MATH 304 Linear Algebra

Tentative schedule

Spring 2021

This tentative schedule might be revised during the semester without notification. See the course website for the up-to-date schedule.
The purpose of this schedule is to provide information about what sections of the textbook are expected to be covered in this course and when they are expected to be covered in the lectures.
It will be very helpful for you to absorb the materials during the lectures if you read the textbook in advance.

- Week 1 (Jan 19, 21).

  1.3 Matrix arithmetic

  1.1 Systems of linear equations

- Week 2 (Jan 26, 28)

  1.1 Systems of linear equations

  1.2 Row echelon form

  1.4 Matrix algebra

  Assignment 1 due Jan 28

  Quiz 1

- Week 3 (Feb 2, 4)

  1.5 Elementary matrices

  2.1 The determinant of a matrix

  Assignment 2 due

  Quiz 2

- Week 4 (Feb 9, 11)

  2.2 Properties of determinants

  2.3 Additional topics and applications

  Review for Midterm 1

  Assignment 3 due

  Quiz 3

- Week 5 (Feb 16, 18)

  Courses are cancelled due to snow

- Week 6 (Feb 23, 25)

  3.1 Definition and examples (for vector spaces)

  3.2 Subspaces

  3.3 Linear independence

  Assignment 4 due

  Quiz 4

- Week 7 (Mar 2, 4)

  Mar 2, Texas Independent Day, No class

  First Midterm is on Mar 4

- Week 8 (Mar 9, 11)

  3.3 Linear independence

  3.4 Basis and dimension

  3.5 Change of basis

  Assignment 5 due

  Quiz 5

- Week 9 (Mar 16, 18)

  3.5 Change of basis

  3.6 Row space and column space

  Assignment 6 due

  Quiz 6

  Mar 18, Redefined Day, No class

- Week 10 (Mar 23, 25)

  3.6 Row space and column space

  4.1 Definition and examples (for linear transformation)

  4.2 Matrix representations of linear transformations

  Assignment 7 due

  Quiz 7

- Week 11 (Mar 30, Apr 1)

  4.3 Similarity

  6.1 Eigenvalues and eigenvectors

  Assignment 8 due

  Quiz 8

- Week 12 (Apr 6, 8)

  6.3 Diagonalization

  Assignment 9 due

  Quiz 9

  Second Midterm is on Apr 8

- Week 13 (Apr 13, 15)

  5.2 Orthogonal subspaces

  5.3 Least squares problems

  Assignment 10 due

- Week 14 (Apr 20, 22)

  5.3 Least squares problems

  5.5 Orthonormal sets

  5.4 Inner product spaces (very brief, not in the final exam)

  Assignment 11 due

  Quiz 10

- Week 15 (Apr 27, 29)

  5.6 The Gram-Schmidt orthogonalization process

  Review

  Quiz 11

  (Assignment 12 is for self-practice, has no due date and does not contribute points for computing semester grades.)