

Sul Ross State University
Course Syllabus
MATH 1342-W01: Elementary Statistical Methods
Spring 2024

Instructor: Dr. Angela M. Brown

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Office Hours: 11-12:30 MW, 2-5 W, 3:30-5 TR, any others by appointment. If you are on campus you can come to the office for these, if not you can set up a virtual meeting.

Time and Place of Class Meetings: Online

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.

Student Learning Outcomes for Core Courses:

- Students will develop critical thinking skills to include creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
- Students will develop communication skills to include effective development, interpretation, and expression of ideas through written, oral, and visual communication.

Marketable Skills-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. Homework completion will be required before attempting a quiz for a particular chapter.

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. All students have access to Excel through office 365. You can also use Numbers, Google Sheets, SPSS, or R if you have access to these instead. Any other statistical software would have to be approved by me before use. Your answers are expected to be detailed with explanations for each step. These will have to be typed with all work included.

Exams: The only exam will be the final exam and will consist partially of broad short answer/ essay questions and some calculation questions. The final exam is will go up on Hawkes during the week of final exams and remaining up until Wednesday evening of finals week.

Attendance Policy: Students are expected to attend every class. Since this is an online class, this would mean showing regular attendance by logging in and completing assignments by the due date given.

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

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.

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.

Counseling: Sul Ross has partnered with TimelyCare where all SR students will have access to nine free counseling sessions. You can learn more about this 24/7/356 support by visiting [Timelycare/SRSU](https://www.timelycare.com/srsu). The SR Counseling and Accessibility Services office will continue to offer in-person counseling in Ferguson Hall room 112 (Alpine campus), and telehealth Zoom sessions for remote students and RGC students.

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 LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123).

No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting library.sulross.edu/find-and-borrow/texshare/ or ask a librarian by emailing srsulibrary@sulross.edu.

Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL) and ScanIt to get materials delivered to you at home or via email.

Distance Education Statement: Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

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.

Supportive Statement: I am to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may 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 a supportive 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:

January 17	First Day of Classes
January 22	Last Day for Late Registration and Schedule Changes
February 1	12th Class Day, Last day to drop a course without creating an academic record
March 11-15	Spring Break
April 12	Last Day to Withdrawal from University or Drop Classes with a Grade of "W" (by 4 pm)
May 1	Last Day of Classes
May 2	Dead Day
May 3, 6-8	Final Exams

Tentative Schedule-Subject to Change

Week 1	Introduction and Syllabus	Introduction to Statistics	Read Syllabus, Watch Ch 1 Videos
Week 2	Data Classification and Statistical Studies	Frequency Distributions and Graphs	Watch Ch 2 Videos Ch 1 HW Due
Week 3	Analyzing Graphs	Measures of Center	Watch Ch 3 Videos 2.1 and 2.2 HW Due Ch 1 Quiz Due Ch 1 Project Due
Week 4	Measures of Dispersion	Measures of Relative Position	2.3 and 3.1 HW Due Core Pre-assessment Due
Week 5	Probability	Probability	Watch Ch 4 Videos 3.2 and 3.3 HW Due Ch 2 Quiz Due Ch 2 Project Due
Week 6	Discrete Distributions	Discrete Distributions	Watch Ch 5 Videos Ch 4 Hw Due Ch 3 Quiz Due Ch 3 Project Due
Week 7	Normal Distribution	Normal Distribution	Watch Ch 6 Videos Ch 5 HW Due Ch 4 Quiz Due Ch 4 Project Due
Week 8	Central Limit Theorem	Central Limit Theorem	Watch Ch 7 Videos Ch 6 HW Due Ch 5 Quiz Due Ch 5 Project Due
Week 9	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	Watch Ch 8 and 10 Videos Ch 7 HW Due Ch 6 Quiz Due CH 6 Project Due
Week 10	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	Watch Ch 8 and 10 Videos Continued 8.1-8.3 HW Due Ch 7 Quiz Due Ch 7 Project Due
Week 11	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	10.1-10.3 HW Due
Week 12	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	Watch Ch 9 and 11 Videos 8.4, 8.5, 10.4, 10.5 HW Due
Week 13	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	Watch Ch 9 and 11 Videos Continued 9.1-9.3 HW Due CH 8/10 Quiz Due Ch 8/10 Project Due
Week 14	Confidence Intervals and Hypothesis Testing	Confidence Intervals and Hypothesis Testing	11.1-11.3 HW Due
Week 15	Regression		Watch Ch 12 Video 9.4, 9.5, 11.4, 11.5 HW Due Core Post-Assessment Due
Week 16	Final Exam		Ch 12 HW Due Ch 9/11 Quiz Due Ch 9/11, 12 Projects Due