MATH-2318-02E Linear Algebra

COURSE SYLLABUS: Spring 2026

INSTRUCTOR INFORMATION

Instructor: **Ricardo Teixeira**
Office Location: **EDN-113B (Education North Building, 1st floor)**
Office Hours: **MW 2:00pm-3:00pm, or by appointment**
Office Phone: **903-886-5859**.
University Email Address: Ricardo.Teixeira@etamu.edu
Preferred Form of Communication: **Email**
Communication Response Time: **Within 48 hours on weekdays**
Class Meeting Time: **TTh 2:00pm-3:15pm**
Class Location: **JOUR 110**

COURSE INFORMATION

Software Required: Students must purchase a copy of MyMathLab/MyLab & Mastering student access code from either of the campus bookstores or directly from Pearson at http://www.coursecompass.com/ The specific course code needed for class registration in MyMathLab is teixeira58824.

Please use the MyMathLab 14 day free trial to start working on homework if you cannot purchase it right away. The MyMathLab student access code must be purchased by the end of 2nd week of class to prevent a loss in points.

Textbook optional: Linear Algebra and its Applications, (6th edition) by David C. Lay, Judi J. McDonald, Steven R. Lay, published by Pearson, ISBN-13: 9780135851258. We will basically cover Chapter 1-6 of the textbook. The MyMathLab access code includes access to an e-book, so the book is optional but the MyMathLab access code is required.

Website & Internet: A Brightspace course website is created for the course which may be accessed from student myLeo accounts. All files and documents that the instructor shares with the will be posted in the course website. All material posted or shared at the course website is copyrighted ©. You can retain one copy of each file for your personal use, but the files should not be distributed in any form without instructor's written consent.

Software & Tools: A graphing calculator (TI-83 or 84) is highly recommended for the course. Other models are not acceptable. It may be used during the lectures and in completing the homework assignments and/or projects. However, calculators will not be allowed during the timed exams. The department may have a calculator loan program in case you need to borrow one.

AI use policy: East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

Tentative Exam Schedules:
Test 1: 20% **Thursday, February 19, 2026, 2pm-3:15pm**, in class
Test 2: 20% **Thursday, March 26, 2026, 2pm-3:15pm**, in class
Final: 30% **Tuesday, May 5, 2026, 1:15-3:15pm**, location to be announced.

No make-up test will be given without an official, written, university accepted excuse. The student is expected to contact the instructor the next working day and present the documented excuse to make up a test.

Midterm exam retake policy: If you get less than 60% in any of the midterm exams, you may take the midterm for a second time at the academic testing center:

- If you get more than 60% in the retaken exam, then you will get **60%** as your midterm grade.
- If you get less than or equal to 60% in the retaken exam, then the grade of the retaken exam will be the grade of your midterm exam.

Quizzes: 15%, You will have 10 quizzes in class quizzes during the semester, generally once a week.

Homework: 15%, Homework will be completed online through **MyMathLab** and immediate feedback will be given. You can use various help features within MyMathLab and try problems you miss again until you get them right and fully understand the topic. It is my expectation that you should have a 100 on each homework assignment because of this. Online due dates should be observed, and in general, **late submissions** will not be accepted unless legitimate reasons are presented. If a student experiences any technical difficulties with MyMathLab, be sure to use the online help and technical support from the software company. If a student continues to have trouble accessing or navigating the software, please contact the instructor through email or come by his/her office during office hours for some individual help.

Grading: At the end of this course, the final grade will be determined by:
Homework (15%) + Midterms (40%) + Final (30%) + Quizzes (15%)
A = 90%-100%
B = 80%-90%
C = 70%-80%
D = 60%-70%
F < 60%

Tentative Course Schedule: See the end of the syllabus.

Math Tutor: The Math Skills Center (Library, 3rd Floor Rear) will be open its (new) normal hours, MTWR 10am – 6pm, and F 10am – 2pm, beginning the SECOND week of school.

Course Description

In-depth combined study of algebra, trigonometric functions and their graphs; radian measurement; solution of triangles; identities; logarithmic and exponential functions; trigonometric equations; applications of trigonometry; conic sections and their graphs and other topics for calculus readiness. Prerequisite: Math 2414 with a minimal grade C.

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Find solutions of systems of linear equations by using Gauss-Jordan elimination.
2. Identify and compute algebraic properties of matrices and determinants.
3. Demonstrate a thorough knowledge of vector spaces and subspaces.
4. Determine the following for a given matrix: basis and rank for column, row, and null spaces, eigenvalues, eigenvectors, basis and rank for eigenspaces.
5. Define linear transformations and examine the properties of linear transformations.
6. Identify inner product spaces and use Gram-Schmidt orthogonalization process to orthogonalize any given basis.

Core Objectives:

- *Critical Thinking:* Students will be able to analyze, evaluate, or solve problems when given a set of circumstances or data. This common core learning objective will be assessed on the final exam using key questions that will fulfill these objectives.
- *Communications:* In written, oral, and/or visual communication, East Texas A&M University students will communicate in a manner appropriate to the audience and occasion, with an evident message and organizational structure. This common core learning objective will be assessed using class activities or projects which involve class discussion.
- *Empirical and Quantitative Skills:* Students will be able to understand and utilize mathematical functions and empirical principles and processes. This common core learning objective will be assessed using in class discussion and projects, homework, and final exams.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements: https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requireme nts

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

https://community.brightspace.com/support/s/contactsupport

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
https://www.britannica.com/topic/netiquette

ETAMU Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.PDF

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03
Undergraduate Student Academic Dishonesty Form

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.PDF

Graduate Student Academic Dishonesty Form

http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.PDF

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.PDF

ETAMU Supports Students' Mental Health

The Counseling Center at ETAMU, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel.

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.PDF

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ETAMU campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Tentative Course Schedule:

Week 1 (Jan. 12 – 16): Syllabus, 1.1 System of Linear Equations, 1.2 Row Reduction and Echelon Form

Week 2 (Jan. 19 – 23): 1.3 Vector Equations

Week 3 (Jan. 26 – 30): 1.4 The Matrix Equation, 1.5 Solution Sets of Linear Systems, 1.6 Applications of Linear System

Week 4 (Feb. 2 – 6): 1.7 Linear Independence, 1.8 Introduction to Linear Transformations, 1.9 The Matrix of a Linear Transformation

Week 5 (Feb. 9 – 13): 2.1 Matrix Operations, 2.2 The Inverse of a Matrix, 2.3 Characterizations of Invertible Matrices

Week 6 (Feb. 16 – 20): Review, **Exam 1 Thursday Feb. 19, 2pm-3:15pm**

Week 7 (Feb. 23 – 27): 2.5 Matrix Factorizations, 2.8 Subspaces of Rn, 2.9 Dimension and Rank

Week 8 (Mar. 2 – Mar. 6): 3.1 Introductions to Determinants, 3.2 Properties of Determinants, 3.3 Cramer's Rule, Volume and Linear Transformations

Week 9 (Mar. 9 – 13): **Spring Break**

Week 10 (Mar. 16 – 20): 4.1 Vector Spaces and Subspaces, 4.2 Null Spaces, Column Spaces, Row Spaces, and Linear Transformations, 4.3 Linearly Independent Sets, Bases

Week 11 (Mar. 23 – 27): Review, **Exam 2 Thursday, Mar. 26, 2pm-3:15pm**

Week 12 (Mar. 30 – Apr. 3): 4.4 Coordinate Systems, 4.5 The Dimension of a Vector Space, 4.6 Change of Basis

Week 13 (Apr. 6 – 10): 5.1 Eigenvalues and Eigenvectors, 5.2 The Characteristic Equation, 5.3 Diagonalization

Week 14 (Apr. 13 – 17): 6.1 Inner Product, Length, Orthogonality, 6.2 Orthogonal Sets

Week 15 (Apr. 20 – 24): 6.3 Orthogonal Projections, 6.4 The Gram-Schmidt Process

Week 16 (Apr. 27 – May 1): Review for Final Exam

Week 17 (May 4-8) **Final Exam, Tuesday, May 5, 1:15m-3:15pm**

To register for Math 2318 Linear Algebra:

1. Go to https://mlm.pearson.com/enrollment/teixeira58824.
2. Sign in with your Pearson student account or create your account. For Instructors creating a Student account, do not use your instructor credentials.
3. Select any available access option, if asked.
    - Enter a prepaid access code that came with your textbook or from the bookstore.
    - Buy instant access using a credit card or PayPal.
    - Select Get temporary access without payment.
4. Select Go to my course.
5. Select Math 2318 Linear Algebra from My Courses.

If you contact Pearson Support, give them the course ID: teixeira58824

To sign in later:

1. Go to https://mlm.pearson.com.
2. Sign in with the same Pearson account you used before.
3. Select Math 2318 Linear Algebra from My Courses.