

# MATH 11-59224: Elementary Statistics

## 4 Units

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Spring, 2024

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Web: <https://www.reedleycollege.edu/>

Office Hours: M/W 11-1 PM F 12-1 PM(Virtual)

Class Hours: M/T/Th/F 2:30-3:20 PM

Office Location: MSCI 123

Class Room: ???

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## Course Description

This course looks at the use of statistical and probabilistic methods to help with decision-making. Statistics is the math behind decision-making and is used in a variety of different fields. The statistical process can be broken up into Data Collection, Organizing, Summarizing, and Analysis. To talk about analysis a grasp of probability is needed, which is why we will also cover various methods in probability. As well as using statistical methods, we will also focus on how to interpret statistical results. We may look at data from many disciplines including business, life science, physical science, health science, education, social sciences, and psychology. The prerequisites for this course from math 3A include being able to work with sums using sigma notation, being able to perform operations with radicals, and being able to perform basic set operations.

## Class Materials

- Text: Elementary Statistics: Picturing the World 8th Edition.
- Excel/Sheets software or scientific calculator recommended for homework.

## Student Learning Outcomes

1. Student are able to organize, analyze, and utilize appropriate methods to draw conclusions based on sample data, table, graphs, measures of central tendency and dispersion
2. Student are able to apply concepts and terminology of statistics
3. Students are able to implement rules of probability
4. Student is able to collect data, interpret, and communicate the results using analyses such as confidence intervals, hypothesis tests, and regression.

## Grading

The typically A through F grading scale will be used in this class. I reserve the right to curve the scale dependent on overall class scores at the end of the semester. Any curve will only ever make it easier to obtain a certain letter grade. The final grade will be made up of the following:

- 35% Final Exam
- 40% Quizzes
- 15% Homework
- 10% Groupwork

### Final Grade

Final grades will be determined as follows:

**A 90-100%**

**B 80-89%**

**C 70-79%**

**D 60-69%**

**F 60 or lower**

### Attendance

Regular attendance is necessary in order to be successful in this class. At the end of the day it is your responsibility to keep up with the class. If you would like to know what you missed on a day you can email me and I'll get back to you as soon as I can. Regular absences, especially in the beginning of the semester, may result in a drop.

### Quizzes

Quizzes will be in-class and will cover each chapter unless they need to be split up. Currently I plan to have 8 quizzes throughout the semester. Computers will be allowed during the test, but only for access to a calculator and Sheets/Excel. **Phones will not be allowed as calculators.** I will allow for 4 quiz corrections on any quizzes for up to 25% of your missed points back.

If you are going to be absent on the day of an quiz I need a heads up by the day of the quiz or an excused absence for you to be able to make it up. Any make ups must be done within a two weeks of the original quiz date.

### Homework

Homework will be assigned nearly every class session and will be due 1 week from the assigned day. All the homework will be submitted through MyMathLab.com You will be able to see due dates and access the homework through our Canvas home page.

**Late Homework will be accepted up until the day of the Final. Any homework turning in late will be worth 50% of the total.**

## Groupwork

We will have some in class handouts which will count for part of your grade. I will collect them by the date of our next quiz for full points. Any groupwork that is turned in after the quiz date will be docked by 50%

## Class Policies

### Academic Integrity

Students are to adhere to the campus policy on academic integrity as outlined in the current student catalog.

What this means is I have a zero tolerance policy on cheating in the class. If I catch anyone cheating this will result in an automatic 0 for that assignment. Working on the homework together is fine, but quizzes are expected to be completed alone.

### Cell phones and other electronic devices

While I am lecturing I expect to see no cell phones or electronic devices out. Tablets or recording devices used to take notes are fine.

## Resources

You can contact me at my school email, [omar.moreno@reedleycollege.edu](mailto:omar.moreno@reedleycollege.edu), which I check at least once a day. Please allow up to 1 day for a response. You can get an immediate response during my office hours on Wednesday from 11-12:30 PM. If you want help from someone else consider:

### Tutoring Center

The math center at Reedley college is where I will host my office hours and where you can get 1 on 1 help from a tutor! Stop by anytime during these hours:

**Monday 9am-4pm**

**Tuesday 9am-8pm**

**Wednesday 9am-4pm**

**Thursday 9am-8pm**

**Friday 9am-1pm**

### Khan Academy

Khan Academy is a great online resources for our class. Their statistics and probability section covers pretty much our entire course. Some of their methods may be slightly different than how we'll do it, but they have great video examples and practice problems. You can find the relevant section here: <https://www.khanacademy.org/math/statistics-probability>

## Tentative Schedule

### DISCLAIMER:

This schedule may not be entirely accurate and may change as the semester goes on. It is a rough idea of what we will be doing week to week. If we need more or less time I may change the schedule as needed.

Week	Sections	Content
Week 1	Review of Syllabus 1.1-1.3	Intro to Stats, Data Types
Week 2	2.1-2.2, Review, Quiz 1	Types of Graphs
Week 3	Introduction to Excel, 2.3-2.5	Measures of Central Tendency and Variation
Week 4	Review Quiz 2 / 3.1-3.2	Intro to Probability and Multiplication Rule
Week 5	3.3-3.4 Review, No class Friday	Addition Rule and Counting Rules.
Week 6	No class Monday, Quiz 3 4.1-4.2	Intro to Probability Distributions Discrete Probability Distributions
Week 7	4.3, Review, Quiz 4 5.1	The Normal Distribution.
Week 8	5.2-5.3, Review, Quiz 5	Normal Distribution
Week 9	5.4, 6.2-6.3	Sampling Distributions and Intro to Confidence Intervals
Week 10	6.4, Review Quiz 6 7.1	Confidence Interval for a S.D. Intro to Hypothesis Testing
Week 11	No Classes	Spring Break
Week 12	7.3/7.4 8.4, Review	Hypothesis testing for a mean/proportion
Week 13	Quiz 7 9.1-9.2	Correlation and Linear Regression
Week 14	9.3-9.4 Review, Quiz 8	Multiple Regression and analysis on regression
Week 15	10.1/10.4/ 11.1	Goodness of Fit/ANOVA/Nonparametric Methods
Week 16	Review Quiz 9	
Week 17	Review	
Week 18	Finals Week	

### Important Dates

- Last day to drop and get a refund is January 19th.
- Last day to drop without a "W" is January 28th
- No classes February 16th for Lincoln's Birthday
- No classes February 19th for Washington's Birthday
- Last day to drop with a "W" is March 8th
- No classes for Spring Break from March 25th-29th
- Final Exams during the week of May 13th-17th