



**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:	Spring 2025
Course Title:	Calculus with Analytic Geometry I
Course Prefix & Number:	MAT 220
Section Number:	30316
Credit Hours:	5
Start Date:	January 14 th , 2025
End Date:	May 9 th , 2025
Class Meeting Location:	CM 465
Meeting Days:	Tuesday and Thursday
Meeting Times:	9:45 AM – 11:55 AM

Course Format

This course is in-person. The start date for the course is January 14th, 2025. The end date for the course is May 9th, 2025. The class is scheduled to meet from 9:45 AM to 11:55 AM.

Instructor Information

Instructor: Gabriel Tarr
Email: gabriel.tarr@scottsdalecc.edu
Phone: 480-425-6746
Office Location: CM 419
Office Hours: Monday and Wednesday 11:30 AM - 12:30 PM
Tuesday and Thursday 2:30 PM – 4:00 PM

Course Description

Limits, continuity, differential and integral calculus of functions of one variable.

Prerequisites

A grade of C or better in MAT187, or MAT188, or an appropriate District placement.

Course Competencies

1. Analyze the behavior and continuity of functions using limits. (I)
2. State the definition and explain the significance of the derivative. (II)
3. Compute the derivative using the definition and associated formulas for differentiation. (II)
4. Solve application problems using differentiation. (II)
5. State and explain the significance of the Fundamental Theorem of Calculus. (III)
6. Compute anti-derivatives, indefinite and definite integrals of elementary functions. (III)
7. Read and interpret quantitative information when presented numerically, analytically or graphically. (I, II, III)
8. Compare alternate solution strategies, including technology. (I, II, III)
9. Justify and interpret solutions to application problems. (I, II, III)
10. Communicate process and results in written and verbal formats. (I, II, III)

Texts and Course Materials

Required Texts: There are no required texts for this course.

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. 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: 20612

Enrollment Key: 30316

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. You will need access to a webcam and a microphone attending the optional virtual office hours through Zoom.

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)

Synchronous Communication Tools

This course implements the use of web conferencing and/or other synchronous course tools.

- Zoom for optional virtual office hours

Streaming Media/Audio/Video Tools

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

- YouTube

Student Assignment Tools

This course requires students to participate in or submit assignments using desktop or cloud-based applications.

- Google Products
- Microsoft Office 365
- Screencast-O-Matic
- Adobe Creative Cloud

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.

Math/Science Tutor Center: Free online tutoring is available online at the following link. <http://www.scottsdalecc.edu/students/tutoring/math>. You will need to know your Maricopa gmail account ID and password, and self-enroll in a Canvas course. Details can be found at the link above.

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

Grade Scale

Letter Grade	Percent Interval
A	90 – 100%
B	80 – 89.9999%
C	70-79.9999%
D	50 – 69.9999%
F	Below 50%

Grade Distribution

Exams (70% of the 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. There will be four exams in this course. The dates can be found at the end of this syllabus.

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 and withdrawal from the course.

Homework (20% of course grade): You will be expected to complete regular homework assignments using MOER. Assignments and due dates will be posted in MOER. It is to your benefit to keep up, however, 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 means 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 five (5) credit-hour course taught in 16 weeks. The typical student should plan to spend at least 15 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 Schedule

Date	Topic or Section
Tuesday, January 14, 2025	1.1 - How do we Measure Velocity
Thursday, January 16, 2025	1.2 - Notion of a Limit
Tuesday, January 21, 2025	1.3 and 1.4 - The Derivative of a Function at a Point & The Derivative Function
Thursday, January 23, 2025	1.5 - Interpreting, Estimating, and Using the Derivative
Tuesday, January 28, 2025	1.6 - The Second Derivative
Thursday, January 30, 2025	1.7 - Limits, Continuity, and Differentiability
Tuesday, February 4, 2025	1.8 - The Tangent Line Approximation
Thursday, February 6, 2025	Exam 1
Tuesday, February 11, 2025	2.1 and 2.2 - Elementary Derivative Rules & The Sine and Cosine Functions
Thursday, February 13, 2025	2.3 - The Product and Quotient Rules
Tuesday, February 18, 2025	2.4 - The Derivatives of Other Trig Functions
Thursday, February 20, 2025	2.5 - The Chain Rule
Tuesday, February 25, 2025	2.6 - Derivatives of Inverse Functions
Thursday, February 27, 2025	Derivative Drills
Tuesday, March 4, 2025	Exam 2
Thursday, March 6, 2025	2.7 - Derivatives of Functions Given Implicitly
Tuesday, March 11, 2025	Spring Break
Thursday, March 13, 2025	Spring Break
Tuesday, March 18, 2025	2.8 - Using Derivatives to Evaluate Limits
Thursday, March 20, 2025	3.1 - Using Derivatives to Identify Extreme Values
Tuesday, March 25, 2025	3.2 - Using Derivatives to Describe Families of Functions
Thursday, March 27, 2025	3.3 - Global Optimization
Tuesday, April 1, 2025	3.4 - Applied Optimization
Thursday, April 3, 2025	3.5 - Related Rates
Tuesday, April 8, 2025	Exam 3
Thursday, April 10, 2025	4.1 - Determining Distance Traveled from Velocity
Tuesday, April 15, 2025	4.2 - Riemann Sums
Thursday, April 17, 2025	4.3 - The Definite Integral
Tuesday, April 22, 2025	4.4 - The 1st Fundamental Theorem of Calculus

Date	Topic or Section
Thursday, April 24, 2025	5.1 - Constructing Accurate Graphs of Antiderivatives
Tuesday, April 29, 2025	5.2 - The 2nd Fundamental Theorem of Calculus
Thursday, May 1, 2025	5.3 - Integration by Substitution
Tuesday, May 6, 2025	Exam 4
Thursday, May 8, 2025	No Class Meeting

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.