RANGER COLLEGE

STEPHENVILLE, TEXAS

COURSE SYLLABUS

ELEMENTARY STATISTICAL METHODS

MATH 1342

3 credit hours

SPRING 2021

INSTRUCTOR:

Jessica Brown

INSTRUCTOR: Jessica Brown
EMAIL: jbrown@rangercollege.edu
OFFICE: Erath County – faculty offices
PHONE: 254-918-7232
HOURS: MTWR: 10:30 – 12:15 or by appointment via zoom

I. Texas Core Curriculum Statement of Purpose

Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

II. Course Description

MATH 1342 Elementary Statistical Methods (3 SCH version, freshman level)
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

III. Required Background or Prerequisite

A TSI score of 350 or higher (TSI 2.0: less than 950 and diagnostic level of 6 or greater than 950) or co-enrollment in the appropriate developmental math course.

IV. Required Textbook and Course Materials

Neil A Weiss, Elementary Statistics, 9th Edition, Pearson Publishing (paid for in tuition and expected to be picked up at the bookstore)
MyStatLab online homework access code (paid for in tuition – provided by instructor)
Scientific calculator – preferably TI-84+

V. Course Purpose

This course focuses on quantitative literacy in logic, patterns, and relationships. The course involves the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experiences.

VI. Learning Outcomes

Learning Outcomes Upon successful completion of this course, students will:
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.

4. Explain the role of probability in statistics. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
5. Describe and compute confidence intervals.
6. Solve linear regression and correlation problems.
7. Perform hypothesis testing using statistical methods

VII. Core Objectives

This course meets the following of the six Core Objectives established by Texas:

☒ **Critical Thinking Skills (CT) –** Creative thinking, innovation, inquiry, and analysis; evaluation and synthesis of information

☒ **Communication Skills (COM) –** effective development, interpretation and expression of ideas through written, oral, and visual communication

☒ **Empirical and Quantitative Skills (EQS) –** The manipulation and analysis of numerical data or observable facts resulting in informed conclusions

☒ **Teamwork (TW) –** The ability to consider different points of view and to work effectively with others to support a shared purpose or goal

☐ **Social Responsibility (SR) –** Intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

☒ **Personal Responsibility (PR) –** The ability to connect choices, actions, and consequences to ethical decision-making

VIII. Methods of Instruction

The instructional delivery of this class may be face-to-face, online, or hybrid. Students may be expected to watch instructional videos outside class, attend Zoom class sessions, work in groups via Zoom, or attend regular class in person. Students are also expected to complete assignments online through Blackboard and Pearson.

IX. Methods of Assessment

- Homework (and other formative assessments – CT, COM, EQS, PR): 30%
  - This average will come from an overall mean score from the online homework system.
    - A formative assessment can include homework, quizzes, class discussions, group work, and other in-class assignments.
- Unit Tests (and other summative assessments – CT, COM, EQS, PR): 45%
  - A minimum of 3 summative assessments will be administered online, in-person, or through a project.

- A summative assessment can include projects, discussion boards, video submissions, etc.
  - 1 proctored exam (CT, COM, EQS, PR): 25%
    - The final will be a proctored exam. This will be a cumulative exam of material covered up until the time of the exam.

Grading scale: A = 90-100%   B = 80-89   C = 70-79   D = 60-69   F = Below 60

X. Course/Classroom Policies

Class participation is strongly encouraged for optimal learning.

Absences – A student WILL be dropped from the course after the sixth absence from class.

Make up assignments – Make up exams will be given on a case-by-case basis. Homework will not be opened up after the final exam starts.

Test Corrections – No test corrections will be given unless otherwise stated by instructor.

Homework – Homework due dates will not be extended unless the course calendar changes. Anything completed after the initial due date has a 10% late penalty deducted.

Tests – Tests may be administered in class or online. You will know ahead of time which method is being used. No cell phones may be used on the test. If a student is caught using a cell phone, the instructor may take the test and deduct points from the score.

Academic Dishonesty - A student found to be cheating or copying on an exam or quiz will be given a grade of "0". Repeated acts of cheating may result in being dropped from class with a grade of "F".

Student Behavior - Students will behave as mature adults and exhibit proper classroom decorum. Students will not cause any distractions that might prevent other students from learning. Students that deviate from this policy will not be permitted to remain in class.

Cell phones - students are encouraged to step outside when receiving phone calls. Cell phones CANNOT be used on a test and are discouraged during notes and practice.

Calculators – please purchase a handheld calculator to use in class (you may not use your phone as a calculator). A TI-84+ is recommended for use in this course. If you cannot purchase your own calculator, you may borrow one from the school.

Available Support Services - the Learning Resource Center has books, videos, and computer software that may be used as a supplement for this class. Tutors are also available (see counselor).

XI. Course Outline/Schedule

This is a tentative calendar – subject to change.

Week	Topics
Week 1 January 19	First day information Chapter 1 (1.1 and 1.2)
Week 2 January 26	2.1 – 2.4 (Chapter 1 Test Online)
Week 3 February 2	3.1 3.2
Week 4 February 9	3.3 – 3.5
Week 5 February 16	4.1 – 4.3
Week 6 February 23	4.4 Project (face-to-face students)
Week 7 March 2	Chapters 2-4 Test (online only) Project (face-to-face students)
Week 8 March 9	Spring Break
Week 9 March 16	5.1 – 5.3
Week 10 March 23	6.1 6.2
Week 11 March 30	6.3 6.4
Week 12	7.1/ 7.2

April 6	7.3
	8.1
Week 13 April 13	8.2 and Chapters 5 – 7 Test (online) 8.3
Week 14 April 20	9.1, 9.2 9.3, 9.4
Week 15 April 27	9.5 Review
Week 16 May 4	FINALS

XII. Non-Discrimination Statement

Admissions, employment, and program policies of Ranger College are nondiscriminatory in regard to race, creed, color, sex, age, disability, and national origin.

XIII. ADA Statement

Ranger College provides a variety of services for students with learning and/or physical disabilities. Students are responsible for making initial contact with the Ranger College Counselor, Gabe Lewis (glewis@rangercollege.edu). It is advisable to make this contact before or immediately after the semester begins.