

# Syllabus for Math 3315, Linear Algebra and Matrix Theory

## Class information

Time: 9:05–10:00 AM, Monday, Wednesday, Friday

Location: Ratliff Building North 3040

## Instructor information

Name: Joseph Vandehey

Office Location: Ratliff Building North 4004

E-mail: jvandehey@uttyler.edu (**NOT** jvandehey@patriots.uttyler.edu)

Book: *Essential Calculus: Early Transcendentals* Second Edition  
by James Stewart

Office Hours: 1:00–4:00 PM Thursday or by appointment

We will use Canvas in this course. Homework assignments, grades, study guides, and even this syllabus will all be posted to Canvas.

## 1. COURSE CONTENT

Study of finite dimensional vector spaces and linear transformations. Emphasis is given to the basic theory of matrices. This will cover most of chapters 1–6 in your textbook.

## 2. STUDENT LEARNING OUTCOMES

Upon completion of this course, students should be able to do the following.

- Understand and use abstract mathematical concepts (Critical Thinking)
- Solve systems of linear equations
- Perform matrix arithmetic operations
- Represent linear transformations by matrices
- Determine dimension and bases for finite dimensional vector spaces
- Find eigenvalues and eigenspaces
- Diagonalize matrices

## 3. GRADING

Class item	Percent of total grade
Homework	20%
Midterms	50%
Final	30%

The lowest homework score will be dropped.

At the end of the semester, your final letter grade will be determined *roughly* as follows:

90% or higher	A
Between 80% and 90%	B
Between 70% and 80%	C
Between 60% and 70%	D
60% or lower	F

Any deviations from the above rubric will only be to your benefit.

## 4. HOMEWORK

There will be a homework assignment due every Friday at the start of class, except for the first week. As this is an upper division math course, the expected quality of your work is higher. Your calculations should be neatly presented and your exposition, where appropriate, should be clear.

## 5. MIDTERMS

There will be two midterms during this semester.

Exam 1	Friday September 24, Week 5
Exam 2	Friday October 29, Week 10

Midterms will be held in class and last the full class period. If you are late to class, you will not be granted additional time to complete your midterm.

## 6. FINAL

The final for this class will be held on Friday Dec 10, from 8:00–10:00 AM.

The final WILL be cumulative.

## 7. ADDITIONAL COMMENTS

- (1) Exceptions to the above rules will be made in the case of extreme circumstances (death in the family, severe illness, etc.).
- (2) There is no special attendance policy for this course.
- (3) Please note that September 3rd is the census date for this course, which is the deadline for all registration and schedule changes.
- (4) Cheating on exams is strictly prohibited and carries severe consequences, up to and including expulsion from the university. You are, however, actively encouraged to work together on homework assignments, provided you write up your own solutions and hand them in independently.
- (5) Calculators, phones, tablets, laptops, or any other computing or communication devices are not permitted on quizzes or tests. Use of them will be considered cheating.
- (6) If you believe I have graded an exam in error, come see me at the end of the class in which I handed it back. Leaving class with the quiz or exam means you accept the grade you have been given.
- (7) I frown upon the use of erasers on tests. They make me sad.  
If you think your work is wrong, cross it out. Do not erase! I cannot give partial credit for work that has been erased and I can no longer read.
- (8) Important campus-wide policies that you should be aware of can be found at the following link: <https://www.uttyler.edu/academicaffairs/files/syllabuspolicy.pdf>

**UT Tyler Resources for Students.**

- The Mathematics Learning Center, RBN 4021. This is an open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Writing Center (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu)
- UT Tyler Tutoring Center (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu)
- UT Tyler Counseling Center (903.566.7254)

*This syllabus is a general guideline for the course. Deviations may be necessary as the semester progresses.*