

Course Information

- Semester and Year: Fall 2026
- Course Title: Mathematical Analysis for Business
- Course Prefix and Number: MAT217
- Section Number: 18120
- Credit Hours: 3
- Start Date: August 24, 2026
- End Date: December 18, 2026
- Class Format: Online (Exams must be proctored in-person)

Instructor Information

- Instructor: Carla Stroud
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- Phone: (480) 423-6112
- Office Location: CM 424
- In-Person Office Hours: Mon/Wed 12:15 – 1:15 PM
Tuesday by appointment
- Remote Office Hours: Thurs 12:00 – 2:00 PM (by appointment only)

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 and/or Corequisites

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.
2. Use technology to solve application problems with 3+ variables.
3. Solve linear programming problems using the graphical method.
4. Solve multivariable optimization problems with and without constraints.
5. Solve counting problems using various counting techniques.
6. Define probability using sample spaces, and apply to real-world scenarios.

7. Define basic statistics (measure of central tendency and dispersion), and apply to real-world problems.
8. Describe properties of discrete and continuous probability distributions, and apply to solve real-world problems.
9. Describe the normal distribution and its characteristics.
10. Find probabilities for normal random variables by using the normal distribution.

General Education & Institutional Learning Outcomes

General Education provides foundational learning experiences that contribute to academic and career success. It is reflected in [Scottsdale Community College's Institutional Learning Outcomes](#): Arts & Humanities Awareness, Career Readiness, Critical Thinking and Problem Solving, Effective Communication, Information Literacy, and Social Responsibility. Students who take MAT217 will develop Critical Thinking and Problem Solving skills. They will strengthen Effective Communication by clearly explaining mathematical reasoning, interpreting quantitative information, and using technology to model and solve real-world business and social science problems.

Program Learning Outcomes

Credit-bearing courses at Scottsdale Community College can count toward the completion of a degree or certificate program. Each program has Program Learning Outcomes, which are learned assets that students can claim to have acquired by completing their academic or occupational program at SCC. Program Learning Outcomes can be found on the [Degrees and Certificates page](#) of the SCC Website. For each degree, look under "What You'll Learn."

This course is a General Education course that is foundational to many degree programs and a key component of the Arizona General Education Curriculum (AGEC) certificate program. This course fulfills a mathematics requirement for the AGEC – B (for Business Majors).

Texts and Course Materials

Textbook: Given the array of topics covered in this course, content is used from several textbooks. Students can view the textbook sections as a pdf file for free from on MOER.

Calculator: A graphing calculator is **required** for this course. A TI-83, TI-83+, or TI-84 are recommended. Calculators with QWERTY keyboards or those that do symbolic algebra (such as the TI-92, TI-89, TI-Nspire) are NOT allowed. Your cell phone may NOT be used as a calculator on an exam.

Online Course Learning Management System: This course uses [MOER](#) as the learning management system. The syllabus, schedule, announcements, assignments, grades, and course materials will be available through MOER. **Students who do not create a MOER account by the end of the first day of class will be withdrawn** from the course. Login instructions are available in Canvas.

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.

Withdrawal Policy: In a 16-week class, students may withdraw without instructor permission through the end of the seventh week. Students can request permission from the instructor to be withdrawn from the course up to two weeks before the last class period. These official dates and deadlines are posted on the [SCC Dates and Deadlines](#) website. If a student withdraws or is withdrawn from the course, the instructor is required by law to report last day of attendance (LDA). This date is based on submitted coursework.

Technology Responsibility: Students are expected to have regular access to a computer or device with internet connection to complete online assignments. Students are responsible for completing all assignments on time regardless of any computer issues that may occur. SCC has computers available for student use in the math center and library.

Course Grading Policy: The final exam date serves as the final deadline for all coursework submissions. Exam scores are final, and extra-credit is not offered. Discussions about how the exam is graded will not be discussed via email. Instead, students are encouraged to meet with the instructor to review their exam performance. Final course grades are calculated using the scale listed in the syllabus (rounded to the nearest percent) and are non-negotiable. It is unethical for a student to request their final percentage be rounded up to earn their desired grade.

Academic Dishonesty: If academic dishonesty is suspected, students may be asked to explain their solution method, complete a similar problem, or redo the exam. The use of unauthorized technology or outside assistance during an exam constitutes academic dishonesty and will result in a score of 0 on the exam, which will result in the inability to pass the course.

Emergency Documentation: Students who miss an assignment or exam deadline due to an emergency must contact the instructor as soon as possible (for exams, on or before the missed exam is the expectation) and provide documentation within 2 days. Late penalties may be waived at the instructor's discretion. Submitting fake, altered, or misleading documentation (e.g., a falsified doctor's note) is a form of academic dishonesty. Students who submit falsified documentation will receive a 0 on the exam (resulting in their inability to pass the class) and the incident may be reported under the college academic integrity policy.

Attendance Policy

Attendance in an online course involves consistent progress on course assignments in accordance with the deadlines posted in MOER. This is not a self-paced class. Students who fall more than **one week behind** the schedule or who **miss the first exam** may be withdrawn without notice.

Instructional Contact Hours and Minimum Course Expectations

Instructional contact hours are the weekly time students spend directly learning with their instructor or course activities. These activities include, but are not limited to, lectures, discussions, labs, group work, and viewing recordings. Instructional contact hours vary by course; refer to the [MCCCD course bank](#) for your course's details.

Minimum course expectations include the number of hours students are expected to spend outside of class (weekly) completing coursework. Students are encouraged to use the [Time Management Calculator](#) to help estimate their weekly time commitment for classes. In a three credit-hour course completed in 16-weeks, students should plan to spend about 8 hours each week on coursework.

Course Technologies

View the [Accessibility Statements & Privacy Policies](#) of the technologies used in this course. The [SCC Help Desk](#) provides students with a primary point of contact within SCC for college-supported technology services and technical assistance.

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

Generative Artificial Intelligence (AI) Policy

The World Economic Forum defines generative AI as “a category of artificial intelligence (AI) algorithms that generate new outputs based on the data they have been trained on. Unlike traditional AI systems that are designed to recognize patterns and make predictions, generative AI creates new content in the form of images, text, audio, and more.”

Some examples of generative AI tools include but are not limited to: ChatGPT, Google Gemini, Microsoft Copilot, Stable Diffusion, GrammarlyGo, and Adobe Firefly.

No Generative Artificial Intelligence (AI) Allowed

In this class, all work submitted must be your own. The use of generative AI tools will be considered academic misconduct (see Administrative Regulation 2.3.11 1.B(b)) and will be treated as such. If you are unsure if the tool or website you are using is a generative AI tool, please contact the instructor for further clarification before using the tool or website.

Grading Standards and Practices

Grade Scale

Table 1 Course Grading Scale

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

Grade Categories

Table 2 List of Grade Categories

Category Name	Percent of Grade
Online Lessons	5%
Homework	10%
Quizzes	15%
Unit 1 Exam	20%
Unit 2 Exam	20%
Units 3-4 Exam	30%

Online Lesson: The Online Lesson is your direct instruction on the content. Online Lessons are set up like an interactive textbook - read through the text and examples, watch the videos, and complete the problems. You will have unlimited attempts at each question. It is recommended that students print the lesson notes and use the online lessons to complete the lessons notes.

Homework: The Homework allows you to practice the material you learned while completing the Online Lesson. Write down your work and make note of any questions you have. Questions can be posted to the FAQ forum for the instructor or classmates to answer. You will have three attempts at each question and can then generate a new version of the question.

LatePasses: LatePasses can be used on Online Lessons and Online Homework. Any problems completed during the LatePass extension will result in a 20% penalty. **Homework and lessons can only be extended until the unit exam.**

Quizzes: The Online Quiz gives you the opportunity to demonstrate understanding of the material. Each question includes two attempts, with a 30% penalty on the second attempt. Students may retake up to two quizzes to improve their scores by requesting a quiz redo from the instructor. Practice quizzes are optional but highly recommended and may be taken multiple times. **Note, you can NOT use a LatePass for the Quizzes.**

Exams: There are two exams in this course. Students must show written work when indicated on the exam. Exams must be completed by the deadlines listed in MOER. Students that miss an exam deadline may take the exam up to 3 days late but can only earn a maximum score of 70%.

Exams will be proctored at the SCC campus (details available in MOER). **Exams must be proctored in-person.** If you are unable to take the exam during the scheduled time at the SCC campus, then you may use the SCC testing center (free) or a certified testing center or college near you (fees apply). Students will need to indicate how they plan to take the in-person proctored exams in an MOER assignment at the start of the semester. Requests to change an in-person testing location must be approved by the instructor **at least one week before the exam.** Students who do not secure an approved in-person testing center in time or who fail to follow exam instructions in MOER will receive a score of 0.

Students may not use unauthorized technology during exams, including both online and physical devices. Students may be asked to remove and securely store smart watches, smart glasses, or any other device with advance technology before or during the exam.

Student/Instructor Interaction

In this course, you can expect regular and substantive interaction (RSI) that aligns with Scottsdale Community College's mission to provide challenging and supportive learning experiences and the US Department of Education's requirement for regular and substantive interaction (RSI) for online courses. My commitment to your success includes the following:

- Being available during regularly scheduled office hours as stated in the syllabus.
- Providing regular updates and information about the course, campus events, resources, tutoring services, and opportunities.
- Promptly responding to student questions about the course sent via email, MOER messaging, or the Canvas inbox.
- Monitor student academic progress and communicate concerns, as needed.

Response Time

Students can expect the instructor to respond to messages within 24 hours Mon-Thurs and 48 hours Fri-Sun. These response times do not apply to holidays or after the course end date.

Online lessons, homework, and quiz assignments will be graded immediately in MOER and other assignments and exams will be graded within 5 days of the due date.

Tutoring

SCC's tutors are available online to help with your courses. You may work with an SCC tutor remotely using Google Meet, your phone, or email. Visit the [Tutoring & Learning Centers](#) page for detailed information on the five learning centers' hours and procedures. The Math Center offers **in-person** and **remote** tutoring to students who are currently enrolled in mathematics courses at SCC. Visit the [Math Center](#) page for more information.

If you need to work with a tutor outside regular hours, online and hybrid students now have access to a 24/7 online tutoring service called Brainfuse. To access Brainfuse and begin working with a tutor, visit the [SCC Online Tutoring Services Through Brainfuse](#) page.

MCCCD Policies

MCCCD is committed to providing a safe, fair, and accessible environment for all students. This includes laws such as the ADA and Title IX, which protect against discrimination. These statements explain your rights, available support, and where to go for help or more information. Please review the following policies:

Classroom Accommodations for Students with Disabilities

In accordance with the Americans with Disabilities Act (ADA), the Maricopa County Community College District (MCCCD) and its associated colleges are committed to providing equitable access to learning opportunities to students with documented disabilities (e.g. physical, sensory, neurological, chronic illness, mental health, learning disabilities, or other health concerns). If you require accommodations for this course, please contact [Disability Resources and Services](#) (DRS) at your college.

Contact with [DRS](#) should be made as soon as possible to ensure academic needs are met in a reasonable time. Additional information can be found in the [Non-Discrimination Statement](#) and [MCCCD Non-Discrimination Policies](#).

[Addressing Incidents of Title IX Sexual Harassment](#)

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.