Reedley College
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AgNR Department
Plant Science 9

Plant Science 9 – Biometrics

Course Description

An introduction to data description, presentation, experimental design, statistical procedures and experimental methods with emphasis on biological systems. Upon completion of this course, the student will be capable in experimental design, data presentation and statistical procedures.

Units and Hours

3 units; 2 hours Lecture - M 6:00 p.m. to 7:50 p.m.
1 hours Online - Arrangement
Final: May 16, 2017 – 6:00-7:50 p.m.

Textbook

Hampton, R.E. and Havel, J.E. **Introductory Biological Statistics**. 2014. 3rd Ed. Waveland Press Inc. Long Grove, USA.

Assignments and Grading

Three major tests will be given that correlate to the assigned readings and course lecture notes. Quizzes will be given weekly on the discussed subject matter.

		Point Distribution
1.	Online Assignments/Quizzes	400
2.	Examinations: 2 Mid Term - Final	600
	Total	1000

90% = A 80% = B 70% = C 60% = D Less = F

Important Dates:		
	Last Day to Drop Class with Refund:	January 20, 2017
	Last Day to Drop w/o Transcript Record:	January 27, 2017
	Last Day to Change CR/NR:	February 3, 2017
	Last Day to Drop w/o Letter Grade Assigned:	March 19, 2017

Assignments: All assignments are due at the beginning of class on the date due. Late submission of assignments will be assessed a penalty of 50%. No exceptions are made.

Academic Dishonesty: Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in course; and or expulsion from the University. For more information refer to the "Academic Dishonesty" policy in the College Catalog.

Need for Assistance: If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it, or which will require academic accommodations, please notify me as soon as possible.

Attendance

Attendance of lectures and labs is required and roll will be taken at each meeting. A "tardy" is considered an absence unless the student contacts and explains the incident. Students must make prior arrangements with the instructor to be excused from lectures and labs, make-up of missed tests and labs are permitted only with excused absences.

Office Hours - Ag 4

Monday 9:00 Thursday 9:00 Friday 9:00 – Online

Lecture Schedule

Week	Lecture Topics	Reading Assignments
1	Introductions / Administration	Chapter 1
2	Intro to Research by Experimentation	
3	Descriptive Statistics	Chapter 2
4	Data Distribution	Chapter 3
5	Data Distribution	Chapter 3
6	Exam 1	
7	Populations, Samples & Reliability	Chapter 4
8	Inferential Statistics/Hypothesis Tests	Chapter 5
9	Single Sample Tests and 2-Sample Tests	Chapter 6
10	ANOVA – One Way	Chapter 7
11	ANOVA – Two Way	Chapter 8
12	Exam 2	
13	ANOVA – Latin Square	Chapter 9
14	Correlation Analysis	Chapter 11
15	Linear Regression	Chapter 12
16	Multiple Regression	Chapter 13
17	Analysis of Frequency Data	Chapter 14
18	Final Exam	

Course Outcomes

A. Perform statistical calculations to summarize data for easy understanding.

B. Determine probability, probability distributions, sampling and sampling distributions.

C. Make meaningful inferences from statistical operations

Course Objectives

A. Identify possible common misuses of statistics, such as bias, faulty generalizations & deductions, noncomparable data, and errors.

B. Summarize data into frequency distributions, determine averages, medians, modes, ranges, and measures of dispersion.

C. Develop understanding for probability to relate sample properties to a population.

D. Review normal distribution and its importance to statistical analysis.

E. Comprehend probability based sampling procedures and convenience sampling.

F. Develop and understand statistical hypotheses and Type I & II errors.

G. Perform analysis of variance calculations and interpret the results.