



## MTH 335.001-Linear Algebra Course Syllabus: Spring 2015

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**Office Hours:** MWF : 11:00 – 12:00  
T: 11:00 – 13:00 or by appointment.

**Class Schedule:** MWF: 9:00-9:50 pm

Location: BIN 302

### COURSE INFORMATION

**Textbook:**

Linear Algebra and its applications, David C. Lay, Fourth edition

The following chapters will be covered:

Chapter 1: sections 1.1 – 1.5, 1.7-1.9

Chapter 2: sections 2.1-2.4, 2.8-2.9

Chapter 3: sections 3.1-3.3

Chapter 4: sections 4.1-4.7

Chapter 5: sections 5.1 – 5.4

Chapter 6: sections 6.1 – 6.4

**Technology:**

Students may use a TI 83/84 or equivalent calculator for this course.

**Course Description:**

This course studies vector spaces; linear transformations; matrices; determinants; systems of linear equations; equivalence relations on matrices; characteristic vectors; operators. Prerequisite: MATH 331, Discrete Mathematics, Minimum of C grade.

**Student Learning Outcomes:**

Upon completion of the course, students will be able to:

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

## COURSE REQUIREMENTS

**Instructional:** Lecture.

**Attendance:** It is expected that you attend classes daily and it is your responsibility to sign the daily class roll sheet. It is expected that you follow the guidelines set forth by the Class Attendance Policy in the current undergraduate catalogue.

**Exams:** There will be three midterm exams and a comprehensive final exam for this course.

**Exam 1: Friday February 20<sup>th</sup> (5<sup>th</sup> week)**

**Exam 2: Friday, March 27<sup>th</sup> (10<sup>th</sup> week)**

**Exam 3: Friday, April 24<sup>th</sup> (14<sup>th</sup> week)**

**Final Exam: Wednesday, May 13<sup>th</sup> 8:00 – 10:00 am.**

**Home work/Quizzes:** You are encouraged to try all the homework problems. There will be announced quizzes from the assigned homework problems.

## COURSE GRADES

**Grading policy:** The course grade consists of

3 Midterm Exams:                      300 points

|             |            |
|-------------|------------|
| 8 Quizzes:  | 70 points  |
| Final Exam: | 130 points |
| -----       |            |
| Total:      | 500 points |

**Notes:**

- Lowest midterm grade will be replaced by the final exam grade if the final exam grade is higher.
- Lowest quiz grade will be dropped.
- Extra credit: You will receive extra credit for attending the Mathematics colloquium (which will be announced during the semester) and attending math club activities.

**Grading Scale:**

A: 90 – 100%, B: 80 – 89%, C: 70 – 79%, D:60 – 69%, F: 0 – 59%

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| <b>COURSE AND UNIVERSITY PROCEDURES/POLICIES</b> |
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**Withdrawal Policy:**

Concerning the deadlines and consequences of withdrawals please check on:  
<https://ems.tamuc.edu/MasterCalendar/MasterCalendar.aspx>

**Make-up work:**

No late tests will be given. If you miss a test, the final will be used to replace that score. No late homework will be graded and weekly quizzes will not be repeated if missed. However, a percentage of the homework and quiz grades will be dropped to cover days when an absence is unavoidable.

**Getting Help:**

You are welcome and encouraged to use office hours if you need any help during the semester. Further you can find free tutors at the Math Skills Center located in Binnion Hall 328.

**Academic Integrity:**

Texas A&M University –Commerce has explicit rules and regulations governing academic dishonesty and academic misconduct. These policies are stated in details in the student’s Guide Handbook. Each students is expected to read this document and abide by the contained polices. These university polices will be followed in class. The minimum penalty an act of academic dishonesty will be a grade of 0 on the examination or homework assignments.

## **University Specific Procedures**

### **ADA Statement**

#### **Students with Disabilities**

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**

Texas A&M University-Commerce

Gee Library- Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

### **Nondiscrimination Statement**

A&M-Commerce 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.

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See *Code of Student Conduct from Student Guide Handbook*).