MATH 11-56718: Elementary Statistics
4 Units

Omar Moreno

Spring, 2024

E-mail: omar.moreno@reedleycollege.edu
Office Hours: M/W 11-1 PM + F 12-1 PM(Library)
Office Location: MSCI 123

Class Hours: M/W 9-10:50 AM
Class Room: FNR-3

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%** Exams
- **15%** Homework
- **10%** Group Work/Discussions

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. 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.

Exams

Exams will be in-class and will cover around 4 weeks of material. Currently I plan to have 4 exams throughout the semester plus a culumuative Final Exam. Computers will be allowed during the exam, but only for access to a calculator and Excel. Phones will not be allowed as calculators. I will allow for two test corrections on any tests that you choose. You can use these to get 50% of the points you missed back.

If you are going to be absent on the day of an exam I need an email or message the day of, in order for you to make it up. If I don't receive a heads up you won't be allowed to make it up. Any make up tests must be done within two week of the original test date.

Homework

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

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

Group Work

We will have some in class handouts which we will be working on in groups. You can turn them in for full points up until the day of the next upcoming Exam. Any handout that is turned in after the exam 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 exams are expected to be completed alone.

Cell phones and other electronic devices

When 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

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 resource for our math class and many others. If you search up Probability and Statistics you should be able to find all the topics that we will cover in this class. They go into detail by using videos and examples, so if you're ever stuck on homework or want to study this is a great resource. Look out for the link below:

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 does week to week.

Week	Sections	Content
Week 1	Review of Syllabus 1.1-1.3	Intro to Stats, Data Types,
Week 2	No class Monday / Intro to class + 1.3	Sampling and Bias
Week 3	2.1-2.2 / Introduction to Excel 2.3	Types of Graphs and summarizing data
Week 4	2.4-2.5 / Review	Measure of Dispersion and Position
Week 5	Exam 1 / 3.1-3.2	shortstackIntro to Probability and Multiplication Rule
Week 6	No class Monday / 3.3-3.4	Addition Rule and Counting Rules
Week 7	4.1-4.3	Discrete Probability Distributions
Week 8	5.1-5.3 / Review	The Normal Distribution
Week 9	Exam 2 / 5.4-6.2	Sampling Distributions and intro to Confidence Intervals
Week 10	6.3-6.4 / Review	Confidence Intervals for a Mean and S.D.
Week 11	No Classes	Spring Break
Week 12	7.1 / 7.3	Hypothesis Testing for a Proportion
Week 13	7.4+8.4 / Review	Hypothesis Testing for a mean
Week 14	Exam 3 / 9.1-9.2	Correlation and Linear Regression.
Week 15	9.3-9.4 / 10.1+10.4	Multiple Regression ANOVA and Goodness of Fit Test
Week 16	11.1 / Review	Nonparametric Methods
Week 17	Exam 4 / 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