



MATH 1342 (3:3:0)
Statistics Methods

Mathematics Department

Division of Arts & Sciences

South Plains College

FALL 2024

Shirley Davis

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South Plains College

MATH 1342 – Statistical Methods HYBRID/Flex

{ *Section 003, M W 1:00 – 2:15 pm*
{ *Section 090, M W 1:00 – 2:15 pm*

{ **Math Bldg., Rm. 105**
{ **Math Bldg., Rm. 105**, respectively

I. Instructor Info

A. Instructor:

- 1.) **Professor:** Miss S. Davis
- 2.) **Office:** 103 MATH Bldg.
- 3.) **Phone:** (806) 716 – 2699
- 4.) **E-mail address:** sdavis@SouthPlainsCollege.edu
 - a.) Any questions or comments should be sent using **Blackboard email** (i.e., Course Messages) not your SPC email. SPC email will be used as a secondary communication tool.
 - b.) **Response Times**

I will do my best to respond to your email within the primary office hours availability zone posted on Blackboard. If the emails are overwhelming in volume then please allow me 72 hours = 3 business days of receipt Monday through Thursday throughout the regular business day Monday through Thursday to respond to your email. If I do not respond within 72 hours please email again. Response times are dependent on whether my proposed method of emailing is respectively followed. In other words, if you decline to follow my instructions for emailing me through Blackboard and email me through my SPC email account then response times could take weeks.

- 5.) **Messaging/Announcements:** **Blackboard email** and postings will be used as our primary virtual means of communication. **SPC Email will be used as a secondary communication instrument since student emails can be overwhelmed by administrative emails.** Your course will be contained within Blackboard. The instructor will post general announcements in Blackboard usually accompanied with email to your SPC email address.

You must check Blackboard homepage on a regular basis preferably daily.

B. Office Hours:

Table 1 – Office Hours

Monday	Tuesday	Wednesday	Thursday	Friday
<i>or by appointment</i>				
You do not need an appointment for the physical (f2f) office hours. When you come by, I may be assisting another student, but please wait patiently, and I will attend to you eventually.				

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II. Course Info

A. **Course Description:**

This course is a study of the methods of analyzing data, statistical concepts and models, estimation, tests of significance, introduction to analysis of variance, linear regression, and correlation.

B. **Text:**

A Brief Version – Elementary Statistics: A Step by Step Approach, 7th edition, Allan Bluman, McGraw Hill. (ISBN: 978-007-772-0582)

C. **Supplies:**

Computer access, one flash drive, large 3-ring notebook binder, dividers, notebook paper, graph paper (available to print on blackboard), hole punch, stapler, a staple puller, pencils, erasers, a ruler, scientific calculator preferably TI-83 or higher.

This will keep your coursework organized so you can easily access all your own work.

D. **Purpose:**

To provide a transferable course for students in the medical and physical sciences.

E. **Prerequisites:**

Successful completion of MATH 1314 and strong arithmetic skills.

III. Attendance Policy

A. **Attendance:**

Lectures, effort, engagement, and Q&A are the most important activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. Maintaining a time management schedule for the online video lectures is crucial to avoid lagging in this class. The student is expected to attend at least eighty percent (80%) of the total class meetings and submit at least eighty percent (80%) of the total class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

B. **Withdrawal:**

If you wish to withdraw yourself from this class for any reason, you must initiate the appropriate steps on your own.

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IV. Equipment

A. Online Essentials:

1.) Internet access

- Working, reliable internet access with the ability to view videos via Blackboard or YouTube and participating in online conferences via Zoom.
- Libraries, school and public communities, are a great source to computer accessibility.

2.) Computer (laptop highly recommended) and Webcam

3.) Blackboard (Bb)

- The online course management system that will be used for this course.
- A wealth of information is provided to you for this class in the **Stats Bb**. All the information for this class will exist on Blackboard including but not limited to syllabus & compendium, homework assignments, worksheets supplements, videos, & etc., but additional material involves Classroom Conduct, Technological & Equipment info & assistance, Tutoring opportunities, previous semester student evaluations, and miscellaneous administrative information. Please be responsible to log in to Blackboard and visit **Stats Bb** page and peruse through it to become familiar with all the items.

Login at <http://southplainscollege.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 Campus Connect Pin No. (located on SPC acceptance letter)

- *Technical Support:* Student support is available by emailing blackboard@southplainscollege.edu or calling 716-2962. When emailing a request for help, include your full name, course(s) enrolled in, name of instructor(s) and a phone number where you can be reached.
- *Blackboard Tutorials.* Blackboard video tutorials are available at <http://ondemand.blackboard.com/students.htm>.
- *Blackboard App.* A free Blackboard App is highly suggested and recommended and can be downloaded in the APP store specific to your cell phone and can be found on **Stats Bb**.

4.) Calculator

- A scientific calculator for this course is recommended.
- Acceptable: TI-83, TI-83+, TI-84, TI-84+, or TI-84+ Silver Edition but many others are also acceptable.
- Any other graphing calculator, you will need to read you manual to determine how to make the processes work.
- The TI graphing calculator model is not allowed in this class: TI-Nspire.
- Cell phones and similar devices may NOT be used as calculators and no sharing of calculators is allowed.

5.) Other Resources

- You are expected to keep up with the schedule set forth by the due dates of the video lectures, homework assignments, and the exams. If you need help, please ASK! Here are some other good resources online:
 - Your instructor is your first and BEST resource for any help!!!!
 - Free online math videos at www.khanacademy.org, www.patrickjmt.com, www.mathtv.com, & MIT Opencourseware.

6.) Troubleshooting

- Computer Issues
 - If your personal computer becomes "disabled", then you will need to seek an alternate computer source.

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V. Coursework Policies

A. Assignments:

Homework will be assigned for each class meeting (located on **Stats Bb** under the COURSE Materials). You are expected to work all problems assigned in each assignment and to seek help when you do not understand. You are responsible for keeping up to date and prepared. Homework is to be completed and be kept in a notebook that must accompany you to each (f2f) class session.

B. Assessments:

There will be quizzes given over the assigned homework and online lecture videos in which **no make-ups will be allowed.** The total number of quizzes for the semester is unpredictable (unknown number at this moment) but only a portion will count as the quiz grade (implying the few lowest will be dropped). The online quizzes must be taken in one sitting. You will have a limited time to complete each quiz. Make sure you have uninterrupted time when taking the quiz. For online quizzes, you will be able to access assignments or the book in **Stats Blackboard** during the quiz.

C. General Info / Extension of deadlines:

Please make note of all deadlines on the outline in Blackboard. There are no extensions on any deadlines. You should ALWAYS allow yourself a time cushion for assignments so that if you have any issues, it can be resolved before the deadline. Issues cannot be resolved after the deadline. You must give me 72 hours to fix any issues. NEVER wait until the last minute to complete an assignment. Computers seem to have issues when you are in a hurry to meet a deadline.

D. Tests:

There will be four tests (final exam inclusive) face-to-face (f2f) unless circumstances change. Exams will be f2f unless there exist **verified extenuating circumstances** in which the exams will be conducted online through virtual meetings. Virtual invitations will be delivered through Blackboard via announcements and/or Bb email on or before exam days. The final exam will be comprehensive. See your OUTLINE for the approximate date for each test.

If the final exam score is greater than any non-zero major exam score then the final exam score replaces the major exam score. In other words, the major exam score will be deleted, and the final exam score will count two times (an exception is the Honest Effort Rule (**H.E.R.**) policy). See your OUTLINE for the approximate date for each test.

- 1.) **Make-up Policy:** There is no automatic provision for making up exams. Only under **verified extenuating circumstances** (e.g., death in the family, hospitalization, +COVID test) will make-up exams be inevitable. These situations will be dealt with on a trial-by-trial basis. If at all possible, the instructor should be notified prior to missing an exam.

➤ If you happen to miss an exam, a grade of **0** will be administered, and under the **H.E.R.** (Honest Effort Rule), this missed exam of grade **0** will not be replaced by the final exam even if the final exam is greater.

E. Maximizing Potential

- 1.) Login to Blackboard daily;
- 2.) Watch the lecture videos and take notes on them;
- 3.) Attend each face-to-face class session;
- 4.) Practice the exercises in each lesson until you have full mastery of them;
- 5.) Complete each set of homework exercises;
- 6.) Complete each online quiz on time; and
- 7.) Complete each Unit Test.

F. Grading Policy:

Your final grade will be based solely on major exam scores, quiz average, and a comprehensive final.

- 1.) **Grading Score:** Final score =
$$\frac{\text{Test 1} + \text{Test 2} + \text{Test 3} + \text{Quiz Avg.} + \text{Final Exam score}}{5}$$

NOTE: If the final exam score is greater than the least non-zero major exam score (excluding the Homework/Quiz avg.) then the final exam score replaces the least non-zero major exam score. In other words, the major exam score will be deleted and the final exam score will count two times.

- 2.) **Grade Scale:**

A:	90 and above	D:	60 – 69
B:	80 - 89	F:	59 or below
C:	70 - 79		

Table 2 – Grading Scale

- 3.) **Borderline Grades:** These grades will be evaluated with regard to attendance and mature conduct in class
- 4.) **Blackboard Gradebook:** Your grades will be accessible in **Stats Bb** Gradebook. However, I consider Bb Gradebook the UNOFFICIAL grade because, at any time, it may not contain all your grades for the course. For your final score in this course, you will obtain at the end of the semester **through Texan Connect &/or Colleague.**

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G. STUDY:

You should normally spend approximately 2-3 hours outside of class in study for each hour of lecture. Some material will require more time than other material. Also, your mathematical background is a major factor in the time spent completing the homework. Try to study the assigned lesson as soon after the class meets if possible. With your greatest effort, try not to get behind on the homework! Refer to the “How to Study” sheet for further detailed studying suggestions.

1.) Methods of Learning Assessment:

- a.) **Handwritten notes for video lectures.** This helps both of us to be diligent in keeping your skills on pace.
- b.) **Online/Paper quizzes.** They are practice for the tests

2.) Notebook: Homework, quizzes, tests, and other useful material should be kept in a notebook in which the notebook will be used as a reference and study guide. The notebook will be brought to class everyday! The following material will be placed in the notebook in the order listed:

- | | | |
|--|--|--|
| <ol style="list-style-type: none"> a.) Cover sheet including Name, Class, and Semester, b.) Syllabus, c.) Procedure pages, d.) Assignment sheet, e.) Notes, | | <ol style="list-style-type: none"> f.) Work, g.) Quizzes, h.) Tests, & i.) Miscellaneous |
|--|--|--|

Table 3 – Notebook Material

(1.) *To print all the material for your notebook, please visit the **Stats Blackboard** page. All printed material needs to be read at least once during the term of this course.*

3.) Tutoring: Free tutoring is available in the Math-Engineering building (Levelland campus, room M116) and online. For the Math-Engineering building tutor, please remember to sign in when you seek help from a tutor. For free online tutoring, please refer to **Stats Bb**.

4.) Video Tapes: Videos for many review topics in this course are available through the Mathematics Department on Blackboard. For username and password, please use *mvideos*.

H. Critical Dates:

<i>Sept 2</i>	Labor Day	<i>Nov 8</i>	WEB Pre-registration for Summer & Spring Interim 2025
<i>Oct 18</i>	FALL Break	Final Exams	
<i>Nov 27–29</i>	Thanksgiving	<i>Dec 11</i>	<i>(10:15 – 12:15p, Wednesday)</i>
<i>Dec 4</i>	Last Day to Drop		

Table 4 – Special Dates

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VI. Responsibilities & Consequences

A. Student Responsibilities:

- 1.) Attend class, be aware of announcements made in class and on Blackboard, and ask questions when necessary.
- 2.) Work homework problems the day that they are assigned.
- 3.) Form (virtual and/or f2f) study groups.
- 4.) Get help from tutors, tapes, and/or the instructor.
- 5.) Read and know the attendance policy.
- 6.) All students are encouraged to implement good hygiene measures such as washing hands regularly, using hand sanitizer, and covering coughs/sneezes. Hand sanitizing stations are available across all SPC locations.
- 7.) ****Cell phones, laptops, and pagers during class! ****
 - a.) Cell phones and laptops are required to use in class in order to upload class work documents.
 - (1.) If the instructor determines that activation of a cell phone, pager, PDA, or laptop irrespectively interrupts the lecture or classroom discussion or impedes the progress of any student then the instructor will ask the student to leave either temporarily or permanently.
 - (2.) **No technologic devices such as cell phones, PDA's, etc. are to be used during tests or in-class quizzes but, at the instructor's discretion, may be used at the completion of tests and/or in-class quizzes. If due to technological disruption, the instructor may grant permission for a student(s) to use such devices for a test or in-class quiz.**
- 8.) **Follow the classroom policy, no food or drink allowed in the classroom if posted (located in Stats Blackboard, COURSE RESOURCES).**
- 9.) **In addition to the No Food or Drink classroom policy and in accordance to campus policy, no tobacco products are to be permitted and consumed in class.**
- 10.) **Do not dress for the beach or for bed.**
- 11.) **You will obtain your final grade for the class through Texan Connect &/or Colleague.**

B. Cell Phone Policy:

All students will, during each class period and for its duration, place and keep their cell phone in its deactivated state, provided that they are at the present time in possession of said device, face-down in the right-hand corner and on the top surface of their desk unless the cell phone is used as a laptop function. If a student's cell phone activates and/or the student engages in text messaging during class at anytime during the semester, the student, by the instructor's discretion, could be permanently dismissed from the class for the remainder of the semester. If a student's cell is activated during class and/or the student engages in text messaging determined by the instructor, and **the student chose not to place their phone on top of their desk as mentioned above** then the student will be dismissed from the class by the instructor permanently.

C. Academic Integrity:

The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a serious offense and renders the offender liable to serious consequences, possibly suspension. For more detail, see "Academic Integrity" and "Student Conduct" in the South Plains College General Catalog.

- 1.) You are expected to work alone on all quizzes and tests. You are not allowed to use any electronic device other than your calculator during a quiz or test. If you choose to cheat, you will be withdrawn immediately from this class with a grade of "F."

D. Academic Misconduct:

Complete honesty is required from students in all facets of course work including homework assignments, tests, and the final exam. See the South Plains College Catalog for more detail.

E. Sanctions for Cheating or Plagiarizing:

A grade of "F" in the course will be assigned to any student caught cheating or plagiarizing; additional sanctions may also be considered. Students are responsible for understanding the meanings of the words cheating and plagiarizing. (Refer to page 10 of the syllabus for specific details of the definitions of cheating and plagiarizing.)

VII. Questions:

A. I invite all your questions **except** the following:

- 1.) I wasn't able to make it to class. Did I miss anything? (Yes.)
- 2.) Is this going to be on the test? (Perhaps, not directly, but if the ideas were not important, I would not be discussing them in class.)
- 3.) Do you have the tests graded? (I put forth my best effort to have the tests graded so as to return them the next class session. However, there are times due to uncontrollable factors that this may not be possible.)

B. **Verified Extenuating Circumstances**

- 1.) Death in the family, hospitalization, +COVID test, etc. with written proof.

VIII. Objectives:

Upon completion of this course and obtaining a passing grade, the student will have mastered at least 70% of the course objectives. The course objectives provide that the student be able to:

- 1.) represent raw data using frequency distributions,
- 2.) represent raw data using stem & leaf plots, ogives, histograms, bar graphs, and pie charts,
- 3.) calculate measures of central tendency, variation, and position for both grouped and ungrouped data and interpret in writing the significance and meaning of the calculations,
- 4.) calculate coefficients of variation and skewness and interpret in writing the significance of the calculations,
- 5.) calculate classical and empirical probabilities,
- 6.) apply binomial, Poisson, and normal distribution properties to calculate probabilities and interpret in writing the significance of the calculations,
- 7.) calculate mean, variance, and standard deviations of probability distributions and interpret in writing the significance of test results,
- 8.) evaluate a hypothesis testing situation to determine the appropriate test to be used,
- 9.) use parametric and non-parametric tests for hypothesis testing and interpret in writing the significance of test results,
- 10.) calculate simple and multiple linear regression equations and use equations to make predictions,
- 11.) calculate coefficients of correlation, determination, and non-determination and interpret in writing the significance of the calculations, and
- 12.) use a computer statistics program and/or a statistical calculator to help with computations.

IX. SPC Policies & Procedures

A. **Diversity:**

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.

B. **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 Special Services Office, preferably, 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 Special Services Coordinator. For more information, call or visit the Special Services Office in the Student Services Building, 894-9611 ext. 2529.

C. **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.

D. **Sexual Misconduct:**

It is important for you to know that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me. Dr. Lynne Cleavinger, the Director of Health & Wellness, can advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Dr. Cleavinger at 716-2563 or lclevinger@southplainscollege.edu or go by the Health and Wellness Center. You can schedule an appointment with a counselor by calling 716-2529.

E. **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.

F. **Campus Concealed Carry:**

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/lhc.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.

X. Course Outline

		Course Outline
		This schedule is tentative and subjective to change. Changes will be announced in class.
Week	Date	Topics and Sections Covered
1	8/26, Mon	Introduction, Misc. Chapter 1 – The Nature (Definitions)
	8/28, Wed	2.1 Organizing Data – (Frequency Distributions/Tables)
2	9/2, Mon	<i>Labor Day</i>
	9/4, Mon	2.2 Histograms, Frequency Polygons, & Ogives
3	9/9, Mon	2.3 Other Types of Graphs – Bar Graphs, Pareto Charts, Time Series Graphs, Pie Graphs, Dotplot, and Stem & Leaf Plots 2.4 Paired Data & Scatter Plot
	9/11, Wed	10.1 Correlation 10.2 Regression
4	9/16, Mon	3.1 Measures of Central Tendency
	9/18, Wed	3.2 Measures of Variation
5	9/23, Mon	3.3 Measures of Position 3.4 Exploratory Data Analysis
	9/25, Wed	4.1 Sample Spaces & Probability
6	9/30, Mon	Test 1 (Ch 1, 2, 3, & 10)
	10/2, Wed	4.1 Sample Spaces & Probability contd. 4.2 Addition Rules for Probability
7	10/7, Mon	4.3 Multiplication Rules & Conditional Probability
	10/9, Wed	4.4 Counting Rules 4.5 Probability & Counting Rules
8	10/14, Mon	5.1 Probability Distributions 5.2 Mean, Variance, Standard Deviation, & Expectation
	10/16, Wed	5.3 Binomial Distribution
	10/18, Fri	<i>Fall Break</i>
9	10/21, Mon	6.1 Normal Distributions
	10/23, Wed	6.2 Applications of Normal Distributions
10	10/28, Mon	Test 2 (Ch 4 & 5)
	10/30, Wed	6.3 Central Limit Theorem
11	11/4, Mon	7.1 Confidence Intervals for the Mean when sigma is Known (Z-test) 7.2 Confidence Intervals for the Mean when sigma is Unknown (T-test)
	11/6, Wed	7.3 Confidence Intervals & Sample Size for Proportions
12	11/11, Mon	8.1 Steps in Hypothesis Testing – Traditional Method 8.2 z – Test for a Mean
	11/13, Wed	8.3 t – Test for a Mean
13	11/18, Mon	Test 3 (Ch 6 & 7)
	11/20, Wed	8.4 z – Test for Proportion
14	11/25, Mon	9.1 Testing the Difference Between Two Means – Using the z – Test
	11/27, Wed	<i>Thanksgiving</i>
15	12/2, Mon	9.2 Testing the Difference Between Two Means of Independent Samples – Using the t – Test
	12/4, Wed	Review for FINAL
Final(s)	12/11, Wed	10:15 – 12:15p

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ACKNOWLEDGMENTS

I owe a debt of gratitude to Charlene Perez, Professor of CIS, at South Plains College for tolerating my incessant number of questions and ideas all the while being at my disposal during the semester I attended BCIS 1305 – Business Computer Applications which primarily aided in the shape and refinement of this syllabus in terms of all its bells and whistles.

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