Math 1342.603W Syllabus Statistical Methods Wednesdays 5:30pm – 6:45pm Rm B031 Downtown Lubbock Center Fall 2023

Instructor: Mrs. Morgan Groves

Email: mgroves@southplainscollege.edu

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Sam - 11am

Office: B017

Office Hours: TR

8am - 11am

(or by appointment)

Office Phone: 806-716-2735

Course Structure

- Hybrid One-Day-Per-Week course.
 - o Students will do the lecture videos and notes **prior** to coming to class each Wednesday.
 - Student will do the homework (as much as possible) prior to coming to class each Wednesday.
 - Students will bring their questions to class each Wednesday to get further clarification on the topics being taught.

Textbook

- This section does NOT require you to purchase a physical textbook.
- All resources can be found online through MyStatLab.com (the online homework system) or in your class notes found on Blackboard.

Course Requirements/Materials

- Students should attend all class meetings, take notes and participate in class, and complete all homework assignments and examinations including the final exam in the allotted time.
- All students are expected to have reliable internet access, a reliable laptop or tablet, a printer, and either a scanner or a smart phone for submitting PDF documents.
- Students will also need to purchase the access to MyStatLab after the 14-day free trial period ends.

Grading:	Daily/Participation	10%	<u>Grading Scale</u> :	A 90-100
_	Homework (MSL)	10%	-	B 80-89
	Tests (3 total)	60%		C 70-79
	Final Èxam É	20%		D 60-69
				F 59 or below

^{***}Note: Students must justify answers or show work on all problems to receive full credit.

Communication

- Students are expected to check their SPC emails at least once per day.
- The instructor promises to respond to student emails within 48 hours, with the exception of weekends.
- The instructor does not check/respond to emails after 5pm on Fridays and not at all on Saturdays and Sundays. Any emails sent past 5pm on a Friday will be responded to on Monday.

Class Notes

- Found on Blackboard under Course Content.
- Should be completed by each student (hand-written) using lecture videos provided on Blackboard.
 - I recommend you print the notes, but this is not required. You may fill them out digitally using a tablet or use your own blank paper to take notes during the videos.
- Upload completed notes to Gradescope by the indicated due date on the course calendar at the end of this syllabus.
 - These are daily/participation grades.

Lecture Videos

- Found on Blackboard under Course Content.
- Watch and fill in the notes, pausing often to allow for cognitive processing time.
- Organize your questions to bring to class each Wednesday.
- Completion of the lecture videos is part of your participation grade.

Homework

- All homework assignments will be on MyStatLab, an online homework system, that is access through Blackboard.
- Homework is to be completed by the due dates posted on each assignment.
 - Late homework can be submitted but will have a deduction of 20% of the grade for being late.
- Written work from homework assignments should be done and kept for studying purposes but is not submitted to the instructor.
- All work in this class must be your own!!
- Three low homework grades will be dropped at the end of the semester.
- Using PhotoMath (or similar) is strictly prohibited and will result in academic dishonestly reports being submitted to your permanent record.
- Using ChatGPT on any assignment in this class is strictly prohibited.

Tests

- 3 midterm exams, plus one comprehensive final exam
- No notes/homework/textbooks will be allowed on ANY test.
- All tests are expected to be completed in the allotted time, no exceptions.
- No test grades will be dropped.

Final Exam

- The final exam is comprehensive.
- Any student who does not take the final exam will fail the class with an F regardless of the student's average.
- No make-up final exam will be offered.

Late work

- If you submit your notes late, you will receive 25% off your daily grade.
- If you submit your homework late, you will receive 20% off your homework grade.
- Exams cannot be taken early or late. You must take exams in the classroom at the assigned testing time.

Make-up

- Make-up work is given at the discretion of the instructor.
- NO make-up assignments are given without prior notification AND proper documentation.

• If you miss an assignment and have given prior notification and proper documentation to justify the reason you missed the assignment, you MUST make arrangements BEFORE the end of the day before your missed class to make up whatever you have missed.

Participation Grade

- Daily participation grade.
- This grade is 50% attendance to/participation in class and the remaining 50% is awarded for watching the lecture video(s) prior to class and filling in and uploading the lecture notes to Gradescope before class each day.
 - o Completed lecture notes should be uploaded to Gradescope.
 - Failure to upload the completed notes will result in up to 25% of the participation grade that day being deducted.
- To receive full credit for the Attendance/Participation in Class portion of this daily grade, students must:
 - Be on time to class
 - Not leave class early
 - o Not leave class for an extended period of time, as deemed by the instructor.
 - Stay awake during class
 - o Not be on a cell phone or other mobile device during class
 - Participate in classroom discussions
 - Come prepared for class with notes/homework/review in hand.

In the event you are absent during class, you will get 0 pts for the Attendance/Promptness portion of this grade for that day.

Submitting Documents Online (Gradescope)

- Download the Gradescope app onto your smart phone.
 - o Log-in with your SPC credentials, just like you log into Blackboard.
- Students will be required to upload written work to Gradescope (notes, not homework).
- This is expected to be done clearly and legibly.
- After uploading your work, Gradescope will provide you an opportunity to indicate which
 problems are on which pages of your work. Please be sure you take the time to assign the
 problems to certain pages.

Academic Integrity

- Any student involved in cheating will receive a zero on the assignment(s) and will be informed of why he/she received a zero.
- Student may be administratively dropped from the class and will receive an X or F.

Calculators

- This course is taught under the assumption that each student owns a graphing calculator.
- I recommend a TI 84 series calculator.
- TI-Nspires and Casio calculators are NOT recommended unless you are an expert at using them, as the instructor will be of little help with these devices.

Class Rules:

- Be on time and ready to learn.
- Use only pencil for all assignments.
- Have the notes completed **prior** to coming to class.
- Students are not permitted to use electronic devices, other than a calculator, in class. **Put** the cell phones away!!
- During testing, all cell phones should be placed on SILENT or turned off, and all smart watches need to be removed and placed on the floor face-down to the left of your seat.

- Any student who leaves the classroom for any reason (bathroom, phone call, etc.) during an
 exam will not be allowed to continue the exam upon their return. Once you leave the
 classroom during an exam, you are done.
- Adhere to the requirements of the Student Code of Conduct.
- If you are joining the class through virtual means, please keep your microphone on mute until you have a question.

Virtual Students

- Stay active and attentive during the entire class.
- Camera on and positioned in such a way as to allow the camera to catch both your face and your workspace.
- Keep your camera on until you have explicit permission from your instructor to turn it off.
- Students are expected to follow the same testing/quizzes/lab rules as any student in class.
- If you leave the view of the camera during an assessment without explicit permission from the instructor, you will be given a 0 on the assessment.
- Keep chat windows open during assessments as a way for the instructor to communicate (quietly) with you.
 - If the student does not keep their chat window visible to themselves during assessments and misses a message from the instructor, 15% credit may be deducted from that assignment's score.
- If you break any of the rules listed above, you will receive a 0 on the assessment.
- Students who are virtual for an assessment have been given explicit permission by the instructor to take the assessment in this format. If you are not given this permission, you are expected to be in class for each and every assessment (labs, quizzes, tests). Instructor permission is not given lightly nor liberally and the decision to allow a student to work virtually is entirely at the instructor's discretion.

South Plains College Common Course Syllabus: MATH 1342

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* 8/e, Farber, Betsy | Larson, Ron. Pearson.

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. 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: Should be provided by the Vice-President of Student Services over email.

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 <u>activate</u> 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 <u>email cgilster@southplainscollege.edu</u> 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.

Tentative Calendar for Math 1342 – Fall 2023					
Week	Day	Date	Topic	Notes & HW	
1	Wednesday	Aug 30	An Overview of Statistics, Data Collection and Experimental Design	1.1 – 1.2	
2	Wednesday	Sept 6	Frequency Distributions and Their Graphs; Measures of Central Tendency; Measures of Variation	1.3 – 1.5	
3	Wednesday	Sept 13	Measures of Position; Basic Concepts of Probability and Counting; Conditional Probability and the Multiplication Rule	1.6 – 1.8	
4	Wednesday	Sept 20	The Addition Rule; Additional Topics in Probability and Counting	1.9 – 1.10	
5	Wednesday	Sept 27	Exam 1	Unit 1	
6	Wednesday	Oct 4	Probability Distributions; Binomial Distributions; Intro to Normal Distributions and Standard Normal Distributions	2.1 – 2.3	
7	Wednesday	Oct 11	Normal Distribution (Finding Values); Sampling Distributions and the Central Limit Theorem;	2.4 – 2.5	
8	Wednesday	Oct 18	Confidence Intervals for Means (Sigma Known and Unknown); Confidence Intervals for Population Proportions	2.6 – 2.8	
9	Wednesday	Oct 25	Exam 2	Unit 2	
10	Wednesday	Nov 1	Intro to Hypothesis Testing; Hypothesis Testing for the Mean (Sigma Known and Unknown)	3.1 – 3.3	
11	Wednesday	Nov 8	Hypothesis Testing for Proportions; Testing the Difference Between Means (Sigma Known)	3.4 – 3.5	
12	Wednesday	Nov 15	Testing the Difference Between Means (Sigma Unknown); Correlations	3.6 – 3.7	
13	Wednesday	Nov 22	Thanksgiving Break – No Classes		
14	Wednesday	Nov 29	Linear Regression; Measures of Regression and Predicted Intervals	3.8 – 3.9	
15	Wednesday	Dec 6	Exam 3	Unit 3	
16	Wednesday	Dec 13	Final Exam 5pm – 7pm	Comprehensive	

Last day to drop – Nov. 30th

- Notes are due on Gradescope at the start of class each Wednesday.
- Homework is due on MyStatLab by Friday each week unless otherwise posted on MyStatLab.