

**South Plains College**  
**Common Course Syllabus: MATH 1342**  
**Revised August 2020**

**Department:** Mathematics, Engineering, and Computer Science

**Discipline:** Mathematics

**Course Number:** MATH 1342

**Course Title:** Statistical Methods

**Available Formats:** conventional/flex 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:** *Elementary Statistics: A Brief Version*, Bluman, 2014, 7<sup>th</sup> Edition, McGraw-Hill.

**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/Student Engagement Policy:** Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the semester, **for any reason**. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's 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.

**COVID-19 Policy:** It is the policy of South Plains College for the Spring 2021 semester that as a condition of on campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation.

**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](mailto: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.

**Statistical Methods ~ MATH-1342-002**  
**M W 9:30 – 10:45 M128**  
**Spring 2021 Course Syllabus**

**Instructor:** Rebecca Darby  
**Office:** M109  
**Phone:** (806) 716-2645  
**E-Mail:** rdarby@southplainscollege.edu  
**Blackboard:** https://southplainscollege.blackboard.com

**Office Hours:** As listed below or by appointment.

	Monday	Tuesday	Wednesday	Thursday	Friday
Levelland Campus (M109)	8:45 - 9:30	8:45 - 9:30	8:45 - 9:30	8:45 - 9:30	
Levelland Campus (M109)		11:45 - 12:30		11:45 - 12:30	
Virtual		11:00 - 11:45		11:00 - 11:45	10:00 - 12:00

**Course Modality:** **Fully Face-to-Face** ~ In this course, classes will be held face-to-face, twice a week in a classroom, specifically Mondays and Wednesdays in Room M128. ***During class meetings, the instructor and students will be expected to practice social distancing and appropriate hygiene and to observe all SPC policies regarding COVID-19.***

**Supplies:** You will need pencils, notebook paper, and a folder or binder. A scientific calculator, preferably a TI-83 or TI-84, is required. **Calculators on cell phones or other electronic devices are not allowed.**

You will need access to a working computer with reliable internet access. All homework will be submitted on Blackboard. It is permissible to submit photos of your work but creating pdfs of your homework and uploading those is the best way to ensure a clear, easy to read/grade document. There are several methods/apps for doing this. A couple of popular apps are CamScanner and Genius Scan.

**Blackboard:** Information and resources pertaining to this course are available on Blackboard. The syllabus, instructor contact information, and all course resources are stored there. Assignments and due dates, as well as exam dates are posted on the Blackboard calendar. I'll be posting your grades in the gradebook on Blackboard so that is where you can see what your grade is in the course at any time. You should get into the habit of checking Blackboard daily for pertinent information.

**Important Dates:** **Classes begin on January 19<sup>th</sup>.** Other important dates are listed below.

- **March 15 - 19** Spring break
- **April 2** Easter break
- **April 29** Last day to drop spring semester courses
- **May 10 - 13** Final Exam Week

**Homework** Homework will be assigned regularly and each assignment must be submitted on the day that it is due. Homework will be submitted on Blackboard. Late homework will not be accepted.

- Exams:** There will be four unit exams given during the semester and a comprehensive, departmental final exam given at the end of the semester. There are no exemptions for the final exam. If you are going to miss a unit exam, contact your instructor immediately, preferably prior to the exam. Makeup exams are given only under extremely rare and documented circumstances. Once you begin an exam, you cannot leave the room until the exam is submitted for grading.
- Grading Scheme:** Your grade in the course will be comprised of scores from the following categories. **This course and its grade will be recorded on your official transcript.** Grades will be posted on Blackboard throughout the semester.
- Exams (Each exam will count 17% for a total of 68%). The following exam dates are tentative. Any changes to these dates will be announced in class.
    - Exam 1 ~ Monday, 2/15
    - Exam 2 ~ Monday, 3/8
    - Exam 3 ~ Wednesday, 4/7
    - Exam 4 ~ Monday, 5/3
  - Homework/Classwork (12%)
  - Comprehensive Final Exam (20%)
- Where to Get Help:** Math can be challenging occasionally. Here are ways in which you can receive quality assistance.
- As your instructor, I am the best resource for providing assistance. I am available during my office hours (both virtual and walk-in) and by appointment.
  - SPC offers FREE tutoring. This is the link to the SPC Tutoring webpage where you can book an appointment with a tutor.  
<http://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php>
  - **Khan Academy** is one of many free online resources for students who need help with math. The website has excellent instructional videos on every math topic.
- Responsibilities & Expectations:**
1. Attend class regularly, be on time, and be prepared to learn.
  2. Be attentive, take notes, and fully participate in class.
  3. **DO ALL HOMEWORK.** Fully invest yourself in the homework process so that you can maximize your potential to be successful in the course. Do your own work, show all work, and complete the homework early enough that you can seek help if needed. Always turn in your homework on time.
  4. Food, drink, and tobacco products are not allowed in class, with the exception of bottled water.
  5. Cell phones and any other electronic devices must be silenced and put away while you're in the classroom.
  6. Reasonable standards of decency apply to the college community. The student should dress in a manner that does not distract from the academic atmosphere. Revealing attire or clothing carrying obscene or offensive slogans is not permitted. In all academic buildings, classrooms, offices, the Student Center, and dining facilities, students are required to wear shirts and shoes. Refrain from using offensive language, talking loudly or off-topic, or working on outside assignments.
  7. Be respectful to others in the classroom and assist in maintaining an optimum learning environment for all. Any student who disrupts the learning environment will be asked to leave and may be dropped from the course.

**MATH-1342-002 Statistical Methods**  
**Schedule of Topics ~ Spring 2021**  
**M W 9:30 – 10:45 M128**

Week	Day	Date	Lesson
1	Mon	1/18	Martin Luther King Holiday
	Wed	1/20	Syllabus Overview The Nature and Probability of Statistics: Overview (Chapter 1)
2	Mon	1/25	Organizing Data/Histograms, Frequency Polygons, & Ogives (2.1 & 2.2)
	Wed	1/27	Other Types of Graphs/Paired Data & Scatter Plots (2.3 & 2.4)
3	Mon	2/1	Measures of Central Tendency (3.1)
	Wed	2/3	Measures of Variation (3.2)
4	Mon	2/8	Measures of Position/Exploratory Data Analysis (3.3 & 3.4)
	Wed	2/10	Review for Exam 1
5	Mon	2/15	Exam 1
	Wed	2/17	Correlation (10.1)
6	Mon	2/22	Regression (10.2)
	Wed	2/24	Coefficient of Determination & Standard Error of the Estimate (10.3)
7	Mon	3/1	Multiple Regression (10.4)
	Wed	3/3	Review for Exam 2
8	Mon	3/8	Exam 2
	Wed	3/10	Sample Spaces & Probability (4.1)
		3/15 - 3/19	Spring Break
9	Mon	3/22	The Addition Rules for Probability/The Multiplication Rules & Conditional Probability (4.2 & 4.3)
	Wed	3/24	Mean, Variance, Standard Deviation, & Expectation/The Binomial Distribution (5.2 & 5.3)
10	Mon	3/29	Normal Distributions/Applications of the Normal Distribution (6.1 & 6.2)
	Wed	3/31	The Central Limit Theorem/The Normal Approximation of the Binomial Theorem (6.3 & 6.4)
11	Mon	4/5	Review for Exam 3
	Wed	4/7	Exam 3
12	Mon	4/12	Confidence Intervals for the Mean When $\sigma$ is Known/ Confidence Intervals for the Mean When $\sigma$ is Unknown (7.1 & 7.2)
	Wed	4/14	Steps in Hypothesis Testing (8.1)
13	Mon	4/19	$z$ Test for a Mean/ $t$ Test for a Mean (8.2, 8.3)
	Wed	4/21	$z$ Test for a Proportion (8.4)
14	Mon	4/26	Testing the Difference Between Two Means: Using the $z$ Test/ Testing the Difference Between Two Means of Independent Samples: Using the $t$ Test (9.1 & 9.2)
	Wed	4/28	Review for Exam 4
15	Mon	5/3	Exam 4
	Wed	5/5	Review for the Comprehensive Final Exam
16		5/10 - 5/13	Final Exam Week