STAT 7: Business Statistics
Course Syllabus: Fall 2023
Adjunct Instructor: Mark L. Oller
Email: mark.oller@reedleycollege.edu

Course Title & Code #:	STAT 7 57665 Business Statistics
Meeting Day, Time & Location:	T-Th 7:30am – 9:20 Business 43
Course Description:	Prerequisites: Math 103; Advisories: English 1A. This course covers the use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics, probability and sampling distributions, statistical inference, correlation and linear regression, analysis of variance, chi-square and t-tests, and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications will use data from a broad range of disciplines. (A, CSU-GE, UC, I) (C-ID MATH 110)
Prerequisites:	Math 103; Advisories: English 1A. The student should have a strong foundation in algebra, graphing, and problem-solving skills. This course will rely heavily on many algebraic concepts including: equations and inequalities in two variables
Advisories:	English 1A: Students must be able to read, analyze, and compose college-level statements with heavy emphasis on logical thinking and hypothesis construction, evaluate and interpret logical implications and non-implications in hypothesis testing, and conduct analytical research via statistical methods. (A, CSU-GE, UC, I) (C-ID ENGL 100)

Course Policies: Prerequisites for Success

If a student has not satisfactorily completed the recommended prerequisite courses, the student should not be surprised at the difficulty in understanding the concepts presented in this course.

Success in this course requires of the student a basic understanding of certain mathematical concepts and procedures as well as the student's having developed the habit of thinking *logically*. Even though mathematics is *used* in Statistics, it is not primarily a mathematical science, but it is rather a *logical science*.

Course Policies: Textbook is Required

Textbook: *Basic Statistics for Business and Economics*, Ninth Edition

 Authors: Lind|Marchal|Wathen

If a student has not obtained a textbook by the end of the third week of instruction, the student will be dropped.

ATTENDANCE & PARTICIPATION (in-person and online and hybrid classes)

- ***Unless you keep current on homework assignments and tests, you are not fully participating in the course.***
- Keeping up and staying current will be the sole indicator of a student's participation and attendance.
- Any student who is not current on homework assignments and tests as of the end of the third week of instruction will be dropped.
- Students missing **two (2)** weeks of assignments may be dropped for non-attendance.
- Participation points are earned for activities such as:
  - Completing Homework Assignments
  - Completing Tests
  - Participating in online Discussions

ATTENDANCE & PARTICIPATION (face-to-face classes)

- Your attendance and participation are important. Attendance will be taken at random points during each class period.
- Students missing **six (6)** or more hours may be dropped from the course for non-attendance. For classes that meet two times per week, students missing **four (4)** or more classes may be dropped for non-attendance. For classes that meet once per week, students missing **two (2)** or more classes may be dropped for non-attendance. For online classes, students missing **two (2)** weeks of discussion or assignments may be dropped for non-attendance.
- Any student who misses a class during the first **three (3)** weeks of instruction, may be dropped.
- ***Unless you regularly attend class, and have prepared adequately for each class period, you are not fully participating in the course.*** Your success in this course depends on your active participation. In fact, your participation and homework is worth a portion of your grade. There is no opportunity to make up for missed participation points.
- Participation points will be earned for activities such as:
  o Remaining attentive during class presentations
  o Completing Homework Assignments
  o In class projects and work papers
- Students entering or leaving the classroom at times other than the scheduled start/end of class cause a disruption to students and instructors, and it is rude. Class begins on the hour (or half hour – depending on the scheduled start time) not 10 minutes past the hour. In an effort to be courteous to your fellow students and the instructor, please make sure that you are in your seat and ready to "get to work" on time. Students who are habitually tardy (3 or more times per term) will be penalized, as will those who leave class early (without making prior arrangements).
- Remember: "Early is on time. On time is late. Late is unacceptable."
- Students attending less than 30 of the normal 50 minutes of class per hour will be counted as absent and subject to the drop policy if 6 or more days are counted as absent. You should be aware that participation points are often earned at the beginning or end of the class session and there will be no opportunity to make up those points once they are missed.

HOMEWORK and TESTS

Details regarding Homework Assignments can be found on the Modules tab on the student's Canvas page. After the third week of instruction, Homework Assignments will have no specific due date, however, they must be completed in sequential order as required in the Canvas modules. Homework Assignments will be submitted by emailing the Assignments to the Instructor via Canvas.

CANVAS website is: https://scccd.instructure.com/

__Course Overview and Road Map__

The basic outline and direction of this course will be as follows:

Chapter 1:   Introduction to Statistics
Chapter 2:   Frequency Tables and Distributions
Chapter 3:   Numerical Measures of Data
Chapter 4:   Displaying and Exploring Data
Chapter 5:   Probability Concepts
Chapter 6:   Discrete Probability Distributions
Chapter 7:   Continuous Probability Distributions
Chapter 8:   Sampling Methods and the Central Limit Theorem
Chapter 9:   Estimation and Confidence Intervals
Chapter 10:   One-Sample Tests of Hypothesis
Chapter 11:   Two-Sample Tests of Hypothesis
Chapter 12:   Analysis of Variance
Chapter 13:   Correlation and Linear Regression
Chapter 14:   Multiple Regression Analysis
Chapter 15:   Non-Parametric Methods: Nominal Level Hypothesis Tests

Student Learning Outcomes – Introduction to Statistics

1. Interpret the output of a technology-based statistical analysis
2. Calculate probabilities using normal and t-distributions
3. Use appropriate statistical techniques to analyze and interpret applications based on data from disciplines including business, social sciences, psychology, life science, health science, and education
4. Formulate hypothesis tests involving samples from one and two populations
5. Distinguish the difference between sample and population distributions and analyze the role played by the Central Limit Theorem
6. Interpret data displayed in tables and graphically
7. Select the appropriate technique for testing a hypothesis and interpret the result
8. Use linear regression and ANOVA analysis for estimation and inference, and interpret the associated statistics
9. Identify the basic concept of hypothesis testing including Type I and II errors
10. Distinguish among different scales of measurement and their implications
11. Construct and interpret confidence intervals
12. Calculate the mean and variance of a discrete distribution
13. Determine and interpret levels of statistical significance including p-values
14. Apply concepts of sample space and probability
15. Identify the standard methods of obtaining data and identify advantages and disadvantages of each
16. Calculate measures of central tendency and variation for a given data set

Course Policies: Grading and Assessment

GRADING and ASSESSMENT

The course grade will be based on a student's point total points as a percentage of total points possible. Students completing all exams, assignments, and activities with a cumulative, average grade of "C" or better will be deemed as having achieved the course objectives.

Learning Methods & Course Activities:

Class will be presented with visual demonstrations and specific problem-solving, and students' progress and proficiency will be evaluated by weekly homework assignments, and periodic examinations/tests.

Course Breakdown: Homework 20%, Tests 80%

Grading Scale: 90 - 100% = A | 80 - 89% = B | 70 - 79% = C | 60 - 69% = D | < 60% = F

Course Policies: Late Work

- Each homework assignment requires knowledge and familiarity with the skills and concepts developed in the preceding assignment.
- Homework assignments are for the student's benefit.
- Students must keep current on homework in order to succeed in this course.
- There is no penalty for turning work in late, but since all homework assignments must be completed in sequential order, falling behind becomes its own penalty.

Course Policies: Prerequisites for Success

If a student has not satisfactorily completed the recommended prerequisite courses, the student should not be surprised at the difficulty in understanding the concepts presented in this course.

Success in this course requires of the student a basic understanding of certain mathematical concepts and procedures as well as the student's having developed the habit of thinking *logically*.

Even though mathematics is *used* in Statistics, it is not primarily a mathematical science, but it is rather a *logical science*.

Course Policies: Textbook is Required

Textbook: *Basic Statistics for Business and Economics*, Tenth Edition

 Authors: Lind|Marchal|Wathen

If a student has not obtained a textbook by the end of the third week of instruction, the student will be dropped.

Course Policies: Drop Policy and Drop Dates

DROP POLICY October 6, 2023 is final drop date

- A student will be dropped if the textbook has not been obtained by the end of the third week of instruction
- If you intend to drop a course, *do not simply stop participating!*
- In order to officially drop a class, *you must fill out a program change card*
- The Program Change Card is available in the Admissions and Records Office
- Drop dates are listed in your Reedley College Class Schedule

If you do not officially drop a course but simply stop attending, *the Instructor is required to assign a letter grade.*

Course Policies: Communicating with Instructor

- A current and correct email address is required for all students.
- This email address will be used to contact you through the Canvas portal.
- You should expect a response by the next normal business day.
- If your email is sent on a Friday or on a weekend, you should expect a response on Monday.

When emailing the instructor:

1. Subject Line: Include **Course ID, your first and last name, and the subject you are writing about**

     For example: Subject: **STAT 7 Mark Oller Question about homework**

2. Use the spell checker.
3. Use proper grammar, not text message lingo.

STUDENT CONDUCT:

- Conduct standards are designed to perpetuate the college's educational purposes, allowing students to enjoy the right of freedom to learn. To that end, students who fail to meet the conduct standards, or who interfere with the rights of freedom to learn of others will be removed from class.

APPROPRIATE APPAREL:

- Please be aware that the role of the Business Department is to prepare you for the world of work. We are charged with teaching you about the various functional areas of business as well as appropriate behaviors and attire. To that end, and in order to better serve the entire class, please refrain from wearing inappropriate apparel to class – including, but not limited to, excessively low-cut clothing and low-riding pants. No one will wear sunglasses unless they have a medical directive stating the sunglasses are necessary.

CELL PHONE USE:

- Please, if you carry a cell phone or pager, turn the ringer off or to vibrate so the rest of the class is not disrupted by a ring or beep. If your cell phone/pager rings, beeps or makes any other audible sounds in class, you can expect to lose your points for the day – impacting your attendance/participation credit. If you are penalized more than once for a cell phone "violation," you can expect to be asked to leave the class. A ringing cell phone or pager may also initiate a pop quiz for the entire class.

ETHICS IN THE CLASSROOM:

- You will notice that we will often discuss ethical issues, as such you should understand that cheating and plagiarism is not acceptable in this class (or any other).

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

- If you have a verified need for an academic accommodation or materials in alternate media (i.e.: Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me, or the **DSPS office – ext. 3332** as soon as possible
- *Please see the Reedley College catalog for clarification of issues and additional guidelines.

THIS SYLLABUS AND THE COURSE ACTIVITIES SCHEDULE ARE SUBJECT TO CHANGE
AS DEEMED NECESSARY BY THE INSTRUCTOR.