

**SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS**

I. TITLE OF COURSE: MA2103 - Elementary Statistics

**II. COURSE DESCRIPTION: 3 credit hours credit hours
3 credit hours of lecture credit hours of lecture and 0 credit hours of lab per
week credit hours of lab per week.**

This course will introduce students to many of the important concepts and procedures needed to interpret uses of statistics in the media, at home or at work and to use data to make decisions.

The emphasis will be on performing statistical procedures and interpreting the results to draw conclusions. The course covers methods of descriptive statistics, probability theory, and inferential statistics, including confidence intervals, hypothesis testing, and linear regression.

EduKan course number: MA205

Pre-requisite:

MA 1173 – College Algebra or its equivalent.

III.

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:

The Mathematics Department at Seward County Community College will enhance a student's ability to think critically using mathematical principles, ideas, and concepts in order to function in a society with ever-changing technology.

IV. TEXTBOOK AND MATERIALS:

1. Mario Triola. Elementary Statistics. 13th Ed. Pearson, 2018
2. TI 84 Graphing Calculator
3. Access the Excel spreadsheet software

V. SCCC OUTCOMES:

2: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.

4: Demonstrate mathematical skills using a variety of techniques and technologies.

5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

9: Exhibit workplace skills that include respect for others, teamwork competence, attendance/punctuality, decision making, conflict resolution, truthfulness/honesty, positive attitude, judgment, and responsibility

VI. COURSE OUTCOMES:

1. Create graphical and numerical descriptions of quantitative and qualitative data.
2. Calculate probabilities and percentiles related to a general normal distribution.
3. Calculate and interpret a confidence interval for a single parameter, using both large and small samples.
4. Perform and interpret a test of hypotheses for a single parameter, using both large and small samples.
5. Perform and interpret statistical inference on the difference of two parameters.
6. Fit and interpret a simple linear regression model, including correlation and scatterplots.

VII. COURSE OUTLINE:

1. Introduction to Statistics
2. Summarizing and Graphing Data
3. Statistics for Describing, Exploring, and Comparing Data
4. Probability
5. Discrete Probability Distributions
6. Normal Probability Distributions
7. Estimates and Sample Sizes
8. Hypothesis Testing
9. Inferences from Two Samples
10. Correlation and Regression

VIII. INSTRUCTIONAL METHODS:

1. Lecture/Discussion
2. In class and out of class assignments
3. Calculator and computer exercises
4. Whiteboard drills
5. Calculator demonstrations
6. Quizzes and Examinations
7. Individual help
8. Writing reflections and projects

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1. Textbooks
2. Supplementary materials prepared by instructor
3. Computer tutorial programs
4. TI-84 graphing calculator
5. Whiteboard
6. Computer and projector

X. METHODS OF ASSESSMENT:

Methods of assessing the general course outcomes and the specific course competencies include student examinations and quizzes; assigned work; in/out of class activities using technology; attendance and student participation.

Outcome #2 - Assessed through short and extended writing assignments explaining and interpret statistical concepts.

Outcome #4 - Assessed through class activities and assigned work to be completed using different techniques and technologies.

Outcome #5 - Assessed through activities requiring students to collect, evaluate, and analyze data of course materials.

Outcome #9 - Assessed through prompt submission of assignments

XI. ADA STATEMENT:

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or go to the Student Success Center in the Hobbie Academic building, room A149.

XII. CORE OUTCOMES PROJECT:

The learning outcomes and competencies detailed in this course outline or syllabus meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents

KRSN: MAT1020

Syllabus Reviewed: 5/22/20

