ANSC/NRM 3308
Agricultural Statistics
Fall 2014

Instructor
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Office Hours: M,W, F 8:00am-10:00am
Or by appointment

Time and Location
MWF 11:00am – 11:50am 135 RAS

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) Program Learning Outcomes
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) Program Learning Outcomes
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.

Required Texts (Available at the SRSU Bookstore or online)

Samuels, M. L., Witmer, J. A., & Schaffner, A. A. (2012). *Statistics for the life sciences* (4th Ed.). Boston, MA: Pearson Prentice Hall.

Other articles as assigned – provided by instructor

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DESCRIPTION OF COURSE ASSIGNMENTS

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Participation, Attendance, and other assignments

A high degree of engagement is expected and will contribute to your learning as an active participant. This includes interacting with the instructor and other students, 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.

Examinations

This class will have four exams.

COURSE ASSIGNMENTS	Points
Exams – 4@100pts	400
Variable point homework assignments	250
Attendance and Participation	50

Grading Scale

A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = below 60%

Attendance and Make-up Exams and Assignments

Students' class attendance and participation are required. To receive the maximum number of points for an assignment, it must be completed and submitted by the due date. Late assignments will receive a 20% deduction for each day late, and no work will be accepted six or more days after its original due date, unless other arrangements have been made with the instructor.

Any time instruction is missed, for any reason, it will count as an absence. College approved field trips, and competitive and leadership development events (with prior instructor approval) are considered legitimate and with proper documentation will not be considered an absence. Seeking an extended deadline due to the above mentioned absences should be arranged before missing the course meeting. In case of emergencies, arrangements for completing assignments should be made immediately upon return to campus.

Use of technology during instruction

You will need a calculator that will perform statistical functions. A TI-36X or better should work; be sure to keep the instructions!!

This class is part of your journey to becoming a professional, and the use of personal cell phones, iPads, computers, and other electronic devices can distract learning for all individuals and create an unprofessional environment. However, electronic devices can also be powerful tools to be used in the learning process. Therefore, the use of electronic devices for class purposes, such as note-taking, problem solving, and internet searches is allowed. But, remember that you are now a professional and will be required to act accordingly. So, if you choose to use electronic devices in the classroom, do so in a professional manner.

Academic Honesty

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.**"

As members of a learning community, all should strive to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the university will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

About the Course

Statistics can be a daunting subject. However, the goal of this course is to help you conquer your fear of statistics as you learn. Accordingly, there are some expectations that I have of you, and conversely, there are some expectations that you should have of me. The expectations for this course are as follows:

I will expect you to:
- Complete all assignments thoroughly, in a timely manner.
- Attend all classes, unless there are extenuating circumstances, which you should inform me of as soon as possible.
- Be on time for all class sessions and activities
- Look at each assignment as an occasion for you to learn, and make the most of every learning opportunity.
- Be honest and submit your own original work.
- Participate in class discussions and activities; this helps you as well as all of your classmates.
- Enjoy this class!

You can expect me to:
- Provide learning opportunities that advance your knowledge and development in agricultural statistics.
- Be available before and after class, during office hours, and at other times (I have an open door policy) to provide assistance and answer your questions.
- Be fair in my grading and assessment of your work.
- Provide you with timely, constructive feedback on your work.
- Enjoy this class!

About Me

I grew up in Elgin, Texas where I was a member of my high school FFA chapter. I attended Texas A&M University and received my BS degree in Animal Science. Afterwards, I worked for HEB Grocery Company for 2 years as a meat processor and then for Ruffino Meats as a sausage processing manager. My love of FFA and agricultural education led me to pursue my Master's degree in AgEd at Texas A&M. I was a high school ag teacher at Greenwood High School in Midland, Texas for three years. I then went to the University of Florida to work on my PhD in AgEd.

Reasonable Accommodation Statement

It is the SRSU policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of physical, mental, or learning disabilities, please contact the ADA coordinator in Student Services: UC 211, 837-8178.

ANSC/NRM 3308 Course Calendar
(Subject to Change!!!!)

Dates	Topics / Learning Experiences
Aug 25-29	Introductions, syllabus, expectations, and explanation of course; Why study statistics?; types of research; Becoming a consumer of research
Sep 1	**Labor day – no class**
Sep 3-5	Validity and reliability of studies
Sep 8	Statistical notation
Sep 10-12	Populations and samples
Sep 15-17	Measures of central tendency
Sep 19-22	Measures of dispersion and variability; Sum of Squares
Sep 24	**Exam 1**
Sep 26	**No Class – SRSU Rodeo**
Sep 29-Oct 1	Standard Error
Oct 3-8	Confidence Intervals and Hypothesis Testing
Oct 10-13	One tail vs. two tail tests
Oct 15-20	Independent and Paired-samples t-tests
Oct 22-29	ANOVA
Oct 31	**Exam 2**
Nov 3-10	Factorial ANOVA
Nov 12-14	2-factor ANOVA; 3 or more factor ANOVA
Nov 17	**Exam 3**
Nov 19-24	Linear Regression and correlation
Nov 26-28	**Happy Thanksgiving!**
Nov 1-3	Chi square test; Non-parametric tests
Dec 10	**Final Exam – 10:15 am**