

**WARREN COUNTY SCHOOL DISTRICT**

**VIRTUAL PLANNED INSTRUCTION**

**COURSE DESCRIPTION**

**Course Title:** Stats & Probability

**Course Number:** 10281

**Course Prerequisites:** Algebra I & II

**Course Description:** **Course Description:** Probability and Statistics will introduce students to exploring data, sampling and experimentation by planning and conducting studies, anticipating patterns using probability and simulation, and employing statistical inference to analyze data and draw conclusions.

**Course Estimated Completion Time:** 2 segments/32-36 weeks

**Major Topics and Concepts:**

**Segment I Concepts**

**Module 01: Exploring Data**

- Introduction to Statistics
- Measures of Central Tendency
- Measures of Variation
- Displaying Data

**Module 02: Collecting Data**

- Sampling and Surveys
- Experiments
- Correlation Versus Causation

**Module 03: Probability**

- Basic Concepts of Probability
- Condition Probability and Two-Way Tables
- The Multiplication and Addition Rule
- Simulations

**Segment II Concepts**

**Module 04: Probability Distributions**

- Random Variables
- Binomial Probability Distribution
- Geometric Probability Distribution

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- Introduction to Normal Probability Distribution

#### Module 05: Sampling Distribution

- Sampling Distributions and Proportions
- Sample Means
- Confidence Intervals for Proportions
- Confidence Intervals for Means

#### Module 06: Inference

- Hypothesis Testing- One Proportion
- Hypothesis Testing- One-Sample Mean
- Comparing Two Means
- Scatterplots and Correlation
- Least-Squares Regression

**Suggested Grade Level:** Grades 9-12

**Length of Course:** One Semester

**Units of Credit:** 1

**PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:**  
CSPG 50

To find the CSPG information, go to <https://www.education.pa.gov/Educators/Certification/Staffing%20Guidelines/Pages/default.aspx>

**Certification verified by the WCSD Human Resources Department:** ☒ Yes ☐ No

#### WCSD STUDENT DATA SYSTEM INFORMATION

**Course Level:** Academic

**Mark Types:** Check all that apply.

☒ F – Final Average ☒ MP – Marking Period ☐ EXM – Final Exam

**GPA Type:** ☐ GPAEL-GPA Elementary ☐ GPAML-GPA for Middle Level ☒ NHS-National Honor Society  
☐ UGPA-Non-Weighted Grade Point Average ☒ GPA-Weighted Grade Point Average

**State Course Code:** 12005

To find the State Course Code, go to <https://nces.ed.gov/forum/sced.asp>, download the Excel file for SCED, click on SCED 6.0 tab, and chose the correct code that corresponds with the course.

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#### **TEXTBOOKS AND SUPPLEMENTAL MATERIALS**

**Supplemental Materials:** Florida Virtual (Virtual Academy)

#### **Curriculum Document**

**WCSD Board Approval:**

**Date Finalized:** 9/19/2019

**Date Approved:** 11/4/2019

**Implementation Year:** 19-20

#### **SPECIAL EDUCATION, 504, and GIFTED REQUIREMENTS**

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (IEP), Chapter 15 Section 504 Plan (504), and/or Gifted Individual Education Plan (GIEP).

#### **ASSESSMENTS**

**PSSA Academic Standards, Assessment Anchors, and Eligible Content:** The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content and incorporate them regularly into planned instruction.

**Formative Assessments:** The teacher will utilize a variety of assessment methods to conduct in-process evaluations of student learning.

**Effective formative assessments for this course include:** Lesson quizzes, projects, discussion boards, and module exams

**Summative Assessments:** The teacher will utilize a variety of assessment methods to evaluate student learning at the end of an instructional task, lesson, and/or unit.

**Effective summative assessments for this course include:** Semester exams