



**SCOTTSDALE  
COMMUNITY COLLEGE**

A MARICOPA COMMUNITY COLLEGE

Scottsdale Community College (SCC) credits the diverse Indigenous people still connected to the land on which we gather. Our college resides on the ancient lands of the Huhugam, ancestors to the O’odham and tribal territory of the Salt River Pima-Maricopa Indian Community (SRP-MIC). SRP-MIC is a federally recognized tribe - one of 22 Arizona Indigenous tribes and one of 574 across the United States. Attached to this physical space is a painful history of forced removal and the resulting intentional genocide of its Indigenous people. We remain appreciative of our ability to teach, learn and serve in a space of such importance and reverence.

SCC acknowledges the land on which we are situated today as the traditional land and home of two distinct tribal nations: the Onk Akimel O’odham (Pima) and the Xalychidom Piipaash (Maricopa). We take this opportunity to thank the original caretakers of this land, the Huhugam. We offer our respect to all O’odham and Piipaash of the past, present and future.

## Course Information

Semester & Year:	Fall 2024
Course Title:	Mathematical Analysis for Business
Course Prefix & Number:	MAT 217
Section Number:	13056
Credit Hours:	3
Start Date:	August 20 <sup>th</sup> , 2024
End Date:	December 13 <sup>th</sup> , 2024
Location:	CM 465
Meeting Days:	Tuesday and Thursday
Meeting Times:	12:30 PM – 1:45 PM

## Course Format

The course format for this course is in-person. The start date for the course is 8/20/2024. The end date for the course is 12/13/2024. The class is schedule to meet from 12:30 PM – 1:45 PM.

## Instructor Information

Instructor: Gabriel Tarr  
Email: gabriel.tarr@scottsdalecc.edu  
Phone: 4804256746  
Office Location: CM 419  
Office Hours: Monday and Wednesday 1:00 PM - 2:00 PM  
Tuesday and Thursday 12:00 PM - 12:30 PM  
Tuesday and Thursday 2:00 PM - 3:00 PM

## Course Description

An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.

## Prerequisites

Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221.

## Course Competencies

1. Solve linear systems with two and three equations using various methods, including matrices. (I)
2. Use technology to solve application problems with 3+ variables. (I)
3. Solve linear programming problems using the graphical method. (II)
4. Solve multivariable optimization problems with and without constraints. (II, III)
5. Solve counting problems using various counting techniques. (IV)
6. Define probability using sample spaces, and apply to real-world scenarios. (V, VI)
7. Define basic statistics (measure of central tendency and dispersion), and apply to real-world problems. (V)

8. Describe properties of discrete and continuous probability distributions, and apply to solve real-world problems. (V, VI)
9. Describe the normal distribution and its characteristics. (VI)
10. Find probabilities for normal random variables by using the normal distribution. (VI)

## Texts and Course Materials

**Required Texts:** There is no physical textbook for this class. Due to the topics of the course, the course contains content from several textbooks. You can download and/or print the textbook sections from within each unit section in MOER.

**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 here at [moer.maricopa.edu](http://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: 19656**

**Enrollment Key: 13056**

**Calculator Requirement:** A graphing calculator or graphing calculator app is required for this course. The instructor strongly recommends a TI-83/84. Calculators with QERTY keyboards or those that perform symbolic algebra (such as the TI-92/TI89) are not allowed. You are expected to bring your calculator to each class session. Your cell phone may NOT be used as a calculator on your exams. The SCC Media Center will rent calculators this semester on a first-come basis. Go to the Media Center located in the Information Technology (IT) Building to rent a graphing calculator. Rentals are first-come, first-served and there are limited quantities.

**Computer Access, Webcam, Microphone, and Email:** You will need regular access to a computer with online capabilities in order to complete online assignments.

## Course Technologies

View the [Accessibility Statements & Privacy Policies](#) of technologies used in this course.

## Maricopa Systems

This course uses key Maricopa systems for course management and communication.

- Canvas Learning Management System
- Student Maricopa Gmail Account
- Maricopa Open Educational Resource Learning System (MOER)

## Streaming Media/Audio/Video Tools

This course uses webcasting, lecture capture systems, YouTube, and/or other streaming media services.

- YouTube

## 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.

**Withdrawing from the Course:** If it becomes necessary to withdraw from the course, you should speak with admissions office and fill out the proper forms there. There is a last day to withdraw without an instructor's signature. It is not guaranteed that you will be able to withdraw from the course after this date.

**Cheating and Other Forms of Academic Dishonesty:** Any student suspected of or found to be cheating will receive a 0 on the assignment/exam at minimum.

**Email and Contacting the Instructor:** It is HIGHLY inappropriate for your family members, guardians, private tutors, former teachers, or any other third-party actors to contact your instructor to discuss anything related to your academic standing in this class. The instructor is more than happy to discuss your academic standing with YOU (the student), but emails, messages, and phone calls from third-party actors on your behalf will not receive a response (except in extreme circumstances as determined by the instructor). In certain cases, these third-party actors may be blocked from contacting the instructor.

Be respectful of your classmates and the instructor. Don't be a jerk!

## Grading Standards & Practices

Your grade is NOT a commodity; it has not been purchased with your tuition. You have the right to be graded fairly, but you do NOT have the right to any specific grade. Your grade is not a reflection of you as a person. Your grade is not a measurement of effort, it is an evaluation of PERFORMANCE. This means your grade is dependent upon how

well you demonstrate your comprehension of the subject through application and completion of the items listed above in the course competencies. Furthermore, it is immoral to reach out to your instructor about the consequences of not receiving a certain grade in the course. Please do not ask for extra credit or “a few extra points” in order to make a certain grade for scholarships, admittance to a certain program, or athletic eligibility. Emails and messages of this nature will be ignored.

## Grade Scale

Letter Grade	Points Range
A	90 – 100%
B	80 – 89.9999%
C	70 – 79.9999%
D	50 – 69.9999%
F	Below 50%

## Grade Distribution

**Exams (70% of course grade):** There will be four exams in this course. Your exams are meant to test your PERSONAL mathematical aptitude of topics covered prior to each exam in this class, but occasionally you will be required to draw from your PERSONAL aptitude in topics covered in pre-requisite courses, your real-life experiences, and common sense.

Make up exams will only be granted under extreme circumstances. You should meet with your instructor AT LEAST TWO WEEKS BEFORE THE SCHEDULED EXAM to discuss arrangements. This discussion must take place BEFORE the scheduled date of the exam. Failure to adhere to this policy may result in a 0 for the exam.

**Homework (25% of course grade):** You will be expected to complete regular homework assignments using MOER. It will benefit you to write out the homework problems and show your work as if the instructor were grading each assignment by hand. Assignments and due dates will be posted in MOER. If you miss a due date, you have 255 late passes that you are able to use with no penalty to your homework grade. Each late pass only extends the due date for 24 hours, so that 255 goes quickly if you fall too far behind.

**Participation (5% of course grade):** Participation is useful in determining how well students are comprehending the material. The more people participate in class and

demonstrate how well they are working with the material, the easier students may find the exams to be.

Participation involves working problems at the board, explaining your solutions (not just giving answers) to the class, asking questions of others' solutions, answering questions in class, collaborating with other students during class.

In addition, any student may engage in respectful discussion about how current scientific, social, political, or economic events relate to the content we have covered recently in class, or engage in respectful discussion about how something personal in their life relates to the content we have covered recently in class.

## **Response Time**

Students can expect a response time of up to 24 hours (though likely sooner) for the instructor to respond to messages sent via MOER or email. This 24-hour window does not include weekends, holidays, or official district breaks. Students can expect assignments to be graded within 3 class meetings of the assignment's due date.

## **Attendance Policy**

Any student who misses more than three (3) classes may be withdrawn from the course. Any student who misses an exam may be withdrawn from the course. You are responsible for learning any material covered during an absence or tardiness.

## **Instructional Contact Hours (Seat Time)**

This is a three (3) credit-hour course taught in 16 weeks. The typical student should plan to spend at least 9 hours per week on in-class direct instruction and out-of-class coursework (homework, studying, etc.). Some students may require more or less time per week depending on ability, aptitude, and content.

## **Learning Tools and Your Privacy and Security**

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, and submit work and/or download information from these tools. Inherent with all internet-based tools, there is a risk that individuals assume when electing to use these tools, as they may place information at risk of disclosure.

To use learning tools responsibly, please observe all laws and the Maricopa Community College District [Student Conduct Code](#), such as copyright infringement, plagiarism, harassment or interference with the underlying technical code of the software. As a student using a 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 learning tools constitute an educational record. By using the 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.

## Tentative Course Calendar

Date	Topic or Section
Tuesday, August 20, 2024	MAT 217 Introduction and Linear Functions Review
Thursday, August 22, 2024	Solving Linear Systems with 2 and 3 Unknowns (1.1)
Tuesday, August 27, 2024	Matrices and Matrix Operations (1.2)
Thursday, August 29, 2024	Solving Linear Systems with Row Reduction (1.3)
Tuesday, September 3, 2024	Solving Linear Systems with Matrix Inversion (1.4)
Thursday, September 5, 2024	Systems of Inequalities and Their Graphs (1.5)
Tuesday, September 10, 2024	Solving LP Problems with Graphs and Technology (1.6)
Thursday, September 12, 2024	Review for Exam 1
<b>Tuesday, September 17, 2024</b>	<b>Exam 1</b>
Thursday, September 19, 2024	Multivariate Functions (2.1)
Tuesday, September 24, 2024	Derivatives Review from MAT 212
Thursday, September 26, 2024	Partial Derivatives (2.2)
Tuesday, October 1, 2024	Partial Derivatives (2.2)
Thursday, October 3, 2024	Determining Extrema for Bivariate Functions (2.3)
Tuesday, October 8, 2024	Determining Extrema using Lagrange Multipliers (2.4)
Thursday, October 10, 2024	Review for Exam 2
<b>Tuesday, October 15, 2024</b>	<b>Exam 2</b>
Thursday, October 17, 2024	Sets and Venn Diagrams (3.1)
Tuesday, October 22, 2024	Counting Principles (3.2)
Thursday, October 24, 2024	Introduction for Probability (3.3)
Tuesday, October 29, 2024	Probability Using Counting Principles (3.4)

<b>Date</b>	<b>Topic or Section</b>
Thursday, October 31, 2024	Conditional Probability and Independence (3.5)
Tuesday, November 5, 2024	Review for Exam 3
<b>Thursday, November 7, 2024</b>	<b>Exam 3</b>
Tuesday, November 12, 2024	Describing Data (4.1)
Thursday, November 14, 2024	Discrete Random Variables (4.2)
Tuesday, November 19, 2024	Binomial Distribution (4.3)
Thursday, November 21, 2024	Continuous Random Variables (4.4)
Tuesday, November 26, 2024	Normal Distribution (4.5)
<b>Thursday, November 28, 2024</b>	<b>Academic Holiday - No Class</b>
Tuesday, December 3, 2024	Normal Distribution (4.5)
Thursday, December 5, 2024	Review for Exam 4
<b>Tuesday, December 10, 2024</b>	<b>Exam 4</b>
<b>Thursday, December 12, 2024</b>	<b>No Class</b>

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.