

Sul Ross State University
Course Syllabus
MATH 1342-001,ALP: Elementary Statistical Methods
Fall 2021

Instructor: Dr. Angela M. Brown

Office Number: ACR 107B

Office Telephone Number: (432)837-8223

Email Address: abrown4@sulross.edu

Office Hours: TWR 11-12, MW 2-4:30, TR 3:30-4:30, others by appointment

Time and Place of Class Meetings: MWF 10-10:50 am ACR 204

Prerequisites: Completion of MATH 0342 (A,B, or C) or passing TSI or Concurrent Enrollment

Required Textbooks: Beginning Statistics, 3rd edition. Hawkes. ISBN 9781642771114. You will need access to the online textbook and homework. You should be able to buy an access code through our bookstore or the link for the instructions is under the Start Here link on Blackboard.

Other Equipment Needed: calculator (cell phone is not an acceptable calculator), ruled paper or graph paper (for graphical presentation of data), some type of straight-edge or ruler (for graphical presentation of data). Access to statistical software such as Excel to complete the projects.
pencil

Mathematics Program Learning Objectives: The graduating student should be able to

- The student will be able to demonstrate content knowledge of basic mathematical principles.
- The student will be proficient in logic, able to negate statements, provide counterexamples to false statements, and determine the validity of arguments.
- The student will be able to communicate mathematical content clearly and with valid reasoning.

Marketable Skills:

Program - Mathematics BS

- Students Demonstrate Logical and Analytical Skills.
- Students Demonstrate Problem-Solving Using Analytic and Algebraic Methods.
- Students Use Technology in Problem-Solving and Presentation.
- Students Use Communication and Pedagogical Skills.

EC-6 Teaching Competencies

- Competency 013 (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize, and implement instruction and assess learning.
- Competency 014 (Number Concepts and Operation) The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers.
- Competency 015 (Patterns and Algebra) The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.
- Competency 016 (Geometry and Measurement) The teacher understands concepts and principles of geometry and measurement.
- Competency 017 (Probability and Statistics) The teacher understands concepts related to probability and statistics and their applications.
- Competency 018 (Mathematical Processes) The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.

Course Objectives: By the end of the course, the successful students will be able to:

- Evaluate validity of statistical studies/representations
- Correctly represent data using frequency distributions
- Describe and interpret data in terms of measures of central tendency and variation
- Solve applied problems using properties of a normal distribution
- Solve applied problems using hypothesis testing
- Use computer software in solution/presentation of statistical data

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

Grading Policy: The grade weighting will be as follows:

Homework/Classwork 15%

Quizzes: 35%

Projects: 40%

Final Exam 10%

Homework: Homework will be assigned daily through the online homework system. Homework is graded on mastery. All homework along with due dates will be posted on the Hawkes Learning System. You can attempt a homework until you complete it, but you will be forced to go back to the practice mode if you miss too many problems. There will be a graduated point exemption for late assignments, but if unforeseen circumstances come up, please talk to me.

Quizzes: You will have at least one quiz per chapter. Longer chapters may be broken up more. Quizzes will also be posted in Hawkes, but you will only have one opportunity to complete a quiz. You are allowed to use your textbook and/or notes, but these will have a time limit, so please prepare accordingly before attempting a quiz.

Projects: In lieu of exams you will have chapter projects. These will be assigned for each chapter we complete and can be found at stat.hawkeslearning.com. These will also be posted on Blackboard. These will need to be typed and submitted through Blackboard for grading. For the projects, it is expected you will use statistical software to work on these. Your answers are expected to be detailed and you also will need to turn in your work from the software.

Exams: The only exam will be the final exam. The final exam will be an oral exam and each person will need to meet online with me individually to do so. These can be scheduled for finals week around your other exams. I expect each person to take 30 minutes. If you have an A going into the final, you will not be required to take the exam.

General Policies: You are expected to bring all necessary materials and take notes and participate. You are expected to turn-off and not to access any electronic, non-task oriented device such as cell/smart phones/pads and i-pods unless your textbook is on such a device. Again, a cell phone cannot be used as a calculator. Devices for recording the lecture are permitted; either audio or video, but unless there is a glitch, all lectures will be recorded and accessible through Blackboard. Any personal business must be conducted during office hours or by appointment. I will only discuss grades and attendance issues in my office or by a zoom meeting during office hours. Classroom time is for the entire class.

Attendance Policy: Students are expected to attend every class. If class must be missed, the student is expected to get the notes from a classmate, and to check with me or on Blackboard for announcements and updated assignments.

If you are attending through online, finishing your assignments by the designated due dates will constitute continued attendance in the class.

You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

Students are expected to arrive to class on time. If a student is perpetually late, they will be asked to not attend class unless they arrive on time. If tardiness becomes a problem for the class as a whole, people who arrive late will not be permitted to enter the class. If this stricter policy becomes necessary, there will be an announcement made in class.

It is policy of the university to drop a student with a grade of "F" if 9 hours or more of class are missed. For this course that would be 9 or more class sessions missed.

Americans With Disabilities Act: Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Rebecca Greathouse Wren, LPC-S, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email rebecca.wren@sulross.edu. Our office is located on the first floor of Fer-

guson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Library Services: The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

Academic Integrity: Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

Classroom Climate of Respect: Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

Diversity Statement: I aim to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). I also understand that the crisis of COVID, economic disparity, and health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create an inclusive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

Important Dates:

August 23	First Day of Classes
August 26	Last Day for Late Registration and Schedule Changes
September 6	Labor Day
September 8	12th Class Day
November 12	Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
November 24-26	Thanksgiving Holiday
December 1	Last Day of Classes
December 2	Dead Day
December 3, 6-8	Final Exams

Tentative Schedule-Subject to Change

	Monday		Wednesday		Friday
Aug 23	Introduction and Syllabus	Aug 25	Introduction to Statistics	Aug 27	Data Classification
Aug 30	Statistical Studies	Sept 1	Frequency Distributions	Sept 3	Graphs
Sept 6	Labor Day Holiday	Sept 8	Analyzing graphs	Sept 10	Project Day
Sept 13	Measures of Center	Sept 15	Measures of Center	Sept 17	Measures of Dispersion
Sept 20	Measure of Dispersion	Sept 22	Measures of	Sept 24	Measures of
Sept 20	Measure of Dispersion	Sept 22	Relative Position	Sept 24	Relative Position
Sept 27	Probability	Sept 29	Probability	Oct 1	Probability
Oct 4	Discrete Distributions	Oct 6	Discrete Distributions	Oct 8	Discrete Distributions
Oct 11	Normal Distribution	Oct 13	Normal Distribution	Oct 15	Normal Distribution
Oct 18	Central Limit Theorem	Oct 20	Central Limit Theorem	Oct 22	Confidence Intervals and Hypothesis Testing
Oct 25	Confidence Intervals and Hypothesis Testing	Oct 27	Confidence Intervals and Hypothesis Testing	Oct 29	Confidence Intervals and Hypothesis Testing
Nov 1	Confidence Intervals and Hypothesis Testing	Nov 3	Confidence Intervals and Hypothesis Testing	Nov 5	Confidence Intervals and Hypothesis Testing
Nov 8	Confidence Intervals and Hypothesis Testing	Nov 10	Confidence Intervals and Hypothesis Testing	Nov 12	Confidence Intervals and Hypothesis Testing
Nov 15	Confidence Intervals and Hypothesis Testing	Nov 17	Confidence Intervals and Hypothesis Testing	Nov 19	Regression
Nov 22	Regression	Nov 24	Thanksgiving Holiday	Nov 26	Thanksgiving Holiday
Nov 29	Regression	Nov Dec 1	Wrap up		