR.B.5 Articulate what constitutes good practice in designing a sample survey, an experiment, and an observational study. Understand issues of bias and confounding variables in a study and their implications for interpretation.

HS.DR.B.6 Distinguish and choose between surveys, observational studies, and experiments to design an appropriate data collection that answers an investigative question of interest.

HS.DR.B.7 Apply an appropriate data collection plan when collecting primary data or selecting secondary data for the statistical investigative question of interest.

HS.DR.C Analyze, summarize, and describe data.

HS.DR.C.8 Identify appropriate ways to summarize and then represent the distribution of univariate and bivariate data multiple ways with graphs and/or tables. Use technology to present data that supports interpretation of tabular and graphical representations.

HS.DR.C.9 Use statistics appropriate to the shape of the data distribution to compare the center and spread of two or more different data sets.

HS.DR.C.10 Use data to compare two groups, describe sample variability, and decide if differences between parameters are significant based on the statistics.

HS.DR.D Interpret data and answer investigative questions.

HS.DR.D.11 Use statistical evidence from analyses to answer statistical investigative questions, and communicate the findings in a variety of formats to support informed data-based decisions.

HS.DR.D.12 Articulate what it means for an outcome or an estimate of a population characteristic to be plausible or not plausible compared to chance variation.

HS.DR.D.13 Use multivariate thinking to articulate how variables impact one another, and measure the strength of association using correlation coefficients for regression curves.

HS.DR.E Understand independence and conditional probability and use them to interpret data.

HS.DR.E.14 Describe the possible outcomes for a situation as subsets of a sample space.

HS.DR.E.15 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.