

Math 2210Q Syllabus
Fall 2017

Instructor: Jeffrey Connors

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Office: ACD 114C

Office hours: MW 3:15-4:15 PM, but you can always drop in to see if I am available, or e-mail to set up an appointment.

Class time and room: MWF 11:15 AM - 12:05 PM in ACD 304

Text: *Linear Algebra and its Applications* by Lay, Fourth Edition.

Homework: Homework will be assigned for each section and collected according to the schedule shown below. Late homework is penalized at a rate of 10% once late, with an **additional** 10% deduction for each full week that passes after the due date. Example 1: you turn it in the class after it is due, then there is a 10% deduction for lateness. Example 2: you turn it in the following Friday, 1 week after it was due. The total deduction is still 10%. Example 3: you turn it more than 7 days late, less than two weeks late. Then there is a total 20% deduction for lateness.

Quizzes: No quizzes.

Calculators: The use of calculators will not be permitted on exams. Calculators may be used on homework.

Grading policy: The course grade is 40% homework, 15% exam 1, 15% exam 2 and 30% for the final exam.

Make-up exams: These will only be available with permission granted prior to the start of the exam. There must be extenuating circumstances to receive permission for a make-up exam.

Final exam: I will update this when I receive the information. **The exam is cumulative.**

Dates	Book Sections	Topics
Aug. 28-Sept. 1	1.1, 1.2	Systems of linear equations, row reduction, echelon forms
Sept. 4		Labor Day - no class
Sept. 6, 8	1.3	Vector equations, matrix form
Sept. 11-15	1.4, 1.5, 1.7	Matrix form, solution sets, linear independence
Sept. 18-22	1.7, 1.8, 1.9	Linear independence, linear transformations
Sept. 25-29	1.9, 1.10, 2.1	Linear transformations and models, matrix operations
Oct. 2-6	2.1, 2.2	Matrix operations, inverse matrices
Oct. 9	2.3	Inverse matrices
Oct. 11	—	Review for Exam 1
Oct. 13	—	Exam 1
Oct. 16-20	4.1, 4.2	Vector spaces and connections to linear transformations
Oct. 23-27	4.3, 4.4	Linear independence, bases, coordinate systems
Oct. 30 -Nov. 3	4.5, 4.6	Dimension and rank
Nov. 6-10	5.1, 5.2	Eigenvectors, eigenvalues, characteristic equation
Nov. 13	5.3	Diagonalization
Nov. 15	—	Review for Exam 2
Nov. 17	—	Exam 2
Nov. 20-24		Thanksgiving break - no class
Nov. 27 - Dec. 1	6.1, 6.2	Inner products, orthogonality, orthogonal sets
Dec. 4	6.4	Gram-Schmidt process
Dec. 6	6.4	Finish 6.4, begin review for final
Dec. 8	—	Review for Final Exam

HOMEWORK:

Book Section	Problems	Due date
1.1	1, 3, 10, 13, 22, 24	Sept. 8
1.2	1, 3, 7, 8, 19, 21, 22	Sept. 8
1.3	1, 6, 9, 12, 14, 21, 26	Sept. 15
1.4	6, 7, 9, 12, 22, 24, 25, 40	Sept. 22
1.5	2, 6, 12, 23	Sept. 22
1.7	1, 6, 8, 9, 15, 20, 22, 33, 34	Sept. 29
1.8	2, 4, 7, 11, 16, 19, 20	Sept. 29
1.9	1, 2, 3, 6, 8, 19, 27	Oct. 6
1.10	2, 3, 9, 11	Oct. 6
2.1	1, 4, 7, 9, 12, 16, 21, 22, 27	Oct. 13
2.2	3, 4, 6, 10, 26, 31, 32	Oct. 13
2.3	2, 4, 8, 12, 15	Oct. 20
4.1	2, 3, 8, 10, 12, 14, 16, 18	Oct. 27
4.2	1, 3, 5, 16, 18, 22, 24, 26	Oct. 27
4.3	2, 4, 6, 8, 10, 14, 19, 22	Nov. 3
4.4	3, 7, 8, 12, 14	Nov. 3
4.5	4, 6, 8, 14, 16, 20	Nov. 10
4.6	1, 4, 6, 8, 12, 15, 16, 18	Nov. 10
5.1	3, 4, 8, 9, 13, 14, 18	Nov. 17
5.2	2, 4, 14, 16	Nov. 17
5.3	2, 4, 6, 8, 10, 12	Dec. 1
6.1	2, 4, 8, 10, 16, 18, 22	Dec. 8
6.2	2, 6, 10, 14, 20	Dec. 8
6.4	2, 6, 10	Dec. 8