



**SCOTTSDALE
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE

Spring 2024

Course Information

Course Title:	Elements of Statistics
Course Prefix & Number:	MAT 206
Section Number:	16459
Credit Hours:	3

Course Format

The course format for this course is online with exams held on campus. This course is a 14 week course that runs from January 29th through May 10th. You will need to have a webcam in order to participate in office hours unless you come to CM 409. There are 2 on campus exams with an optional on campus final exam. The exams are on March 20th, May 1st and the optional final is on May 8th. All exams are in room CM 460 and at 8 am. If you have a conflict with any of these dates you must contact me immediately. We can make arrangements for you to take the exams at an earlier date or time that meets your needs. You may not take the exam late or in a non-proctored environment.

Instructor Information

Instructor:	James
Email:	james.spiker@scottsdalecc.edu
Phone:	602-826-0605
Office Location:	CM 409
Office Hours:	Mon/Wed 8-1030

Course Description

Basic concepts and applications of statistics, including data description, estimation and hypothesis tests.

Prerequisites

A grade of “C” or better in MAT140 or MAT141 or MAT142, or a grade of “C” or better in MAT150 or MAT151 or MAT152 or equivalent, or satisfactory score on District placement exam.

Course Objectives

1. Identify the difference between descriptive and inferential statistics.
2. Distinguish between a population and a sample.
3. Group a set of data and present the grouping in graphical form.
4. Determine the mean, median, mode and standard deviation of data set and find the z-score for a data piece.
5. Define random variable and the probability distribution of a random variable.
6. Find probabilities for normal random variables by using the standard normal distribution.
7. Construct random samples.
8. Graph the sampling distribution of the mean for all sample sizes and all populations.
9. Find point and interval estimates of population means and proportions.
10. Describe the logic of hypothesis testing emphasizing the role of probability distributions and types of error.
11. Perform inferences about one mean or proportion in the case of normal populations or large sample size.
12. Perform inferences about two means or proportions in the case of normal populations or large sample size.
13. Use the Chi-square goodness-of-fit test to determine if two populations have the same shape.
14. Use the Chi-square independence test to determine whether two characteristics of a population are dependent.
15. Identify the best-fitting regression line for a set of data points.
16. Partition the total sum of squares for a set of data points to find measures of regression line fit and linear relationship.

Texts, Course Materials and Technologies

Required Text: *Statistics Using Technology, Edited Version*. You can access the textbook in MOER (see next section). If you would prefer a paper copy of the textbook, you may download the chapter files from MOER and print them.

Online Course Management System: This course uses MOER, an Online Course Management System developed by David Lippman and the State of Washington. All of the Online Homework will be accessed through this system. Grades will also be posted

through this system. The software is free to use and can be accessed at <https://moer.maricopa.edu/> . **Failure to enroll in MOER and complete the required syllabus quiz by the due date will result in being withdrawn from the course.**

Course ID 18313

Enrollment Key 16459

Calculator Requirement: A graphing calculator is **required** for this course. The instructor strongly recommends a TI-83+/TI-84+. If you choose not to purchase one, you can rent one for \$10 per semester from the Media Center in IT. Calculators with QWERTY keyboards or those which do symbolic algebra (such as the TI-92 or TI-89) are NOT allowed. You are expected to bring your graphing calculator to each class session. Your cell phone may NOT be used as a calculator during in class exams.

Sharing of calculators during quizzes or exams is NOT permitted.

Computer Access and Email: You will need regular access to a computer in order to complete online assignments. If you don't have a computer at home, you can use the computers on the SCC campus. You will also need a valid email address that you (and only you) check regularly.

Course Policies

The following are policies specific to this course. Students are also responsible for the college policies included on the [Student Regulations](#) page of the Maricopa Community College District website.

Course Progression: This is an online course, but it is NOT self-paced. Students are expected to keep up with the assignments and due dates. **Students who fall more than 1 chapter behind (or do not complete any online work over the course of 3 consecutive days) may be withdrawn from the course.** Also, **failure to enroll in MOER by 2/2 will result in being withdrawn from the course.**

Withdrawing from the Course: If it becomes necessary for you to withdraw from the class, you must submit proper forms at the Admissions Office. The last day to withdraw **without** an instructor's signature is at the end of the seventh week. The last day to withdraw **with** an instructor's signature is two weeks before the last day of class. Additional information on withdrawals can be found in the College Catalog.

Electronic Devices/Cell Phones: Use of cell phones, laptops, cameras, and other electronic devices when in class for a proctored exam is a disruption for you, your fellow students, and your instructor. Please keep them off and out of sight during class. If you have an emergency situation requiring you remain in cell phone contact, please let the instructor know prior to the start of class. Also, no audio or video recording, or taking photos are allowed in class.

Math/Science Tutor Center: Free online tutoring is available through the Math/Science Tutor Center at <https://www.scottsdalecc.edu/students/tutoring/math> you will need to know your SCC student ID number in order to sign in. Check the website for summer hours.

Online Tutoring

Online and hybrid students now have access to 24/7 online tutoring via *Brainfuse*. You may utilize up to 6 hours of online tutoring per semester for free.

To access Brainfuse and begin working with a tutor:

1. Visit the [SCC Online Tutoring page](https://www.scottsdalecc.edu/students/tutoring/online-tutoring) (<https://www.scottsdalecc.edu/students/tutoring/online-tutoring>)
2. Click the **Visit a tutor online** button
3. Enter your MEID and password
4. Choose your topic and subject
5. Click the **Connect** button

Please use your time effectively and be prepared with your questions before you connect to a tutor. Tutors and students communicate in real time through the Brainfuse Online Classroom. Whatever you type, draw, or share on the screen, the tutor sees, and vice versa. You may also want to have screenshots ready if applicable. All sessions are recorded for you to review later.

Grading Standards & Practices

Grade Scale

Letter Grade	Points Range
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	0 – 59%

Grade Categories - Your final grade will be determined by the following graded events:

Reading Quizzes	10%
Online Homework	15%
Homework Quizzes	5%
Team Participation	10%
Midterm Exam 1	30%
Midterm Exam 2	30%

Reading Quizzes: Prior to completing the homework assigned for each chapter, you will be asked to complete an online Reading Quiz. The Reading Quiz will be in MOER and will include problems that are similar to the examples presented in the textbook. The purpose of the Reading Quiz is to hold students accountable for reading each chapter in the textbook, and learning material prior to starting the online homework. Reading Quizzes are worth 10% of your final course grade.

Online Homework: You are expected to complete weekly homework assignments online using MOER (<https://moer.maricopa.edu/>). These assignments are worth 15% of your course grade. Assignments and due dates are already posted on MOER. You should WRITE DOWN your work for all problems as you do the homework.

Homework Quizzes: End of chapter homework quizzes will be assigned in MOER over each chapter and will cover the material you practiced in your homework assignments. They are worth 15% of your final course grade. Quiz dates will be announced in MOER.

Midterm Exam 1: There will be a midterm exam worth 30% of your grade. Make up exams will only be granted in extreme circumstances and must be approved BEFORE the missed exam. DO NOT wait until after the missed exam to contact me. Failure to adhere to this policy will result in a grade of zero for the missed exam. Exam dates are

listed in moer. There are no alternate test dates.

Midterm Exam 2: There is a final exam for the course, worth 30% of the course grade. Make up exams will only be granted in extreme circumstances and must be approved BEFORE the missed exam. DO NOT wait until after the missed exam to contact me.

Failure to adhere to this policy will result in a grade of zero for the missed exam. Exam dates are listed in moer.

Response Time

Your instructor will respond to posts, messages, and emails within 8 business hours (usually faster). Please understand that business hours are from 9 am to 5 pm, Monday through Friday. If you post a question or message, be aware that after 5 pm on Friday until Monday morning at 9 am is NOT part of business hours. Any holidays are also not considered part of business hours. Students can expect assignments to be graded within 5 business days after the due date.

Attendance Policy

SCC policy states that you may be withdrawn from the course by the instructor after three unexcused absences. In a 14 week online course, you may be withdrawn if you do not complete any assignments over 3 consecutive days. Consistent tardiness will not be tolerated.

Instructional Contact Hours (Seat Time)

This is a three (3) credit-hour course. Plan to spend at least three hours on course content or seat time (direct instruction) and at least six hours on homework weekly. **Since this is an accelerated course, the required time each week will exceed that listed above.**

Technology Statement

Third-Party Learning Tools

SCC utilizes a variety of software applications and web-based tools operated by third party vendors to support student learning. To allow student access to the application, site, or tool certain identifiable information may be required to establish a user name or password, submit work and/or download information from these tools. Inherent with all internet-based tools, there is risk that individuals assume when electing to use the

products and services made available by these tools, as they may place information at risk of disclosure.

In this course, we will use MOER to complete or participate in assignments, activities and/or access course materials. [Accessibility Statements and Privacy Policies](#) for all tools used at SCC are available.

To use the third-party tools responsibly, please observe all laws and the Maricopa Community College District [Student Conduct Code](#). Some specific aspects of law and conduct code to remember are prohibitions against copyright infringement, plagiarism, harassment or interferences with the underlying technical code of the software. As a student using a third-party learning tool, you have certain rights. Any original work that you produce belongs to you as a matter of copyright law. You also have a right to the privacy of your educational records. Your contributions to the third-party learning tool constitute an educational record. By using the third-party tool, and not taking other options available to you in this course equivalent to this assignment that would not be posted publicly on the internet, you consent to the collaborative use of this material as well as to the disclosure of it in this course and potentially for the use of future courses.

The instructor reserves the right to make changes to the syllabus. If changes are made during the course of the semester you will be notified by email.

Students are responsible for the information contained in this syllabus, the Syllabus page in your Canvas course and the **College Policies & Student Services** page found in the First Steps module of your Canvas course. Students will be notified by the instructor of any changes in course requirements or policies.