



## MATH1324.002 Math for Business/Social Sciences I

Fall 2025

**Instructor:** Dr. Thanuka H W Pathiranage

**E-mail:** tpathiranag@tamusa.edu

**Class meeting:** MWF 11:00 – 11:50 AM in STEM 161

**Recitation (Help Session):** W 12:00 – 12:50 PM in STEM 161

**\*\*As a part of MATH 1324, students attend a weekly recitation session. In weekly recitation sessions, you will meet with your instructor who will review course material, provide additional practice exercises, and/or answer questions on the material covered in class and homework assignments. We will often have quizzes during recitation time, and on test days we will use that time to extend your test-taking time.**

**Office:** STEM 211S

| Office Hours (Student Help Sessions)                                            |                               |
|---------------------------------------------------------------------------------|-------------------------------|
| <b>Mondays</b>                                                                  | 8.30am – 10.50 am (on campus) |
| <b>Wednesdays</b>                                                               | 1.30pm – 3.30 pm (on campus)  |
| <b>Fridays</b>                                                                  | 8.30am – 10.50 am (on campus) |
| <b>**Please do not hesitate to ask if you need to meet at a different time!</b> |                               |

**Credit hours:** 3 credits

**Catalog Description:** Students will study topics from college algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, and applications to management, business and social sciences. This course meets the standards for the Mathematics category of courses under the core curriculum. **Prerequisites:** Evidence of math equivalent to High School Algebra II ("C" or higher) or placement; Requires passing TSIA Math score.

### Course Materials

**REQUIRED:** Online access code for *Mathematics with Applications in the Management, Natural & Social Sciences* by Lail, Hungerford, Holcomb (13<sup>th</sup> edition), Pearson Publishing. ISBN: 9780-137892198; 9780-137891870 (E-book included with access code).

**OPTIONAL:** Notebook for class handouts, notes, etc.

Students can purchase a loose-leaf version of the text for a reduced cost if desired.

**Calculator Policy:** Scientific non-graphing calculators are permitted. Graphing calculators or online math utilities (e.g., Desmos) are not allowed on exams.

**Note:** Laptops, cell phones, and other mobile devices are NOT acceptable calculators for quizzes or tests.

**\*\*If you need a scientific calculator, the library on campus has some for you to check out.**

## GRADING POLICY

| # of Graded Items | Graded Course Elements                            | Percentage |
|-------------------|---------------------------------------------------|------------|
| <b>Approx. 27</b> | Homework (completed on MyMathLab)                 | 10%        |
| <b>8</b>          | Weekly Quizzes (completed on MyMathLab & inclass) | 15%        |
| <b>3</b>          | Unit Tests                                        | 55%        |
| <b>1</b>          | Final Exam                                        | 20%        |

**Grade Scale for MATH 1324: 90 – 100% = A; 80 – 89% = B; 70 – 79% = C; 60 – 69% = D Below 60% = F**

**Grade Scale for MATH 1024 recitation: 60 – 100% = P; Below 60% = F**

\*Please watch the deadlines in MyMathLab regularly to ensure that HW is completed on time. No late homework or quizzes will be allowed, and individual make-up exams will be given in rare cases and only with instructor approval. If you are struggling with deadlines, please see me to discuss any concerns you have.

\*The lowest quiz grade will be dropped at the end of the semester.

\*The final examination is a comprehensive exam and is required of all students. The final exam may also replace a low or missing test grade.

\*The grading policy may be amended during the semester at the instructor's discretion.

**Student Learning Objectives:** MATH 1324 helps students develop critical thinking, communication, and empirical and quantitative skills by focusing on student understanding of key algebraic concepts to include recognizing, identifying, solving, analyzing, and explaining applications of various mathematical functions in management, economics, and business problems. Upon completion of this course, students will:

1. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solve and interpret real-world problems.
2. Recognize and solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
3. Apply and explain basic matrix operations, including linear programming methods, to solve application (business) problems.
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.
5. Interpret and apply matrix techniques and probability analyses to model applications to management, economics, and business problems

**List of Topics:** Topics to be covered include but are not limited to the following.

1. Graphs (Section 2.1)
2. Equations of Lines (Section 2.2)
3. Linear Models & Applications (Sections 2.3, 3.3)
4. Functions, Graphs, and Transformations (Sections 3.1-3.2)
5. Quadratic Functions & Applications (Section 3.4)

6. Polynomial and Rational Functions (Sections 3.5-3.6)
7. Exponential and Logarithmic Functions (Sections 4.1-4.4)
8. Simple and Compound Interest (Section 5.1)
9. Annuities, Future Value & Sinking Funds (Section 5.2)
10. Consumer Loans & Amortization (Section 5.3)
11. Systems of Linear Equations & Augmented Matrices (Sections 6.1-6.3)
12. Basic Matrix (Section 6.4)
13. Linear Inequalities & Linear Programming (Sections 7.1-7.3)
14. Simplex Method (Sections 7.4-7.5)
15. Probability & Expected Value (Sections 8.3, 9.1)

*The instructor reserves the right to modify/update the topics as appropriate.*

## Course Requirements and Expectations

**Class Attendance:** Students are expected to attend lectures regularly. Be aware of what has been covered in every class and any announcements and course policy changes made in class. Announcements and changes will also be communicated through Blackboard. You are welcome to ask questions during my office hours; however, it is your responsibility to learn the material.

**Learning New Content:** In this face to face class, your instructor will hold 3 lectures each week during our scheduled class time. If you miss a class meeting, be sure to reach out to a classmate for the class notes. For additional information or details, you can also watch the **section video presentations** in the MyMathLab program. These videos can be accessed from the Chapter Contents menu or in the assignments list in MML. If you don't attend class regularly, you will have a difficult time with the HW and quizzes each week.

**Homework:** Most homework and some quizzes will be completed online in MyMathLab (MML), along with occasional assignments or activities posted in Blackboard. You will need an access code that is available in Blackboard – please look for the Brytewave link. Read the announcements in Blackboard for all instructions. All due dates are listed in MML. You can complete the assignments until 11:59 pm of the due date listed. The homework may be attempted multiple times in order to increase your homework grade. No late assignments will be accepted nor make-ups allowed. Please plan ahead to be sure you meet the deadlines. If you are consistently struggling with the deadlines, please reach out to me so that we can discuss possible solutions.

**Quizzes:** Weekly quizzes will be completed in recitation (Wednesday help session) times or occasionally due in MyMathLab. When quizzes occur online, they may be attempted three times, and each quiz attempt has a time limit. Only the highest score will be counted. In this case, students should attempt the quiz multiple times in order to improve your grade and be prepared for the unit test. No late assignments will be accepted nor make-ups allowed. At the end of the semester, the lowest quiz grade will be dropped.

**Tests:** Three unit tests are scheduled during the semester and a comprehensive final exam. All exams will be given in class and will extend through the designated help session (recitation) time to allow for extended testing time. You should show all work in order to get full credit for the problems. Students will be allowed to use a scientific calculator on the tests. In case you miss an exam or find out that you will miss an exam, you should contact me either in person or by e-mail, at least one week in advance of the exam for non-emergency cases or within 24-hrs of the scheduled exam date for emergency cases. Any missed exam counts as a 0 unless the student has a valid documented excuse and contacts me as soon as possible after the excuse for missing the test arises. Examples of valid documented excuses are sickness documented with a doctor's note, death in the family documented with a copy of the death notice, attending university-sponsored events with a Dean's excuse, etc. Minor headaches or attending sports events (without Dean's excuse) are not examples of emergency situations. Other than described above, no make-up exams will be given, but the final exam can replace your lowest test grade. Test dates are listed below. Please contact me ASAP if you have concerns about the testing dates.

**Unit 1 Exam Wednesday Sep 17, 11:00 am**  
**Unit 2 Exam Wednesday Oct 15, 11:00 am**  
**Unit 3 Exam Wednesday Nov 19, 11:00 am**  
**Final Exam - Monday Dec 08, 10:00 -11.50am**

**Final Exam:** In order to pass this class students must take a comprehensive final exam scheduled during Finals Week. Final exams cannot be rescheduled or missed (for dire and unforeseen medical or family emergencies, students must consult with me). The final exam will also be taken in a classroom setting, with work submitted to justify your solutions. The final exam may be used to replace your lowest regular exam grade. **The final exam must be completed by the announced due date. No exceptions.**

**Gradebook:** The gradebook in MML will keep a running average of your grade. NOTE: The gradebook in Blackboard is not weighted and should only be used to review individual grades, not to assess your overall course grade.

I will review all online quizzes in order to assign partial credit where possible. (\*I look for answers that are technically correct but have not been submitted in 'good form'. An example would be an answer of 14/16 that has not been simplified to 7/8. Your answers will be more complicated than this example, but you get the idea that I will be looking for answers that are technically correct.) I will NOT review HW answers because you have unlimited attempts for each problem.

## **CLASS RULES**

- 1. Regular participation and attendance is VERY IMPORTANT in this class!** You are enrolling in a FOUR HOUR math course (3 hour lecture + 1 hour recitation), so expect to work on your Math work very regularly. Waiting to work on one day at the end of the week would be disastrous for this course!! Assignments will be broken up into two lessons each week, with staggered deadlines for the online HW.
2. Please do not ask me to extend the due dates. Work ahead on the assignments instead (remember... if something can go wrong, it will).
3. If you need additional help, please ask! Your instructor is available to help, and students also have access to free on campus or online tutoring through the Academic Learning Center. The best way to contact me is via email, [tpathiranag@tamusa.edu](mailto:tpathiranag@tamusa.edu).

## **IMPORTANT POLICIES AND RESOURCES**

University Email Policy and Course Communications: All correspondence between professors and students must occur via University email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at [helpdesk@tamusa.edu](mailto:helpdesk@tamusa.edu) or at 210-784-HELP (4357). If you don't hear back within 48 hours, contact them again. They have many requests during the first part of the semester, so you may need to follow up with them.

Academic Accommodations for Individuals with Disabilities: Texas A&M University-San Antonio is committed to providing all students with reasonable access to learning opportunities and accommodations in accordance with The Americans with Disabilities Act, as amended, and Section 504 of the Rehabilitation Act. If you experience barriers to your education due to a disability or think you may have a disability, Disability Support Services is located in the Central Academic Building, Suite 210. You can also contact us via phone at (210) 784-1335, visit us at the [website](#) or email us at [dss@tamusa.edu](mailto:dss@tamusa.edu). Disabilities may include, but are not limited to, attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability-related needs with Disability Support Services and their instructors as soon as possible.

Academic Learning Center: All currently enrolled students at Texas A&M University-San Antonio can utilize the Academic Learning Center for subject-area tutoring. The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the *Tools* section of Blackboard. You can contact the Academic Learning Center by emailing [tutoring@tamusa.edu](mailto:tutoring@tamusa.edu), calling (210) 784-1307, or visiting the Central Academic Building, room 202. Online tutoring is also available for after hours and weekend assistance.

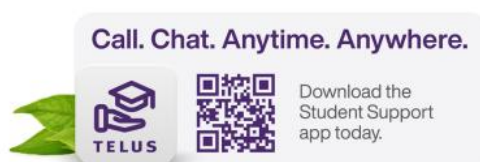
While tutoring hours may change based on tutor schedules and availability, the current tutoring hours for MATH in the ALC are as follows:

|           | <b>Appointments available</b> | <b>Walk in Tutoring – No appointment needed</b> |
|-----------|-------------------------------|-------------------------------------------------|
| MONDAY    | 8 am – 6 pm                   | 9 am – 5 pm                                     |
| TUESDAY   | 8 am – 6 pm                   | 9 am – 5 pm                                     |
| WEDNESDAY | 8 am – 6 pm                   | 9 am – 5 pm                                     |
| THURSDAY  | 8 am – 6 pm                   | 9 am – 5 pm                                     |
| FRIDAY    | 8 am – 5 pm                   | 11 am – 4 pm                                    |

Counseling/Mental Health Resources: As a college student, there may be times when personal stressors interfere with your academic performance and negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment, call 210-784-1331 or visit Madla 120 between the hours of 8:00 AM and 5:00 PM.

All mental health services provided by the SCC are free and confidential (as the law allows) and are not part of a student's academic or university record. The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services. For more information on SCC services visit the [website](#). *Crisis support is available 24/7 by calling the SCC at 210-784-1331 (after-hours select option '2')*. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255.

Additionally, the TELUS Student Support App provides a variety of mental health resources to including support for in the moment distress, an anonymous peer-to-peer support network, mental health screenings, podcasts, and articles to improve your mental wellbeing.



Emergency Preparedness: JagE Alert is Texas A&M University-San Antonio's mass notification system. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit: <https://tamusa.bbcportal.com/>. More information about Emergency Operations Plan and the Emergency Action Plan can be found [here](#). Download the SafeZone App (<https://safezoneapp.com/>) for emergencies or call (210) 784-1911. Non-Emergency (210) 784-1900.

Financial Aid and Verification of Attendance: According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail

to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended by the published Census Date (the first week of class). Any student receiving federal financial aid who does not attend prior to the published Census Date (the first week of class) will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Jaguar Writing, Language, and Digital Composing Center (WLDCC): The Jaguar Writing Center provides writing support to graduate and undergraduate students in all three colleges as well as faculty and staff. Writing tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Our language tutors support students enrolled in Spanish courses and students composing in Spanish for any assignment. Our digital studio tutors support students working on digital projects such as eportfolios, class presentations, or other digital multimedia projects. The Writing Center offers face-to-face, synchronous online, and asynchronous digital appointments. Students can schedule appointments with the Writing Center in JagWire under the Student Services tab. Click on “Writing, Language, and Digital Composing Center” to make your appointment. Students wanting to work in realtime with a tutor can schedule an “Online Appointment.” Students wishing to receive asynchronous, written feedback from a tutor can schedule an “eTutoring” appointment. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our [website](#) . The Writing Center can also be reached by emailing [writingcenter@tamusa.edu](mailto:writingcenter@tamusa.edu).

Meeting Basic Needs: Any student who has difficulty affording groceries or accessing sufficient food to eat every day or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to submit a [CARE report](#) for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to direct you to available resources. A food pantry is available on campus; click [here](#) for hours and contact information.

Military Affairs: Veterans and active-duty military personnel are welcomed and encouraged to visit the Office of Military Affairs for any question involving federal or state VA Education Benefits. Visit the Patriots’ Casa building, room 202, or to contact the Office of Military Affairs with any questions at [military.va@tamusa.edu](mailto:military.va@tamusa.edu) or (210)784-1397.

Religious Observances: Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or course work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

The Six-Drop Rule: Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student’s GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as “F” grades and will impact the student’s GPA.

Statement of Harassment and Discrimination: Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equal opportunity, and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality and the uniqueness of the individual on our campus and within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, or pregnancy/parenting

status. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the University's Civil Rights Officer at 210-784-2061 or [titleix@tamusa.edu](mailto:titleix@tamusa.edu).

Texas A&M University-San Antonio faculty are committed to providing a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking based on sex, know that help and support are available. A&M-San Antonio's Title IX Coordinator can support those impacted by such conduct in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the Title IX Coordinator. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and trained victim advocates) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment, sexual violence, or other related sex-based misconduct, the faculty member must share that information with the university's Title IX Coordinator ([titleix@tamusa.edu](mailto:titleix@tamusa.edu), 210-784-2061, CAB 439K). If you wish to speak to a confidential employee who does not have this reporting requirement, you can contact the Student Counseling Center at (210) 784-1331 or visit them in Madla 120.

Pregnant/Parenting Students: Texas A&M-San Antonio does not require a pregnant or parenting student, solely because of that status or issues related to that status, to (1) take a leave of absence or withdraw from their degree or certificate program; (2) limit the student's studies; (3) participate in an alternative program; (4) change the student's major, degree, or certificate program; or (5) refrain from joining or cease participating in any course, activity, or program at the University. The university will provide such reasonable accommodations to pregnant students as would be provided to a student with a temporary medical condition that are related to the health and safety of the student and the student's unborn child. These could include maintaining a safe distance from substances, areas, and activities known to be hazardous to pregnant individuals and their unborn child; excused absences because of illness or medical appointments; modified due dates for assignments; rescheduled tests/exams; taking a leave of absence; and being provided access to instructional materials and video recordings of lectures for excused absences, if these would be provided to any other student with an excused absence. Pregnant/parenting students are encouraged to contact the Title IX Coordinator with any questions or concerns related to their status ([titleix@tamusa.edu](mailto:titleix@tamusa.edu); 210-784-2061; CAB 439K).

Texas A&M-San Antonio has also designated the Title IX Coordinator as the liaison officer for current or incoming students who are the parent or guardian of a child younger than 18 years of age. The Title IX Coordinator can provide students with information regarding support services and other resources. Young Jaguars can support parenting students with daycare if students meet this criteria: (1) must be enrolled in classes at TAMUSA in the current semester, (2) must be Pell eligible or a single parent, (3) child(ren) must be aged 3 to 12-years-old, and (4) child(ren) must be enrolled in Pre-K-3 through 6th grade. For more information, please contact Young Jaguars at [youngjaguars@tamusa.edu](mailto:youngjaguars@tamusa.edu) or call (210) 784-2636.

Students' Rights and Responsibilities: The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

### *Students' Rights*



1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, gender identity, gender expression, and pregnancy/parenting or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

### *Students' Responsibilities*

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty, and administration.
2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, [Student Code of Conduct](#), on our website, and University Catalog, and to comply with them, as well as with federal, state, and local laws.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to recognize the University's obligation to provide a safe environment for learning.
5. A student has the responsibility to check their university email for any updates or official university notifications.

We expect that students will behave in a manner that is dignified, respectful, and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation, or disability. Conduct that infringes on the rights of another individual will not be tolerated.

Students are expected to exhibit a high level of honesty and integrity in their pursuit of higher education. Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. For more information on academic misconduct policies and procedures please review the [Student Code of Conduct](#) or visit the resources available in the [OSRR website](#)

### Important Dates:

|                |                                                           |
|----------------|-----------------------------------------------------------|
| August 25      | First day of class                                        |
| September 1    | Labor Day Holiday                                         |
| September 2    | Last day to register                                      |
| September 10   | Census date                                               |
| October 6 - 17 | Midterm grading period                                    |
| November 14    | Last day to drop with an automatic "W"                    |
| November 25    | Last day to drop a course or withdraw from the University |
| November 26    | Study Day – No classes                                    |
| November 27-29 | Thanksgiving Holiday – No classes                         |



|               |                        |
|---------------|------------------------|
| December 4    | Last day of classes    |
| December 5    | Study Day – No classes |
| December 6-12 | Final exams            |
| December 16   | Commencement           |

The complete [academic calendar](#) is available online.

#### **Option 1 - No Use of Generative AI Permitted**

Math 1324 assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.