Sul Ross State University
Rio Grande College
MTH 3302
Probability and Statistics I

Location: Web
Term: Fall 2023

Professor: Patricia Nicosia, Ph.D.
Telephone: 703-4836 (Office)
E-mail: pnicosia@sulross.edu

Text: 1**.** Larson & Farber, *Elementary Statistics: Picturing the World w/DVD*, 6th Edition, Pearson Education, Inc. ISBN 978-0-321-91121-6 (Required)
2. Graphing Calculator Manual, ISBN 978-0-321-69379-2 (Optional)

Course Introduction: My name is Dr. Nicosia, and I am happy that you have enrolled in MTH 3302 this semester. My teaching career began in 1980 and after 43 years, I still look forward to working with students. This course is a degree plan requirement, but my hope is that you will also discover how to use statistics in your life and future career by making informed decisions. Math 3302 includes the following topics: descriptive statistics, probability, random variables and distributions. You will need the required textbook to complete this course. The ISBN number for the requested edition is on the syllabus. The content organization is by weekly assignments. As you study the course material, please remember that material you are presently learning builds on material you learned previously. It is important for you to spend time daily on the content. Your grade will be based on five chapter quizzes (12% each), two review quizzes (10% each), and two written reports (10% each). The entire course is open so you can work ahead and submit work before the due date and time. Please email me at pnicosia@sulross.edu anytime you have questions or concerns.

Description: Math 3302 includes the following topics: descriptive statistics, probability, random variables and distributions, estimation and hypothesis testing.

Student Learning Objectives: Students will be able to explain the basic concepts and goals of statistics, demonstrate ways to organize and describe data sets, use data to predict the probability of an event, create/use probability distributions, recognize normal (bell-shaped) distributions and use their properties in real-life applications, explain inferential statistics, make estimates about population parameters and describe the significance of relationships between two variables when data are presented as ordered pairs.

Student Learning Outcomes: The graduating student will be able to demonstrate content knowledge in mathematics including arithmetic, algebra, geometry, probability, statistics, and calculus.

Marketable Skills: (1) Logical and analytical skills. (2) Problem-solving using analytic and algebraic methods. (3) Use of technology in problem-solving and presentation. (4) Communication and pedagogical skills.

Reports: The written reports will be about David Kendall (1918-2007) and Francis Galton (1822-1911). At least two sources need to be sited for each report. Reports will be 1 – 2 typed pages. You can select the format. The reports must be submitted on Blackboard. You will not receive credit for work submitted past the due date and time.

Grading: Your grade will be based on a five chapter quizzes (12% each), two review quizzes (10% each) and two written reports (10% each). Grades will be assigned as follows:
A: 90%-100%, B: 80%-89%, C: 70%-79%, D: 60%-69%, F: below 60%.

Schedule: Math 3302 will cover Chapters 1 – 5.

Calculator: You will need a TI-83 or TI-84 graphing calculator.

Class Schedule:
August 31
Course Introduction
Review Syllabus

September 7
Welcome Video

September 14
An Overview of Statistics (1.1), Data Classification (1.2), Experimental Design (1.3)

September 19
Study 1 Chapter Summary page 29.

September 21
Chapter 1 Quiz Due (page 32, problems 1 – 8) by midnight
You will not receive credit for work submitted past the due date and time.

September 26
Frequency Distributions and Their Graph (2.1),
More Graphs and Displays (2.2)

September 28
Measures of Central Tendency (2.3)
Written report (David Kendall) due on Blackboard by midnight.
You will not receive credit for work submitted past the due date and time.

October 5
Measures of Variation (2.4), Measures of Position (2.5)
Study 2 Chapter Summary page 115.

October 12
Chapter 2 Quiz Due (Textbook page 120 "2 Chapter Quiz", problems 1 – 7) by midnight.
You will not receive credit for work submitted past the due date and time.

October 17
Basic Concepts of Probability and Counting (3.1), Conditional Probability and the Multiplication Rule (3.2)

October 19
Review Quiz Chapters 1 & 2 (Textbook page 126, problems 1, 4, 6a, 9, 15a) by midnight
You will not receive credit for work submitted past the due date and time.

October 26
The Addition Rule (3.3), Additional Topics in Probability and Counting (3.4)
Study 3 Chapter Summary page 179.

November 2
Chapter 3 Quiz Due (Textbook page 184 "3 Chapter Quiz", problems 1 – 5) by midnight.
 Probability Distributions (4.1), Binomial Distributions (4.2)
Study 4 Chapter Summary page 224.
You will not receive credit for work submitted past the due date and time.

November 9
Chapter 4 Quiz Due (Textbook page 228 "4 Chapter Quiz", problems 1, 2, 3) by midnight.
Introduction to Normal Distributions and the Standard Normal Distribution (5.1), Normal Distributions: Finding Probabilities (5.2)
You will not receive credit for work submitted past the due date and time.

November 14
Normal Distributions: Finding Values (5.3), Sampling Distributions and the Central Limit Theorem (5.4)

November 16
Normal Approximations to Binomial Distributions (5.5)
Study 5 Chapter Summary page 285.

November 21
Chapter 5 Quiz Due (Textbook page 290 "5 Chapter Quiz", problems 1 – 12) by midnight.
You will not receive credit for work submitted past the due date and time.

November 30
Written report (Francis Galton) due by midnight (Blackboard)
You will not receive credit for work submitted past the due date and time.

December 7
Review Quiz Chapters 3, 4 & 5 (Textbook page 294, problems 2 a & c, 6, 12a, 14a, 16a)
You will not receive credit for work submitted past the due date and time.

Additional Information:
1. **All assignments will be submitted on Blackboard. You will not receive credit for assignments submitted after the due date and time.**

2. Sul Ross State University Rio Grande College is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request for accessibility services each semester for each class. Students seeking accessibility/accommodations services should contact Mrs. Mary Schwartze Grisham, LPC, SRSU's Accessibility Services Director at 432-837-8203 or email mschwartze@sulross.edu. Office location and address is Ferguson Hall (Alpine), room 112; P.O. Box C122, Sul Ross State University, Alpine, TX, 79832.
3. My Office Location: Del Rio, Faculty Building (N), Room 219
4. Office Hours: Monday-Friday, 8 am - 5pm by appointment.
5. *Distance Education Statement*:

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.