

ANSC/NRM 3308 – Agricultural Statistics Course Syllabus - Fall 2019

Instructor

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Office Hours: - MW 1-2 (RAS); TR 10:45-11:30 & 1:45-2:30 (ACR); F 10-12 (RAS); or by appointment
- I also have "Open Door Office Hours". Feel free to come in anytime you see me in my office.
- You can reach me anytime from 8am - 4pm by text (preferred, fastest), phone, or e-mail (checked daily). We can even arrange Facetime/Skype calls.
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Teaching Assistant

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Course Description

An introduction to statistical concepts as applied to agricultural and biological systems. The course introduces the scientific method, inferential theory, data types, descriptive statistics, goodness of fit, the normal distribution, hypothesis testing and linear regression.

Course Objectives

At the completion of the course, the learner will be able to:

1. Discuss the importance of statistics in agriculture and natural resources.
2. Identify parametric and nonparametric tests, descriptive statistics and inferential statistics
3. List the basic assumptions involved in statistics.
4. Solve basic statistical tests.
5. Interpret statistical results.

ANSC Student Learning Objectives

Student will demonstrate that he/she is able to:

1. Recognize and be able to utilize animal breeds from a variety of domestic species.
2. Comprehend the role of nutrition in the production of food animals.
3. Understand the processes involved in producing meat products from a variety of domestic food animals.
4. Select breeding animals using genetic information.

NRM Student Learning Objectives

Student will demonstrate that he/she is able to:

1. Identify species of wildland plants and wildlife common to the western United States and describe their natural history.
2. Demonstrate knowledge of the elements of an ecosystem.
3. Communicate about natural resources and conservation both verbally and in writing.
4. Conduct range and wildlife inventories in a team setting.
5. Apply knowledge about elements of an ecosystem into an appropriate conservation management plan.

TEA AFNR Educator Standards

The AFNR teacher understands:

1. The foundations of agricultural education
 - a. (Competency I: F and G) Understands the use of scientific principles, methods, measurements and calculations in agriculture and agricultural education, and

- b. Collects organizes, displays and analyzes data according to an orderly plan, using data, tables, graphs, narrative descriptions and other methods as appropriate.

Class Meeting Time/Place

Lecture: Monday, Wednesday, Friday 2:00 pm - 2:50 pm, RAS 130

Text and Supplies

1. Samuels, M. L., Witmer, J. A., & Schaffner, A. A. (2012). *Statistics for the Life Sciences* (4th Ed.). Boston, MA: Pearson Prentice Hall. (**Required**)
2. Calculator (**Required**) You will need a calculator that will perform statistical functions. A TI-36X or better should work; be sure to keep the instructions! Note: Use of internet-capable devices (e.g. smartphones) is not allowed for exams.

Course Grade

Exam I	20%
Exam II	20%
Exam III	20%
Exam IV	20%
Homework	20%

Grade Assignment

<60 = F, 60-69 = D, 70-79 = C, 80-89 =B, 90-100 = A.

Class Organization and Policy

Students' class attendance and participation are required. I expect a high level of engagement to enhance everyone's learning. This includes interacting with the instructor and other students, asking questions during class, completing outside of class assignments and readings, and being prepared to participate in class discussions. This class is the beginning of your journey to becoming a professional. Evidence of professionalism includes attendance, collegial attitude, participation, and punctuality.

Roll will be taken in each class meeting. The SRSU catalog states "The Instructor will drop a student from a course when the student has a total of nine absences. An absence is defined as nonattendance to 50 minutes of class." Any time class is missed, for any reason, it will be recorded as an absence. College-related events that conflict with class will not be considered an absence ONLY WITH my prior approval.

All lectures and assignments will be posted in Blackboard. Some problems will be worked out during lecture, and will not be in the electronic files. If you miss class, it is advised you obtain any hand-taken notes from a classmate.

No make-up exams will be given for an unexcused absence. You must notify me of an excused absence PRIOR to the class you will miss and arrangements for make-up exams must be made BEFORE the exam is given.

Late assignments will be accepted at the discretion of the instructor, with a 10% penalty for each day that it is late (i.e. 10% for 0-24 hours late, 20% for 24-48 hours late, etc.) Late assignments are not accepted after seven days. Extended due dates may be allowed due to college-related conflicts ONLY WITH my approval PRIOR to the due date. In case of emergencies, arrangements for completing assignments should be made immediately upon return to SRSU.

The use of personal laptops, cell phones, iPads, and other electronic devices can create distractions for learning, both for yourself and others. However, such devices can also be great tools to aid learning. Therefore, using electronic devices for class purposes (e.g. taking notes, working out problems, searching the internet) is allowed in silent mode. If you choose to use electronic devices in class, do so in a professional manner that does not impede others' learning. **The use of internet-capable devices (e.g. smartphones) is not allowed for exams.**

Academic Integrity

On all work submitted for credit by students at the university, the following pledge is implied: **“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”**

Unauthorized aid includes copying, sharing, or obtaining information from an unauthorized source, attempting to take credit for the intellectual work of another person, falsifying information, and giving or receiving information about a test, quiz, or assignment to other students.

Any student involved in academic dishonesty will receive no credit (0) for work done and/or may be penalized in accordance with published University Rules.

General Expectations

Statistics can be a very intimidating subject. However, you cannot survive in the agricultural sciences without knowing statistics. To maximize learning in this course, we should have some expectations of each other:

I expect from you:

- ATTEND lectures; be on time as a courtesy to others.
- PARTICIPATE in lecture.
- ASK whenever something is unclear. Preferably in class, as it is likely that others have the same question.
- READ the required sections from the text. If you come to me with a question and it is clear that you haven't read the book or the lecture notes, I will direct you to the reading first.
- DO all assignments, do them in a timely manner, and ensure I can read them! Parts of assignments that I can't read will not be graded. If you are late with assignments, it prevents me from returning others' assignments until I have yours in-hand.
- BE HONEST in all of your work.

What you can expect from me:

- GIVE 100% effort in teaching you the best I can.
- Make myself AVAILABLE to help outside of class.
- ANSWER all of your questions to the best of my knowledge, and if I don't know the answer I will find out.
- Be FAIR in all grading.
- Provide you with timely, constructive FEEDBACK regarding your work.

Reasonable Accommodations

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartz, M. Ed., L.P.C., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203 8691. E-mail: mschwartz@sulross.edu.

Tentative Course Schedule (Tentative Exam Dates in Bold)

Week	Date	Topic
1	Aug 26	Course Overview. Why statistics. Scientific Method. Symbolology/Math Prerequisites
	Aug 28	
	Aug 30	
2	Sep 2	NO CLASS: Labor Day
	Sep 4	Chapter 1. Introduction
	Sep 6	
3	Sep 9	Chapter 2. Description of Samples and Populations
	Sep 11	
	Sep 13	
4	Sep 16	Chapter 3. Probability; Lab 1
	Sep 18	
	Sep 20	
5	Sep 23	Chapter 4. The Normal Distribution
	Sep 25	
	Sep 27	Exam I (Chapters 1-3)
6	Sep 30	Exam I Results; Lab 2
	Oct 2	Chapter 5. Sampling Distributions
	Oct 4	
7	Oct 7	Chapter 6. Confidence Intervals
	Oct 9	
	Oct 11	
8	Oct 14	Null Hypothesis Significance Testing (NHST) Intro and One Sample Hypotheses Testing
	Oct 16	
	Oct 18	
9	Oct 21	Exam II (Chapters 4-6)
	Oct 23	Exam II Results; Lab 3
	Oct 25	Chapter 7. Comparison of Two Independent Samples
Oct 28		
Oct 30		
10	Nov 1	Chapter 8. Comparison of Two Paired Samples
	Nov 4	
	Nov 6	
11	Nov 8	Chapter 11. Comparing the Means of Many Independent Samples
	Nov 11	
	Nov 13	
12	Nov 15	Chapter 12. Linear Regression and Correlation
	Nov 18	
	Nov 20	
13	Nov 22	Exam III Results
	Nov 25	NO CLASS: Thanksgiving
	Nov 27	
Nov 29		
14	Dec 2	Chapter 12. Linear Regression and Correlation
	Dec 4	
	Dec 6	
15	Dec 6	Finals (Other classes)
16	Dec 10	Final Exam (Chapters 11-12)