MATH 1342 (3:3:0)
Statistical Methods

Mathematics Department

Division of Arts & Sciences

South Plains College

Online

Summer II 2025

Shirley Davis

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MATH 1342 – Statistical Methods
Online
Summer II 2025

I. Instructor Info
A. Instructor:
  1.) **Professor:** Miss S. Davis
  2.) **Office:** 103 MATH Bldg. (Levelland campus)
  3.) **Phone:** (806) 716 – 2699
  4.) **E-mail address:** sdavis@SouthPlainsCollege.edu
   ➢ SPC email address
   ➢ Not Bb email address
   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 48 hours = 2 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 48 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 ONLY 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
Office Hours schedule are posted on Blackboard				

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**) or (ISBN: 978-1-259-29473-0)

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, 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:
  Minimum score of 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 0335.

III. Attendance Policy

A. Attendance:

Lectures, effort, 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. 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. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student cannot receive an X, the instructor will assign an F.

B. Withdrawal:

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

IV. Equipment

A. Online Essentials:

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

2.) Computer and Webcam
   - Method of scanning handwritten work to submit. You can scan a group of pages called a "batch". If you have another suggestion then please feel free to contact me. Please refer to **Stats Bb** - COURSE RESOURCES - Skills: Technology folders for various methods of scanning documents.
   - An online video conference program will be used as a tool to monitor tests. This online video conferencing requires students to have a webcam. If the computer you will be using does not have a webcam, you will need to use a computer that has one or purchase one.

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 Blackboard** (**Stats Bb**) interface web platform. 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.

4.) Calculator
   - A scientific calculator for this course is highly 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.
     - Free tutoring is available online. Please refer to **Stats Bb** for the tutoring information and weblink.

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

V. Coursework Policies

A. Assignments:

Online Assignment Policy: Homework will be assigned daily (located on **Stats Bb**). <u>You are expected to work all problems assigned in each assignment and to seek help when you do not understand.</u> You are responsible for keeping up to date and prepared. <u>Homework is to be completed and be kept in a notebook</u>. Questions over the homework problems will be discussed in Blackboard Collaborate during virtual office hours.

B. Assessments:

1.) Online Quizzes: There will be quizzes given over the assigned homework in which **no make-ups will be allowed**. All quizzes will be online through Blackboard. 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 textbook in **Stats Bb** during the quiz.

2.) Tests:

There will be three tests. See your OUTLINE for the approximate date for each test.

- **No technologic devices such as cell phones, PDA's, etc. are to be used during tests unless the cell phone is your primary tool for Zoom sessions.**
- Tests will be proctored and monitored by through Zoom sessions. You will be allowed a calculator. You will <u>not</u> be allowed cell phones, smart watches, or any other electronic devices unless the cell phone is your primary tool for Zoom sessions.

➢ **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.

C. General Info / Extension of deadlines:

Please make note of all deadlines on the outline in **Stats Bb**. 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. 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:

a.) Cover sheet including Name, Class, and Semester,	f.) Work,
b.) Syllabus,	g.) Quizzes,
c.) Procedure pages,	h.) Tests, &
d.) Assignment sheet,	i.) Miscellaneous
e.) Notes,	

Table 2 – Notebook Material

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

3.) **Tutoring:** For free online tutoring, please refer to **Stats Bb**.

4.) **Video Tapes:** Videos Review Recordings for many topics in this course are available at the following web address
http://www.youtube.com/playlist?list=PLXbDWrtfFWZHMCVXBPZon988X4TAAsEY

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E. **Grading Policy:**
Your final grade will be based solely on major exam scores, quiz average, and a comprehensive final.

1.) **Grading Score:** $\text{Final score} = \dfrac{\text{Test 1} + \text{Test 2} + \text{Test 3} + \text{Quiz Avg.}}{4}$

2.) **Grade Scale:**

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

Table 3 – 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.**

F. **Critical Dates:**

July 30	Last Day to Drop	*August 7*	*Times will be given prior to this date.*

Table 4 – Special Dates

VI. Responsibilities & Consequences

A. **Student Responsibilities:**

1.) Be aware of announcements made on **Stats Bb** 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.) **You will obtain your final grade for the class through Texan Connect &/or Colleague.**

B. **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."

C. **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.

D. **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 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, Lubbock Centers (located at the Lubbock Downtown Center) 806-716-4675, or Plainview Center (Main Office) 806-716-4302.

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 lcleavinger@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 parenting (paternal or maternal) with children under the age of 18 per **Texas Education Code 51.982** and Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a **Title IX pregnancy and parenting accommodations request**, along with specific medical documentation, to the Health and Wellness Center. 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 Health and Wellness Center at 806-716-2529 or email **rcanon@southplainscollege.edu** for assistance.

F. AI use: Artificial Intelligence (AI) Policy

X. Course Outline

Course Outline
This schedule is tentative and subject to change. Changes will be announced in class.

Monday	Tuesday	Wednesday	Thursday
07 - July Chapter 1 The Nature (Definitions)	**08 - July** 2.1 Organizing Data 2.2 Histograms, Frequency Polygons, & Ogives	**09 - July** 2.3 Other Types of Graphs 2.4 Paired Data & Scatter Plots	**10 - July** 10.1 Correlation 10.2 Regression
14 - July 3.1 Measures of Central Tendency 3.2 Measures of Variation	**15 - July** 3.3 Measures of Position 3.4 Exploratory Data Analysis	**16 - July** 4.1 Sample Spaces & Probability 4.2 Addition Rules for Probability	**17 - July** **TEST #1** (Ch. 1, 2, & 3)
21 - July 4.3 Multiplication Rules & Conditional Probability	**22 - July** 4.4 Counting Rules 4.5 Probability & Counting Rules	**23 - July** 5.1 Probability Distributions 5.2 Mean, Variance, Standard Deviation, & Expectation	**24 - July** 5.3 Binomial Distribution
28 - July 6.1 Normal Distributions 6.2 Applications of the Normal Distribution 6.3 Central Limit Theorem	**29 - July** **TEST #2** (Ch. 4 & 5)	**30 - July LDTD** 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)	**31 - July** 7.3 Confidence Intervals & Samples Size for Proportions
04 - Aug 8.1 Steps in Hypothesis Testing – Traditional Method 8.2 z –Test for a Mean	**05 - Aug** 8.3 t –Test for a Mean 8.4 z – Test for Proportion	**06 - Aug** 9.1 Testing the Difference Between Two Means – Using the z – Test 9.2 Testing the Difference Between Two Means of Independent Samples – Using the t – Test	**07 - Aug** **TEST #3** (Ch. 6, 7, 8 & 9)

Table 5 - Course Outline

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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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