South Plains College
Common Course Syllabus: MATH 1342
Revised December 2019

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1342

Course Title: Statistical Methods

Available Formats: conventional and internet

Campuses: Levelland, Reese, Plainview, Lubbock Center and Dual Credit

Course Description: Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing.

Prerequisite: Minimum score of 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 0337.

Credit: 3 **Lecture:** 3 **Lab:** 0

Textbook:

Supplies: Please see the instructor's course information sheet for specific supplies.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives addressed:
- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.

6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance Policy: Attendance and effort are the most important activities for success in this course. Records of your attendance are maintained throughout the semester. Five (5) absences, *for any reason*, are allotted to the student for the semester. Tardies count as one-half (1/2) of an absence. Tardies will be applied for consistently being late to class, as deemed by the instructor and leaving class early. If this number is exceeded, the instructor has the right to drop you with a grade of F or an X, depending on their discretion.

Plagiarism violations include, but are not limited to, the following:
1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:
1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Nondiscrimination Policy: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or email cgilster@southplainscollege.edu for assistance.

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: http://www.southplainscollege.edu/campuscarry.php
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by* Amazon, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

GRADE RANGE:
    90 – 100 A
    80 – 89   B
    70 – 79   C
    60 – 69   D
    Below 60 F (or X for non-completion of
                course due to lack of
    attendance)

GRADING FORMULA:
Enrollment in this course does not guarantee advancement to the next course level. The final responsibility for learning lies with the student.

The final letter grade for this course will be based on the following:

4 Tests	40%
Homework/Other Assignments	15%
Labs	15%
Semester Project	10%
Final Exam	20%
Total	100%

HOMEWORK:
Homework and assignments are mandatory. Knowledge of material will be assessed through graded assessments. Homework will be assigned on a weekly basis and assignments will be given on a daily basis. If a class is missed, it is the student's responsibility to obtain a copy of the notes, to pick up any worksheets or handouts, and to do the assigned homework. (Absence is not an excuse for failure to do homework.) **Late homework will not be accepted.** Completing all assignments is understood and expected, not optional.

There are **no retakes** on tests or the final exam. Exactly one test grade may be replaced with a higher final exam grade.

NOTE: Since homework is a part of your grade, you should be prepared to spend *at least* two hours outside of class for each hour you spend in class working on math. Doing homework at the tutoring center or with a group of peers is encouraged. Simply copying answers is still cheating, though, so be prepared to justify each answer.

Lab Assignments
Take-home lab assignments will be assigned during the semester. All lab assignments must be turned in before the end of the day on the date due. Late work will be accepted but will be assessed a 40% penalty if it is turned in within one class period that it is due and a 60% penalty if it is turned in within two class periods of the due date. No late lab assignments will be accepted after this point.

Unit Exams

Four major unit exams will be given throughout the semester. Exams will be given in person. Exams will consist of multiple choice, explanation, and computation questions.

The anticipated date of each exam is given in the Tentative Calendar of Topics and Due Dates section below.

You must show all work in your responses to test questions. If you are unable to clearly and correctly show how you arrived at your answer, then you will not receive full credit for your response.

Together, the exams count as 40% of the final grade. No make-up exams will be given unless for an official university-excused absence. To compensate for this, the comprehensive final exam can replace your lowest exam grade.

Final Exam

You will have a comprehensive final exam which covers all the material taught during this course. Your final exam grade will count 20% of your final course grade.

The final exam will replace your lowest unit exam grade if it is higher than this grade. The final exam still counts for 20% of your overall average whether or not it replaces any other exam grade. Please note that NO test grade can replace your final exam grade. A missed final exam is a grade of zero on that exam.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

Note: The last day to drop with a grade of W is **Thursday, December 2nd , 2021**

August
2021

Mon	Tue	Wed	Thu	Fri
2	**3**	**4**	**5**	**6**
9	**10**	**11**	**12**	**13**
16	17	18 **1.Descriptive Statistics**	19 **2. Types of Data** **Assignment 1&2**	20 **HW 1 Due**
23 **3. Frequency Distribution**	24 **Quiz** **Assignment 3**	25 **4. STEM & LEAF, Histograms** **Assignment 4**	26 **Lab 1**	27 **Lab 1**
30 **5. Measures of Center** **Lab 1 Due**	31 **Assignment 5**	1 **6. Measure of Variations** September	2 **Assignment 6**	3 **Quiz** **HW 2 Due**

September
2021

Mon	Tue	Wed	Thu	Fri
6 Labor Day-No School	7 **7. Measure of Relative Position**	8 **Assignment 7**	9 **8. Scatter Plots and Correlations**	10 **Quiz** **HW 3 Due**
13 **9. Regression Analysis** **HW 4 Due**	14 **10. Basic Probability**	15 **Assignment 10**	16 **Review**	17 **Test 1**
20 **11. Addition Probability**	21 **Assignment 11**	22 **12. Multiplication Probability**	23 **Assignment 12** **Lab 2**	24 **Quiz** **HW 5 Due**
27 **Lab 2**	28 **Lab 2 Due**	29 **13. Discrete Random Variable**	30 **Assignment 13** **HW 6 Due**	1 **No school**

October 2021

Important Information

Mon	Tue	Wed	Thu	Fri
4 No School	**5** 14. Binomial Experiment	**6** Assignment 14	**7** Review	**8** Test 2 HW 7 Due
11 15. Intro to Normal Standard Distribution	**12** Assignment 15	**13** 16. Application of Standard Distribution	**14** Assignment 16	**15** Quiz HW 8 Due
18 17. Sampling Distribution and Central Limit Theorem	**19** Assignment 17	**20** 18. Confidence Intervals for σ Known	**21** Assignment 18	**22** Quiz HW 9 Due
25 19. Confidence Interval σ Unknown	**26** Assignment 19	**27** 20. Confidence Interval for Proportions	**28** Assignment 20 Lab 3	**29** Quiz HW 10 Due

November 2021

Important Information

Mon	Tue	Wed	Thu	Fri
1 Lab 3	**2** Lab 3	**3** Review	**4** Test 3	**5** No School
8 21a. The Fundamentals of Hypothesis Testing Assignment 21a	**9** 21b. The Fundamentals of Hypothesis Testing Assignment 21b	**10** HW 11 Due	**11** 22. Hypothesis Testing for Proportions	**12** Quiz Assignment 22
15 23. Hypothesis Testing Comparing two Means	**16** Assignment 23	**17** No school	**18** Review HW 12 Due	**19** Test 4
22	**23**	**24**	**25** Thanksgiving Day	**26**

December 2021

Important Information

Mon	Tue	Wed	Thu	Fri
29 Semester Project November	**30** Semester Project	**1** Semester Project	**2** Semester Project Last Day to Drop	**3** Semester Project Due
6 Final Review	**7** Final Review	**8** Final Review	**9** Final Review	**10** Final Review
13 Final Review	**14** Final Exam	**15** Final Exam	**16** Final Exam	**17** Grades Due Half Day
20 Christmas Break	**21**	**22**	**23**	**24**