ANSC 5322
Statistics for the Animal Sciences
Spring 2017

Instructor:
Dr. Rebecca K. Splan
RAS 105
432-837-8205 office
540-392-8374 cell
rebecca.splan@sulross.edu
Office hours: Please email to schedule appointment

Course Description: This course emphasizes statistical literacy, use of data, and statistical conceptual understanding, specifically related to the animal and agricultural sciences.

Course Learning Objectives:
Upon completion of this course, students should be able to:

1) Discuss the importance of the application of statistics in the agricultural and life sciences.
2) Identify parametric and nonparametric tests, descriptive statistics, and inferential statistics.
3) List the basic assumptions involved in statistical methods.
4) Solve basic statistical tests.
5) Interpret statistical results.

Program Learning Outcomes, Department of Animal Science:
Student will demonstrate that he/she is able to:

1) Apply statistical concepts and procedures to animal science data.
2) Evaluate literature and references as they apply to the animal science field.
3) Demonstrate knowledge of the basic and advanced concepts relating to animal science.

Required Materials:
Textbook: Sullivan III, M. (2013) Statistics: Informed decisions using data. Boston, MA: Pearson.
Additional required reading materials will be made available on Blackboard and/or distributed in class.

Academic Integrity and Honesty: The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of their classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. For more information, please see SRSU guidelines on Student Conduct and Discipline, found in the Student Handbook: http://www.sulross.edu/sites/default/files//sites/default/files/users/docs/stulife/student_conduct_discipline.pdf

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 Schwartze, 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. Telephone: 432-837-8691. E-mail: *mschwartze@sulross.edu*

Absence and Late Assignment Policy:

It is expected that ALL assignments will be submitted on time. Points may be deducted for late work. Valid absences include 1) medical emergency (signed note from a medical doctor is required), 2) participation in a SRSU-sanctioned activity (a letter from the faculty advisor is required before the absence), or 3) other emergencies or conflicts that are allowed at Dr. Splan's discretion. Students are expected to make up missed work as quickly as possible.

Assessment and Grading:

Quizzes (14 @ 20 pts each)	280 pts
Problem Sets (14 @ 30 pts each)	420 pts
Written assignments (4 @ 20 pts each)	80 pts
TOTAL	**780 pts**

Grading Scale:

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

Quizzes: Weeks in this course will run Mon-Sun (with the exception of week 1). The quiz covering each week's material will be available on Blackboard starting Thursday morning and will be up through Sunday night at midnight.

Problem Sets: Problem sets will be made available with each week's instruction. If you desire more practice, please see additional textbook problems in the "Assess your understanding" sections.

Written Assignments: Several written assignments will be assigned throughout the course to supplement course material.

Tentative Lecture Schedule:

Date	**Topic**
Week 1 (Jan 17-20)	Chapter 1 – Getting the information you need
Week 2 (Jan 23-27)	Chapter 2 – Organizing and summarizing data
Week 3 (Jan 30-Feb 3)	Chapter 3 – Numerically summarizing data
Week 4 (Feb 6-10)	Chapter 5 – Probability
Week 5 (Feb 13-17)	Chapter 6 – Discrete probability distributions
Week 6 (Feb 20-24)	Chapter 7 – The normal probability distribution
Week 7 (Feb 27-Mar 3)	Chapter 8 – Sampling distributions
Week 8 (Mar 6-10)	Chapter 9 – Estimating the value of a parameter
Week 9 (Mar 13-17)	SPRING BREAK
Week 10 (Mar 20-24)	Chapter 10 – Hypothesis tests regarding a parameter
Week 11 (Mar 27-31)	Chapter 11 – Inferences on two samples
Week 12 (Apr 3-7)	Chapter 12 – Inference on categorical data AND Chapter 4 – Describing the relation between two variables
Week 13 (Apr 10-14)	Chapter 13 – Comparing three or more means
Week 14 (Apr 17-21)	Chapter 14 – Inference on least-squares regression model
Week 15 (Apr 24-28)	Chapter 15 – Nonparametric statistics