Statistical Methods ~ MATH-1342-002
M W 11:00 – 12:15   AG105
Fall 2022 Course Syllabus

Instructor: Rebecca Darby
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Blackboard: https://southplainscollege.blackboard.com

Office Hours: As listed below or by appointment.

	Monday	Tuesday	Wednesday	Thursday	Friday
Levelland Campus (M109)	9:00 - 9:30	9:45 - 11:45	9:00 - 9:30	9:45 - 11:45	
Virtual					9:00 - 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 AG105.

Textbook: **NO TEXTBOOK IS REQUIRED FOR THIS COURSE!!** All resources for the course, including the textbook, assignments, etc., are available on Blackboard.

Supplies: You will need pencils, notebook paper, a calculator, and a folder or binder. A graphing calculator is very useful in Statistics but not necessary. I recommend either a non-graphing calculator such as a TI-30XIIS or a graphing calculator such as a TI-84. **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: All information and resources needed for this course are available on Blackboard. The syllabus, instructor contact information, and all course resources including the textbook, assignments, etc. are stored there. Assignments due dates and 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 August 29th.** Other important dates are listed below.
- **September 5**   Labor Day
- **November 23-25**   Thanksgiving Holiday
- **December 1**   Last day to drop Fall semester courses
- **December 12**   Final Exam

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. A penalty will be assessed for late homework.

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 16% for a total of 64%). The following exam dates are tentative. Any changes to these dates will be announced in class.
  - Exam 1 ~ Wednesday, September 21
  - Exam 2 ~ Monday, October 17
  - Exam 3 ~ Wednesday, November 9
  - Exam 4 ~ Monday, December 5
- Homework (16%)
- Comprehensive Final Exam (20%) ~ Monday, December 12 @ 10:15 AM

Where to Get Help: Math can be challenging occasionally. Here are some 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 Tutors** ~ Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the link below to learn more about how to book an appointment, view the tutoring schedule, get to know the tutors, and view tutoring locations.
  http://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php

- **Tutor.com** ~ You also have 180 FREE minutes of tutoring with tutor.com each week, and your hours reset every Monday morning. Log into Blackboard, click on the tutor.com link on the left-hand tool bar, click on the tools option from the left-hand menu bar. Then, click on the Tutor.com link and you will automatically be logged in for free tutoring. You can access tutor.com tutors during the following times:
  - Monday – Thursday: 8pm-8am
  - 6pm Friday – 8am Monday morning

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.

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: Picturing the World*, Larson and Farber, 2017, 7th Edition, Pearson → **Please note, this textbook is NOT REQUIRED for this course!!** All resources necessary for the course are available on Blackboard.

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 Syllabus Statement: If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication.

Students must communicate with DeEtte Edens, BSN, RN prior to their return date if still symptomatic at the end of the 5-day isolation.

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 rcanon@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.

MATH-1342-002 Statistical Methods
Schedule of Topics ~ Fall 2022
M W 11:00 – 12:15   AG105

Week	Date	Lesson	Homework Due Dates
1	Mon 8/29	The Nature and Probability of Statistics: Overview (Chapter 1)	*HW 1 due Wed, 8/31*
	Wed 8/31	Organizing Data/Histograms, Frequency Polygons, & Ogives (2.1 & 2.2)	*HW 2 due Wed, 9/7*
2	**Mon 9/5**	**Labor Day ~ No Class**	
	Wed 9/7	Other Types of Graphs (2.3)	*HW 3 due Mon, 9/12*
3	Mon 9/12	Measures of Central Tendency (3.1)	*HW 4 due Wed, 9/14*
	Wed 9/14	Measures of Variation (3.2)	*HW 5 due Mon, 9/19*
4	Mon 9/19	Measures of Position/Exploratory Data Analysis (3.3 & 3.4)	*HW 6 due Wed, 9/21*
	Wed 9/21	**Exam 1**	
5	Mon 9/26	Correlation (10.1)	*HW 7 due Wed, 9/28*
	Wed 9/28	Regression (10.2)	*HW 8 due Mon, 10/3*
6	Mon 10/3	Coefficient of Determination & Standard Error of the Estimate/Multiple Regression (10.3, 10.4)	*HW 9 due Wed, 10/5*
	Wed 10/5	Sample Spaces & Probability (4.1)	*HW 10 due Mon, 10/10*
7	Mon 10/10	The Addition Rules for Probability (4.2)	*HW 11 due Wed, 10/12*
	Wed 10/12	The Multiplication Rules & Conditional Probability (4.3)	*HW 12 due Mon, 10/17*
8	**Mon 10/17**	**Exam 2**	
	Wed 10/19	Probability Distributions/Mean, Variance, Standard Deviation, & Expectation (5.1, 5.2)	*HW 13 due Mon, 10/24*
9	Mon 10/24	The Binomial Distribution (5.3)	*HW 14 due Wed, 10/26*
	Wed 10/26	Normal Distributions (6.1)	*HW 15 due Mon, 10/31*
10	Mon 10/31	Applications of the Normal Distribution (6.2)	*HW 16 due Wed, 11/2*
	Wed 11/2	The Central Limit Theorem (6.3)	*HW 17 due Mon, 11/7*
11	Mon 11/7	The Normal Approximation of the Binomial Theorem (6.4)	*HW 18 due Wed, 11/9*
	Wed 11/9	**Exam 3**	
12	Mon 11/14	Confidence Intervals for the Mean When σ is Known/ Confidence Intervals for the Mean When σ is Unknown (7.1 & 7.2)	*HW 19 due Wed, 11/16*
	Wed 11/16	Steps in Hypothesis Testing (8.1)	*HW 20 due Mon, 11/21*
13	Mon 11/21	z Test for a Mean /t Test for a Mean (8.2, 8.3)	*HW 21 due Mon, 11/28*
	Wed 11/23	**Thanksgiving Holiday ~ No Class**	
14	Mon 11/28	z Test for a Proportion (8.4)	*HW 22 due Wed, 11/30*
	Wed 11/30	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)	*HW 23 due Mon, 12/5*
15	**Mon 12/5**	**Exam 4**	
	Wed 12/7	***Review for the Comprehensive Final Exam***	
16	**Mon 12/12**	**Final Exam @ 10:15 AM**	