Instructor: Dr. Jeff Morgan, jjmorgan@central.uh.edu.

Office Hours: By appointment.

Course Homepage: http://www.math.uh.edu/~jmorgan/Math2331 Active for Fall by 8/24.


Note: I will make extensive use of the online matrix calculator (linked from the course homepage). I will also occasionally use Excel and Matlab in this course.

Prerequisite: Credit for or concurrent enrollment in MATH 1432.

Course Material: The material for the course is a subset of the material listed in the text above. More specifically, we will cover the sections below.

Course Description: Solutions of linear systems of equations, vector spaces and subspaces, orthogonality, determinants, linear transformations.

(1) Linear Equations in Linear Algebra
   1.1 Systems of Linear Equations
   1.2 Row Reduction and Solution Sets of Linear Systems
   1.7 Linear Independence
   1.8 Introduction to Linear Transformations
   1.9 The Matrix of a Linear Transformation

(2) Matrix Algebra
   2.1 Matrix Operations
   2.2-3 The Inverse of a Matrix and Characterizations of Invertibility
   2.4 Partitioned Matrices

(3) Determinants
   3.2 Properties of Determinants, the Determinant and Invertibility
   3.3 Cramer's Rule, Volume, and Linear Transformations
Recorded Lectures: Lectures will be recorded and posted after the live online meeting on Thursday from 4-6pm. A link will be given on the course homepage to the online meeting room. Students who cannot attend the online live meeting can watch the recording. Additional recordings and video help with the homework will also be posted.

Discussion Board Activity: All students are expected to discuss the course material via the discussion board. Up to 5% of the final grade will be based upon discussion board activity.

Electronic Homework: FITB homework (electronic) and/or online quizzes will be given in the course

Homework: Written homework will be given many weeks during the semester, with the due dates noted on the course homepage. Students will submit their written homework by scanning
and uploading their work. **Instructions will be given.**

**Exams:** A proctored midterm and final exam will be given on the UH campus. **We will work with students who are not in the Houston area to accommodate testing.** The dates and times of the exams will be announced later in the semester.

**Grades:**

- Discussion Board Activity – 10%
- Online Electronic Assignments (including FITB) - 12.5%
- Written Homework - 12.5%
- Midterm - 30%
- Final Exam – 35%

**Important Note:** Students must score at least 50% on the final exam to pass the course (which will not be a problem for anyone keeping up and doing their own work in the course).
- 90% and above - A
- at least 80% and below 90% - B
- at least 70% and below 80% - C
- at least 60% and below 70% - D
- below 60% - F

**Whenever possible, and in accordance with 504/ADA guidelines, we will attempt to provide reasonable academic accommodations to students who request and require them.**