**Statistics Syllabus 2017-2018**

**“Statistics is the art and science of dealing with data.**

**Good judgment, good math, and even good taste make good statistics.”**

 - Starnes, Daren. *Statistics Through Applications*

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**Major:**  Mathematics – Education Emphasis; WI Licensure EA-A 73, 400

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**Course Description:**

Statistics is a branch of mathematics that explores the collection, organization, analysis, interpretation, and presentation of data. In this course, students will learn about data analysis through studying graphs, data summaries, distributions, correlation, and regression. Students will learn about data production through studying sampling, surveying, and designing experiments.

**Learning Targets:**

**Knowledge:**

1. Use the statistical problem-solving process to analyze data and interpret results of studies.
2. Draw and describe density curves.
3. Calculate and interpret percentiles and z-scores.
4. Recognize and use Normal distributions to find percentiles and expected values.
5. Find and interpret the regression line and use the line to make appropriate predictions.
6. Give plausible explanations for association between two variables and assess the strength of statistical evidence for a claim of causation.
7. Recognize independence and use probability rules, Venn diagrams, two-way tables, and tree diagrams to find probabilities of events formed form other events.
8. Use counting techniques, permutations, and combinations to determine the number of outcomes and probabilities.

**Skills:** Problem solving, critical thinking, brainstorming, analyzing, drawing connections, note taking

**Dispositions:** Students are expected to be respectful, responsible, motivated, reflective, independent, creative, cooperative, attentive, and able to work well with others.

**Materials Needed:**

Chromebook, Binder or folder, Pencils, Calculator (if you have one)

**Grading Policy:**

Your final grade for this class will be determined by the following:

**65% - Assessments:** Tests will be given about every other week and will typically consist of multiple standards. In all math classes at Veritas, your assessments will be based on **standards-based grading**. A standard is a specific type of skill that you learn in a class. You will be given 2 attempts to show that you have learned each standard.

 1st attempt - 20%

 2nd attempt- 45%

**20% - Assignments:** Daily homework, E-Portfolio, classroom activities, projects, participation, etc.

**15% - Semester Exam:** At the end of each semester exam you will have a test on all the standards

covered during that semester.

**Extra help:**

Rob and Dan are available at various times before/after school, during DST, and during tutorial. Do not come into class with the excuse that you didn’t do your homework because you didn’t understand it. We are available to help, in school and at home, and so are your classmates. Seek help before the next class period.

**Absences:**

It is your responsibility to check the class website or ask me to catch up on the material learned the day you were absent.

**Homework:**

Homework will be assigned on a regular basis as it is important and necessary for you to practice the skills you are learning in preparation for the assessments. You are expected to complete the homework. I will be keeping track of your completion of homework as to have a record as to why you are or are not succeeding in math.

**E-Portfolio:**

At the end of every unit, students will review the material by documenting what they learned in their electronic portfolio. The purpose of the E-Portfolio in Statistics class is for students to improve their mathematical literacy by explaining what they learned in writing.