

ANSC/NRM 3308 – Agricultural Statistics Course Syllabus - Fall 2016

Instructor

Name: Richard B. Mrozinski

Office: RAS 116

Office Hours: - By Appointment.
- I also have "Open Door Office Hours". Feel free to stop by anytime you see me in my office, typically: **Mon 1-2, Tue 9-12 and 1-4, Wed 1-2, and Fri 9-12 and 1-4**. I will generally not be in the office on Thursdays, but still available by the other means listed below.
- You can reach me anytime from 8am - 10pm by text (preferred, fastest), phone, or e-mail (checked daily). We can even arrange Facetime/Skype calls.

Phone: 832-228-7130 (Fastest way to reach me. Feel free to text)

Email: richard.mrozinski@sulross.edu (or rmb14fk@sulross.edu)

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 12:00 pm - 12:50 pm, RAS 135 (This is a time and room change!)

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

| | |
|-------------------------------------|-------------------|
| Exams – 4 at 100 points each | 400 points |
| Variable Point Homework Assignments | 200 points |
| Attendance and Participation | <u>100 points</u> |
| <i>Total Points Possible</i> | <i>700 points</i> |

Grade Assignment

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|----------------------|
| A = 630 – 700 points |
| B = 560 – 629 points |
| C = 490 – 559 points |
| D = 420 – 489 points |
| F = 0 – 419 points |

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 either required or 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

It is Sul Ross State University Policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disability, please contact the ADA Coordinator for Accessibility Services in Ferguson Hall Room 112 or call 432-837-8203.

Tentative Course Schedule (Tentative Exam Dates in Bold)

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|---------|---------------------|--|
| Week 1 | 08/22-08/26 | Course Overview. Why statistics. Scientific Method. Chapter 1. Introduction |
| Week 2 | 08/29-09/02 | Chapter 2. Description of Samples and Populations |
| Week 3 | 09/05 | Labor Day Holiday |
| | 09/07-09/09 | Chapter 3. Probability (and the Binomial Distribution) |
| Week 4 | 09/12-09/16 | Chapter 4. The Normal Distribution |
| Week 5 | 09/19-09/23 | Chapter 5. Sampling Distributions |
| Week 6 | 09/26- 09/30 | Chapter 6. Confidence Intervals |
| Week 7 | 10/03-10/07 | Chapter 7. Comparison of Two Independent Samples |
| Week 8 | 10/10-10/14 | Chapter 7. Comparison of Two Independent Samples |
| Week 9 | 10/17- 10/21 | Chapter 8. Comparison of Two Paired Samples |
| Week 10 | 10/24-10/28 | Chapter 11. Comparing the Means of Many Independent Samples |
| Week 11 | 10/31-11/04 | Chapter 11. Comparing the Means of Many Independent Samples |
| Week 12 | 11/07- 11/11 | Chapter 11. Comparing the Means of Many Independent Samples |
| Week 13 | 11/14-11/18 | Chapter 12. Linear Regression and Correlation |
| Week 14 | 11/21 | Chapter 12. Linear Regression and Correlation |
| | 11/23-11/25 | Thanksgiving Holiday |
| Week 15 | 11/28-11/30 | Chapter 12. Linear Regression and Correlation |
| Week 16 | TBD | Final Exam |

Exam Schedule

Exam I ~September 30 (tentative)
Exam II ~ October 21 (tentative)
Exam III ~ November 11 (tentative)
Final Exam – TBD Week of 12/5