

Course Info



RIO SALADO COLLEGE

A MARICOPA COMMUNITY COLLEGE

Elements of Statistics

MAT206 29731 Fall 2021

Start Date: Sep 20, 2021

End Date: May 27, 2022

Credits: 3

Modality: In Person

Instructor Information

Name: Thomas Clarke

Contact Information:

Email: thomas.clarke@dvusd.org

Location: Boulder Creek High School

Office Hours: before school and by appointment

Website: <https://www.dvusd.org/Page/14762>

Course Competencies

Official Course Description

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

Official Course Prerequisites

Prerequisites: A grade of C or better in MAT14+, or MAT15+, or MAT187, or equivalent, or an appropriate District placement, or permission of Department/Division Chair.

Official Course Competencies

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

Course Materials

Required Course Materials

Title	Edition	Author	ISBN
Graphing Calculator			
The Practice of Statistics	5th	Starnes, Tabor, Yates, Moore	9781464108730

Standards and Expectations

This dual enrollment college course is intended for high school students at the junior and senior level.

Time Requirement

You will need to dedicate significant time to this college course. For each credit hour, plan to spend at least two hours a week on homework in addition to class presentation time.

Course Calendar

Weeks	Lessons
1-3	Statistics and Using Data
4-5	Modeling Distributions of Data
6-7	Describing Relationships
8-10	Designing Studies
11-13	Probability
14	Review
15	Mid-term
16-18	Random Variables
19-21	Sampling Distributions
22-24	Estimating with Confidence
25-26	Testing a Claim
27-29	Comparing Two Population or Groups
31-32	Inference for Distributions of Categorical Data
33-34	More about Regression
35-36	Review and Final

Grading Standards

Grade	Percentage
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

Attendance Standards

Full attendance and active participation are necessary for success in this course. Being absent from class 15 days, or having five unexcused absences will result in a possible loss of credit.

Late Policy

Work for a Unit is due at the time of the unit test.

College Policies

Extra Credit Policy:

There are no extra-credit assignments for this class. The scheduled assignments and exams are sufficient to test understanding of the materials presented in the course.

Academic Misconduct:

Academic Misconduct includes cheating, conspiring to cheat, soliciting to cheat, attempting to cheat, plagiarism, fabrication on an assignment, or other forms of dishonest presentation.

Posting assessments on an unauthorized web site, soliciting assessment answers and the unauthorized acquisition of assessments, assessment answers, or other academic material is cheating.

Plagiarism includes, but is not limited to, the use of paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling or sharing of term papers or other academic materials. Information gathered from the Internet and not properly identified is also considered plagiarism.

We expect every student to produce his/her original, independent work. Any student whose work indicates a violation of the MCCCDC Academic Misconduct Policy (including cheating and plagiarism) can expect sanctions as specified in the college catalog (2.3.11) and online at <https://district.maricopa.edu/regulations/admin-regs/section-2/2-3#11>

Rio Salado College uses software that uncovers plagiarism from student to student and other data sources on the Internet. If a student is found to have plagiarized content, grade consequences will be applied in accordance with departmental policies.

Civility Policy:

The faculty of Rio Salado place a high value on the importance of general ethical standards of academic behavior and expect that communication between students and instructors or among students shall maintain the level of formality and mutual respect appropriate to any college teaching/learning situation. Language or behavior that is rude, abusive, profane, disruptive, or threatening will not be tolerated. Activity of this type is Academic Misconduct as defined in MCCCDC Policy AR 2.3.11. Student engaging in such behavior will be removed from the course with a failing grade. Additional sanctions may be applied pursuant to AR 2.3.11.

Refund Policy:

Refunds are not automatic. Students who drop courses within the refund period are eligible for a reimbursement of appropriate tuition. Deadlines and details are available online at <http://www.riosalado.edu/cashier/Pages/refund.aspx>.

Academic Adjustment Needs & Disability Resources and Services

In accordance with Rio Salado College and Maricopa Community College District policies, all students should have equal access to course materials and technology. Please contact the Disability Resources and Services Office prior to the start date of your course at 480-517-8562 if you have any of the following needs:

- you are a student requiring an academic adjustment due to a documented disability (as protected by The Americans with Disability Act Amendment Act)
- you are experiencing difficulty accessing course materials because of a disability
- you are pregnant or parenting and would like to discuss possible academic adjustments (as protected under Title IX)

References:

1. Maricopa Community College District Administrative Regulation 2.8.1: <https://district.maricopa.edu/regulations/admin-regs/section-2/2-8>
2. Rio Salado College Disability Resources and Services website: http://www.riosalado.edu/disability_services/Pages/default.aspx

Classroom Accommodations for Students with Disabilities

In accordance with the Americans with Disabilities Act, the Maricopa County Community College District (MCCCDC) and its associated colleges are committed to providing equitable access to learning opportunities to students with documented disabilities (e.g. mental health, attentional, learning, chronic health, sensory, or physical). Visit <https://district.maricopa.edu/mandatory-drs-title-ix-syllabus-statements> for more information.

Addressing Incidents of Sexual Harassment/Assault, Dating/Domestic Violence, and Stalking

In accordance with Title IX of the Education Amendments of 1972, MCCCDC prohibits unlawful sex discrimination against any participant in its education programs or activities. The District also prohibits sexual harassment—including sexual violence—committed by or against students, District employees, and visitors to campus. As outlined in District policy, sexual harassment, dating violence, domestic violence, sexual assault, and stalking are considered forms of "Sexual Misconduct" prohibited by District policy. Visit <https://district.maricopa.edu/mandatory-drs-title-ix-syllabus-statements> for more information.

Tuition Assistance

Tuition Assistance is available to students enrolled in a Rio Salado College dual enrollment courses who demonstrate financial need. Details are available online at <http://www.riosalado.edu/dual/>

Student Responsibility

The student is responsible for the information outlined in the syllabus. The student is also responsible for knowing the Rio Salado College policies in the college catalog and the student handbook available online at <http://www.riosalado.edu/dual/>

Disclaimer

Course content and syllabus may vary from the course calendar listed above in order to meet the needs of the particular group in this course section.

Acknowledgement Form

Signature: _____

Date: _____