

Sul Ross State University
Course Syllabus
MATH 1342:002 Elementary Statistical Methods
Fall 2022

Instructor: Dr. Angela M. Brown

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Office Hours: 10 am-12 pm and 2-4 pm M, 10 am-12 pm and 2-3 pm W, others by appointment

Time and Place of Class Meetings: TR 9:30-10:45 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.

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 10%

Quizzes: 35%

Projects: 40%

Final Exam 15%

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. This exam will mostly consist of Broad Topics with a few calculations. You will be able to have a calculator and the formula charts, but this will not be open book or notes.

Final Exam Date: Monday, December 5, 8-10 am.

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.

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 6 or more class sessions missed.

Cell Phone Policy: Cell phones are not allowed in class. They can not be used as calculators on any assignment. If a phone rings during a test or quiz, the student will forfeit their right to finish said test or quiz.

Americans With Disabilities Act: SRSU Disability Services. 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. Alpine students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, 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 mschwartz@sulross.edu

Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, SUI Ross State University, Alpine. Texas, 79832.

Library Services: The Bryan Wildenthal Memorial Library in Alpine. 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 logging in with your LobolD and password. 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:

Aug 22	First Day of Classes
Aug 25	Last Day for Late Registration and Schedule Changes
Sept 5	Labor Day Holiday
Sept 7	12th Class Day-Last Day to Drop a Course Without Creating an Academic Record
Nov 14	Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
Nov 23-25	Thanksgiving Holiday
Dec 2,5-7	Final Exams

Tentative Schedule-Subject to Change

	Tuesday		Thursday
Aug. 23	Introduction and Syllabus	Aug. 25	Introduction to Statistics
Aug. 30	Data Classification and Statistical Studies	Sept. 1	Frequency Distributions and Graphs
Sept. 6	Analyzing Graphs	Sept. 8	Measures of Center
Sept. 13	Measures of Dispersion	Sept. 15	Measures of Dispersion
Sept. 20	Measures of Relative Position	Sept. 22	Measures of Relative Position
Sep 27	Probability	Sep 29	Probability
Oct. 4	Discrete Distributions	Oct. 6	Discrete Distributions
Oct. 11	Normal Distribution	Oct. 13	Normal Distribution
Oct. 18	Central Limit Theorem	Oct 20	Central Limit Theorem
Oct 25	Confidence Intervals and Hypothesis Testing	Oct 27	Confidence Intervals and Hypothesis Testing
Nov 1	Confidence Intervals and Hypothesis Testing	Nov 3	Confidence Intervals and Hypothesis Testing
Nov 8	Confidence Intervals and Hypothesis Testing	Nov 10	Confidence Intervals and Hypothesis Testing
Nov 15	Confidence Intervals and Hypothesis Testing	Nov 17	Regression
Nov. 22	Regeression	Nov. 24	Thanksgiving Holiday
Nov 29	Regression		