

Statistics
2020 – 2021
Mrs. Dodd-Nagel

Classroom Management

- Students are required to follow the ALCS Code of Conduct at all times.
- Cellphones are not to be used during class time. Only water bottles/thermos are allowed.
- Due to our year with Covid-19, if you under quarantine, students are still expected to log into MS Teams and participate in class as much as possible.
- Calculators may be loaned out to students. The calculator used is the TI-nspire CX.
- Students are required to bring the TI-nspire CX calculator, a binder, notebook paper, laptop, and their textbook to class every day.
- **Success in this course can be found by doing the following:
Be on time, be respectful, do your own work and get it done on time, and don't make excuses.**

Grading Policy

- **Classwork/Homework:** Some assignments can be completed in class during work days. If you do not use your time wisely or you are absent, assignments will need to be completed outside of class. A homework average will be taken at the end of the quarter based on completed assignments.
- **Chapter Projects:** These will be assigned at the end of each chapter. They will be used as a review for the chapter test but will also be graded.
- **Chapter Quizzes:** Quizzes will be announced and will be given periodically. All quizzes will be taken in class. If you are absent or in quarantine, you are expected to take it when you come back to school.
- **Chapter Tests:** Tests will be given at the end of every chapter. If you are absent or in quarantine, you are expected to take it when you come back to school.
- **Quarter Grade:**
15% (HW average) + 15% (Quiz average) + 30% (Project average) + 40% (Test average)

Syllabus

- **Textbook:** Elementary Statistics – A Step By Step Approach 9th Edition
- **Chapter 1 The Nature of Probability and Statistics**
 - 1.1 Descriptive and Inferential Statistics
 - 1.2 Variables and Types of Data
 - 1.3 Data Collection and Sampling Techniques
 - 1.4 Experimental Design
 - 1.5 Computers and Calculators
- **Chapter 2 Frequency Distributions and Graphs**
 - 2.1 Organizing Data
 - 2.2 Histograms, Frequency Polygons, and Ogives
 - 2.3 Other Types of Graphs
- **Chapter 3 Data Description**
 - 3.1 Measures of Central Tendency
 - 3.2 Measures of Variations
 - 3.3 Measures of Position
 - 3.4 Exploratory Data Analysis**
- **Chapter 4 Probability and Counting Rules**
 - 4.1 Sample Spaces and Probability
 - 4.2 The Addition Rules for Probability
 - 4.3 The Multiplication Rules and Conditional Probability
 - 4.4 Counting Rules
 - 4.5 Probability and Counting Rules**
- **Chapter 5 Discrete Probability Distributions**
 - 5.1 Probability Distributions
 - 5.2 Mean, Variance, Standard Deviation, and Expectation
 - 5.3 The Binomial Distribution
 - 5.4 Other Types of Distributions
- **Chapter 6 The Normal Distribution**
 - 6.1 Normal Distributions
 - 6.2 Applications of the Normal Distribution
 - 6.3 The Central Limit Theorem
 - 6.4 The Normal Approximation to the Binomial Distribution
- **Chapter 7 Confidence Intervals and Sample Size**
 - 7.1 Confidence Intervals for the mean when σ is known
 - 7.2 Confidence Intervals for the mean when σ is unknown
 - 7.3 Confidence Intervals and Sample Size for Proportions
 - 7.4 Confidence Intervals for Variances and Standard Deviations
- **Chapter 8 Hypothesis Testing**
 - 8.1 Steps in Hypothesis Testing – Traditional Method
 - 8.2 z-Test for a Mean
 - 8.3 t-Test for a Mean
 - 8.4 z-Test for a Proportion