**Elementary Statistics – MATH 1342**
Course Syllabus – Spring Semester 2026 *(Rev. 1/8/2026)*

**Instructor**: Thomas Johnson, M.S.
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**Office Hours:**
Tuesday & Thursday;
9:00 – 11:00 AM, 2:30 – 4:00 PM
Friday; 8:30 – 9:30 AM

**Course Description**: MATH 1342 Statistical Methods **(3:3:0)** Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing.  Semester Hours: 3 Lecture Hours: 3 Lab Hours: 0

Pre-requisite: MATH 0320 or two units of high school algebra.

*Note: This course satisfies a 020 Mathematics Core Curriculum requirement.*

**Textbook:**

Illowsky, B.; Dean, S.; *Introductory Statistics 2e*; openstax.org; Rice University; Houston, TX; Digital Version ISBN-13: 978-1-961584-32-7, 2023.

**Attendance:**  Attendance and effort are the most important activities for success in this course.  Class attendance may be taken at any time during the class period, so please do not be late or leave early. You may be dropped from this course with a grade of X or F if you are absent four (4) consecutive classes or if you exceed six (6) absences throughout the semester. Special circumstances will be considered.

**Course Objectives:**  Successful completion of this course should reflect mastery of the following objectives:

- Descriptive Statistics
- Regression Analysis
- Probability & Discrete Random Variables
- Normal Distributions
- Statistical Estimations
- Hypothesis Testing
- Technology

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

Descriptive Statistics (DS)
>    Types of data and design of experiments
>    Data presentation (graphs/charts)
>    Measures of central tendency
>    Measures of variation
>    Exploratory data analysis

Regression Analysis (RA)
>    Scatterplots and correlation
>    Regression and applications of regression
>    Regression diagnostics

Probability & Discrete Random Variables (PDRV)
>    Probability concepts
>    Addition and complement rules
>    Multiplication and conditional rules
>    Binomial rules
>    Discrete probability distributions

Normal Distribution (ND)
>    Standard normal distribution
>    Probability calculations using the normal distribution
>    Sampling distributions and estimators
>    The Central Limit Theorem
>    Point estimates and confidence intervals for proportions
>    Point estimates and confidence intervals for means
>    Finding the necessary sample size under given conditions

Hypothesis Testing (HT)
>    One sample mean test (z-test and t-test)
>    Proportion test (one sample)
>    Two-mean test for independent samples
>    Analysis of Variance (ANOVA)

Technology (Tech)
>    Calculator applications (TI83+ / TI84+)
>    Computer applications (Excel® spreadsheets)

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### Core Objectives:

*Communication Skills:* Effective development, interpretation, and expression of ideas through written, oral, and visual communication.

*Critical Thinking:* Creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

*Empirical and Quantitative Competency Skills:* The manipulation and analysis of 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.

### Assignments & Grading:

Homework assignments will be made at each class meeting. Daily work (homework, notebook) will count for 65%, Midterm Exam for 15%, and the Final Exam will count for 20% of the FINAL GRADE. For Section 451 students, your final average in the course will determine as a percentage for your HS transcript and a letter grade posted on your college transcript. This grade is determined by the following scale:

A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

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.

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**Supplies:** You will need a TI 83+ or TI 84+ graphing calculator*, graph paper

**Supplementary Course Information:** Blackboard is the online course management system that will be utilized for this course. This course syllabus, as well as any class handouts can be accessed through Blackboard. Login at http://spc.blackboard.com. The user name and password should be the same as the MySPC and SPC email.
   User name: first initial, last name, and last 4 digits of the Student ID
   Password: Original CampusConnect Pin No. (found on SPC acceptance letter)

**Student Conduct:** The Student "Code of Conduct" will be followed in this course. You are expected to be respectful to others in the classroom. Please SILENCE phones before entering class and assist in maintaining a classroom environment conducive to learning. Any student disrupting the learning environment will be asked to leave and may be dropped from the course.

**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:** Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request ADA Sec. 504 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. For more information, call or visit the Disability Services Office in the Student Health & Wellness Office, 806-716-2577, or at the Plainview, TX Campus main office, 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.

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**Equal Opportunity:** South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age.

**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, please refer to the SPC policy at:
([http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php](http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.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.

**Calendar:**

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| Week 01: 1/12 – 1/16 | Sampling & Data |
| Week 02: 1/20 – 1/23 | Descriptive Statistics |
| Week 03: 1/26 – 1/30 | Probability Topics |
| Week 04: 2/2 – 2/6 | Discrete Random Variables |
| Week 05: 2/9 – 2/13 | Continuous Random Variables |
| Week 06: 2/16 – 2/20 | The Normal Distribution |
| Week 07: 2/23 – 2/28 | The Central Limit Theorem |
| Week 08: 3/2 – 3/6 | Midterm Exam |
| Week 09: 3/9 – 3/13 | Confidence Intervals |
| Spring Break: | 3/16 – 3/20 |
| Week 10: 3/23 – 3/27 | Hypothesis Testing with One Sample |
| Week 11: 3/30 – 4/2 | Hypothesis Testing with Two Samples |
| Week 12: 4/6 – 4/10 | The Chi Squared Distribution |
| Week 13: 4/13 -4/17 | Regression & Correlation |
| Week 14: 4/20 – 4/24 | The F-distribution & One-way ANOVA |
| Week 15: 4/27 – 5/1 | REVIEW |
| Week 15: 5/4 – 5/7 | Final Exam Week  FINAL EXAM - TBD |