

**Math 1342 Syllabus
Elementary Statistical Methods
Spring 2017 Sul Ross State University**

Secs. 001:	Mon, Wed: 12:30-1:45p in ACR 205
Instructor:	Dr. Kris Jorgenson
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Office Hours:	Mon, Tue, Wed, Thu, Fri: 10-11p; Mon, Wed: 2-3 pm; Tue, Thu: 3:30-5 pm; also available by appointment

Course Description: This is an introductory statistics course designed for the student to develop critical thinking skills necessary to interpret statistical information. In this course, the student will prepare for further statistical work in his/her field. Topics include: measures of central tendency, measures of variation, normal distributions, hypothesis testing, and graphical representations. Use of technology and real-world data is integrated throughout the course. Prerequisites: Completion of MATH 0301 or a satisfactory score on the Mathematics Placement Test.

Student Learning Objectives: Successful students will demonstrate correct understanding and knowledge of the topics including but not limited to those listed in the previous paragraph. Students will apply knowledge of concepts and problem-solving methods to new contexts and situations. Students will demonstrate correct knowledge of the difference between numbers that are in exact form and numbers that are approximate and will be able to report numbers in exact form and with a correct approximation when required. Students will express their solutions clearly in writing and by using complete sentences when appropriate.

Required Materials: Textbook: Introductory Statistics, 8th Edition by Prem S. Mann, John Wiley & Sons, Inc. ISBN: 978-0-470-90410-7.

Scientific Calculator: There will be some need for a scientific calculator, which has buttons with denotations such as y^x , a^b , \wedge , e^x , LN, LOG, but use of a calculator will not be a large part of this course. A calculator may be used to check arithmetical calculations throughout the semester. Appropriate scientific calculators cost usually \$8-\$30 each.

Class Materials: Students are expected to be prepared in every class with pencils or pens and paper in some sort of organized notebook for taking notes of lecture content and examples, and for homework. You are required to be involved in class activities every class day. This will be part of your grade. Work on quizzes and tests to be handed in for a grade should only be in pencil.

Blackboard: Also you are required to have access to Blackboard and have an e-mail address that you check regularly be your e-address registered in Bb since I will regularly need to contact you outside of class with important information.

Grading and Assignments: The assignments discussed below will help students achieve all of the Learning Objectives mentioned previously through active learning and assessment. Your total grade will break down as follows:

Daily Grade (DG) is worth **20%** and consists of **Class Study Grades (CSG) 10%** and **Quizzes 10%**. A **Homework Notebook Grade** is worth **10%**. The **Test Average** worth **70%** will be based on 3 in-class tests.

There will be some grade given in every class period except the 1st day of class. **Class Study Grade** problems will give students a chance to work out a homework problem in class for a grade with an opportunity for discussion to aid in understanding. **In-class quizzes** will be similar to a small test in which no discussion is allowed and each student is graded as in a test. It is very important that you keep up with homework assignments in your notebook. On average, students should make it a goal to complete and understand 3-5 homework exercises each day. Students will usually have 3 or more in-class quizzes prior to each test. On days in which there is no in-class quiz or test, students will receive **CSG credit** based on attendance, class participation, and in-class work. The homework assignments will be the basis for the in-class quizzes and tests. Students may use their homework notebook for CSGs and during the in-class quizzes, but not the in-class tests. **Homework Notebook:** Each student's notebook containing homework exercises from a particular unit must be handed in prior to each of the 3 tests, but do not include very many blank pages in your notebook however.

There will be **3 Unit Tests** each based on the corresponding Unit Assignments. Each of these tests will count in your **test average**. You may only use pencil(s)/eraser(s) and a scientific calculator during the tests. The dates for the Tests are as follows.

Test 1	Wed., Feb. 8
Test 2	Wed., Mar. 22
Test 3	Tue., May 9, 12:30-2:30p

Smarthinking online tutoring Students will be able to add 10 points to one of their tests by using the Smarthinking online tutoring system. In Blackboard for this course, there is a link to Smarthinking online tutoring (Alpine campus undergraduate). To earn these points on a test, students must learn or perhaps correct a quiz on a topic from the unit of study of the upcoming test and print out this tutoring session to hand in to me in person. I reserve the right to question you on the tutoring session to ensure that you have learned the topic before awarding you these test points. Such additional points must be earned before the unit test corresponding to the topic that is studied.

General (But Important) Policies

Late Work, Rescheduled Quizzes/Tests No late homework will be accepted, but I will accept homework as long as it is handed in by 5 pm on the due date. To take an in-class quiz or test at a time other than the scheduled time, you must notify me of this absence **ON OR BEFORE THE DAY MISSED**, and you must satisfy one of two requirements: either (1) supply a written medical excuse signed by a medical professional for the day of the absence, or (2) your excuse is for a university activity, in which case you must notify me of this authorized absence in writing with your name, the name of your organization and the date(s) of your absence, and your name must appear on a published explained absence list that I am provided (or this is verified by a faculty sponsor). Also, you and I must set up a

time for you to make up the quiz or test within a reasonable time period (not more than 1-3 days) before or after the time of the missed grade. Usually I will let you make up a grade according to the above conditions if it is due to another one-time occurrence, such as the care of someone else in your family or a friend, or for a work-related excuse as long as you can document your absence and you let me know **BY THE DAY OF THE ABSENCE AT THE LATEST**. A CSG may also be made up with me in my office if you follow the above policy.

Attendance I will be taking attendance as university policy precludes you from missing more than 5 classes for anything other than authorized university activities since you cannot miss 3 weeks of classes (6 classes). To excuse an absence for a university activity, in addition to letting me know of the absence by the day of the absence (as explained previously) you must also spend at least 60 minutes outside of class on this course with me or with a tutor, but the tutor will need to sign a note that documents this made-up time. Also I will allow you to excuse a test day for a documented medical absence as long as you also make up the test with me. If you have 6 or more unexcused absences, I reserve the right to drop you from this class with a grade of 'F', which is university policy.

Good Advice Concentrate on learning the material of the course rather than worrying about your grade. Your time is best spent concentrating on the material to be learned in the impending assignments, asking questions, and devoting yourself to activities that will help you learn the material and do better in the course. I will worry about the details of your grade since you doing so does not help you earn a higher grade. But learning the material and doing well on the tests *will* help your grade. **Remember that math is not a spectator sport**, so the more problems you work yourself and the more practice you get, the more confident you will be, and the better you will do in this course. Working on the problems helps you to figure out what your specific questions are. Remember an individual homework or quiz grade may not account for a lot in your overall grade, but working and learning from the homework is **essential** because this is where you learn the topics that will appear on the tests, which do count for a lot of your grade. The best lessons learned often come from correcting quiz or homework problems in which you have made a mistake.

More Good Advice

Keep absences to a minimum. You never know when you might miss something you will find important either from the lecture or class discussion such as questions other students ask. Remember: **YOU ARE RESPONSIBLE FOR EVERYTHING THAT IS DISCUSSED DURING CLASS WHETHER YOU ARE PRESENT OR NOT.**

Also do not allow yourself to develop bad habits such as missing classes. It's human nature to be controlled by our habits, so once you develop a weekly habit for the semester, it can be hard to break this habit. So be sure that you allow the necessary time for this course, **ESPECIALLY** if you consider mathematics not to be your best subject. If you have trouble in math, then you should attend **EVERY** class of a college mathematics course. Not showing up to class or not doing the required work will not cause this class to "go away". If you are not understanding the material and/or have fallen behind in your work, missing class will not help. Making mistakes or falling behind is natural, so it is best in this case to come to class and talk to me about this. If you do have to miss, let me know before class, and plan to come and see me and make an appointment to discuss what was missed and pick up assignments or discuss what you are not understanding. It is essential to get your questions answered, which you are welcome to do in my office. However meeting in my

office is not a substitute for attending class.

Ask questions no matter how easy or trivial they may seem. There is no such thing as a bad or silly question. Questions result when you are interested and have been thinking about areas, such as mathematics, in which you have some limitations in your educational background. Being in a college mathematics course means you will have questions both obvious and more subtle. Asking questions is a very important part of learning.

Study and work problems regularly—every day or at least every other day. Work on assignments discussed in class as soon as you can after class while the methods discussed are still fresh in mind. You can't expect to succeed in a math course by waiting till the last minute to only study and cram prior to a test. If you promise yourself you will study for ½-hour, get into the work, forget the clock, then the next thing you know, you've studied and worked for one or two hours.

Classroom Conduct It is important to conduct yourself in a college classroom so that everyone can benefit from good communication between instructor and students. My goal is to create an environment in which everyone can do their best work, learn, and make the best grades possible.

I think you will find that I am a very friendly, sympathetic, and generous instructor as long as you are sincerely working to succeed in this course and certain guidelines for classroom behavior are followed during class to allow a sanctity of study for your fellow students. Classroom habits such as holding conversations during lecture, or being engaged in activities not related to this course such as working on a different course or reading a newspaper will work against the goal of this course and cause you to be counted absent and you will lose Daily Grade credit. Also engaging with electronic communication devices of any kind during class or coming into class more than 5 minutes late or leaving early before class is dismissed circumvent the goals of this course and cause you to lose credit. My sympathy and generosity will quickly evaporate if I find that you are working against the goals of the course or that you are simply trying to get a good grade without learning or without honestly doing the required work. I want you to have every opportunity to succeed in this course.

Please be aware of the rules for Academic Honesty that you will find in the Sul Ross Student Handbook and building codes prohibiting food, beverages, tobacco (smokeless or otherwise) in the classroom. Use commonsense to think of anything else that will allow you to learn and do the best work that you can in this class, and for me to better help you do your best work. And please let me know how the learning environment of our class might be improved. Remember that being registered for this course does not allow you to behave in any manner you wish during class. You must keep other people in mind. It is within university policy for me to send a student out of this class on a temporary or permanent basis if disruptions or interruptions like the types listed above persist.

Equal Access The university is committed to equal access in compliance with the Americans with Disabilities Act of 1990 (ADA) and section 504 of the Rehabilitation Act of 1973. If you have questions regarding accessibility, please consult with the Director of Counseling and Accessibility Services, Mary Schwartz, in Ferguson Hall Rm. 112, and feel free to discuss this with me in private. The mailing address is Accessibility Services, Box C-122, Sul Ross State University, Alpine, Texas 79832. The telephone number is (432) 837-8203. E-mail: mschwartz@sulross.edu.

Important Dates

Tues, January 17	First day of classes, first day of late registration and schedule changes
Fri, January 20	Last day for late registration and schedule changes
Mon-Fri, March 13-17	Spring Break Holiday, No classes
Fri, April 7	Last day to withdraw from Univ. or drop with a grade of "W" by 4 pm in Registrar's Office
Wed, May 3	Last Day of Classes
Thu, May 4	Dead Days, No classes
Fri, Mon-Wed, May 5, 8-10	Final Exams, End of Term

Math 1342 Elementary Statistical Methods, Sec. 001 Tentative Course Outline		
(Chaps. refer to <u>Introductory Statistics 8th Ed.</u> by Mann)		
Spring 2017	Mon	Wed
Jan. 18	X - MLK holiday	1st Day, Chap. 1: Statistics Definitions
Jan. 23, 25	Chap. 1: Population vs. Sample Types of Variables	Chap. 2: Organizing and Graphing Data
Jan. 30, Feb. 1	Chap. 2: Organizing and Graphing Data	Chap. 3: Measures of Central Tendency
Feb. 6, 8	Review for Test 1	Test 1
Feb. 13, 15	Chap. 3: Measures of Central Tendency, Dispersion	Chap. 3: Measures of Dispersion, Percentiles, Boxplots
Feb. 20, 22	Ch. 3: Percentiles, Boxplots	Chap. 4: Probability, Calculating Probability
Feb. 27, Mar. 1	Chap. 4: Conditional Probability Intersection of Events	Chap. 4: Union of Events Counting Techniques
Mar. 6, 8	Chap. 4: Counting Rules	Chap. 5: Random Variables Probability Distributions
Mar. 13-17	Spring Break ----->	
Mar. 20, 22	Review for Test 2	Test 2
Mar. 27, 29	Chap. 5: Mean and Standard Deviations of a Discrete Variable	Ch. 5: Binomial Probability Distributions
Apr. 3, 5	Ch. 6: Continuous Probability Dists., Standard Normal Dists.	Ch. 6: Applications of Normal Distributions
Apr. 10, 12	Ch. 6: Normal Approximation to the Binomial Distribution	Ch. 7: Sampling Dists., Mean and Standard Dev. of Sample Mean
Apr. 17, 19	Ch. 7: Applications of a Sampling Distribution	Ch. 8: Estimation of a Pop. Mean St. Dev. Known
Apr. 24, 26	Ch. 8: Estimation of a Pop. Mean St. Dev. Unknown	Chap. 9: Hypothesis Testing: Testing the Mean
May. 1, 3	Chap. 11: Chi-Square Distribution	Review for Test 3
Test 3	Tues. May 9: 12:30-2:30	