Expected Learning Outcomes: Students develop skill in manipulating with matrices and understand their relationship to linear systems. They understand the concept of bases and vector spaces, as well as, eigenvectors and eigenspaces. In particular, students learn to 1. recognize vector spaces, and compute their bases, 2. express a linear transformation as a matrix, 3. perform basic matrix manipulations, and compute the determinant of a matrix, 4. compute eigenvalues and eigenvectors, 5. use the Gram-Schmidt process, 6. find the Jordan form of a matrix.

Chapters to cover and approximate days for each

1. Chapter 1 - Sections 1-4, .................................................................7 days
   (p. 11, ex. 1-5, 6 a.-d., p. 25, ex. 1-3, 5 a.-f., 6 a.-c.8-10, p.57, ex. 1-8, 10, 11, 14, p. 69, ex. 1-12.)*
2. Chapter 2 - Sections 1-3 .................................................................3 days
   (p. 96, ex. 1-6, 11, p. 103, ex. 1-4, 7, 9, 12, 16, p. 109, ex. 2, 3.)
3. Chapter 3 - Sections 1-6 .................................................................8 days
   (p. 121, ex. 1-2, 4, 5, p.131, 1-4, 6, 9-11, 17, p. 144, ex. 1, 2, 5, 6-8, 10, p. 150, ex. 1, 3, 4, 5, 8, p. 161, ex. 1-7, p.167, ex. 1-4.)
4. Chapter 4 - Sections 1-3 .................................................................6 days
   (p. 182, ex. 1, 4-6, p. 196, ex. 1-4, p. 204, ex. 1, 2)
5. Chapter 5 - Sections 1-3, 5-6 ............................................................9 days
   (p. 223, ex. 1-13, p. 233, 1, 2, 4, 5, 8, 9, p. 243, ex. 1-5, p/ 270, ex. 1-3, 6-9, p. 281, ex. 1-5)
6. Chapter 6 Sec.1-3 .................................................................4 days
   (p. 310, ex. 1-9, p. 323, ex. 1-2, p. 340, ex. 1-8)

Total 37 days

Assessment of Learner Outcomes (Grading Policy): Assessment of learning outcomes will be based on classroom activities including quizzes, in-class exams and several graded homework assignments. In more detail:

1. There will be 3 exams given in class. Each exam counts as one score. A missed exam gives a score of 0, i.e., there are no makeup exams — although, under extreme circumstances arrangements can be made to take a test in advance. Technology: The use of computers will be important. Software will be provided. Calculators may also be used to do homework but students are encouraged to learn and use the provided software. A memory stick with at least 100 MB free would be useful. You will also need to use your TDrive.

2. There will be numerous online homework assignments using WebWork. The homework will count as one score.

*All these exercises are suggested problems like ones you may expect on the exams. Answers to many of these problems can be found in the back of the book. Graded homework will be given online using Webwork.
In computing your grade for homework your lowest homework score will be dropped.

3. There will be approximately 10 short in-class quizzes. The quizzes will count as one score. In computing your grade for quizzes your lowest quiz score will be dropped.

4. There will be a comprehensive final exam which will count for 2 more scores.

After the final you will have 7 scores. Your final grade for the course will be determined by the average of 5 out of 7 scores.

Grading scale: 90-100, A; 80-89, B; 70-79, C; 60-69, D; < 55, F

**Important Dates:**

1. August 31, Thursday, Last day for student-initiated add on the Web.
3. September 13, Wednesday, Last day for student-initiated drop on the Web.
4. October 30, Monday, Last day to drop a course. Last day to declare pass/fail intentions.
5. November 22 - 26, Wednesday - Sunday, Thanksgiving holiday.
6. November 30 - December 6, Thursday - Wednesday, Period of no examinations except for makeup exams or scheduled lab exams.
7. December 6, Wednesday, Last day of classes.
8. Final Exam: Tuesday, December 12, 7:30 a.m. to 10:00 a.m. (location announced in class before exam time)

**Attendance:** Attendance will be taken as needed. You are expected to attend every class. In particular students are responsible for any and all information given in class, e.g., test dates, quizzes, assignments, and general course material.

**ADA Accommodations:** Any student who, because of a disability, may require special arrangements in order to meet course requirements should contact me as soon as possible to make necessary arrangements. The instructor may request verification of need from the Dean of Students Office.

**Religious Holy Day:** 1. “Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20. 2. A student who intends to observe a religious holy day should make that intention known to the instructor prior to the absence. 3. Any a student who is to be absent from classes for the observance of a religious holy day should arrange with the instructor to make up the missed work. 4. A student who is excused for religious observance may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

**Student Honesty and Civility in the Classroom:** Cheating of any kind will not be tolerated and may result in severe academic sanctions. Disruptive behavior during class will not be tolerated. All cell phones are to be turned off upon entering the classroom – there are no exceptions. Disruptive behavior includes talking out of turn, cell phones ringing during class, repeatedly arriving late or leaving class early, sleeping in class. Class starts promptly on the hour.

**Tutoring Resources:** 1. Missouri Club: a free tutoring service provided by math majors in MA 106; 2. PASS center: a free tutoring service in WEST HALL 205; 3. A list of private (pay) tutors is available in room 201 (main math office)