

Math 2700-003 Course Syllabus - Spring 2014

Meets: TR 11:00-12:20 in BLB 260

Instructor: Dr. Pieter Allaart

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Office Hours: TR 9:30-10:30 and 1:00-2:00, and by appointment. (There's a slight chance that these will change.)

You are also welcome to drop by outside office hours without an appointment. However, there will be occasions when I will be busy, and I may ask you to wait or to come back later.

Book: Linear Algebra and its Applications (4th Edition), by David C. Lay.

Prerequisite: Math 1720

Grading: Grades will be based on three regular exams, homework, and a final. The regular exams are worth 100 points each, but your lowest score of the three regular exams only carries half weight. Thus, the regular exams are worth 250 points total. The homework is worth 100 points total, and the final is worth 150 points. This gives you a total of 500 possible points. To earn an A it is sufficient to make a total of 450 points, 400 for a B, 350 for a C, and 300 for a D. In fact, the grading scale may be slightly lower than the numbers indicated, depending on the level of difficulty of the exams.

Exams: The regular exams will be given in class on February 13, March 20 and April 24. (There is a slight chance these dates will change.) If you show up late for an exam, without a valid excuse, do not expect to be given extra time for the exam. The final exam is on Tuesday, May 6 at 10:30. If you miss an exam due to illness or other circumstances beyond your control, you should contact me within 24 hours in order to be granted a make-up exam. The make-up exam may be different from the original.

Homework: Homework will be assigned at the end of each class period, and will be collected the following class period. Even though not the entire homework assignment will be graded, you are expected to do all the assigned problems because you can only master the material through ample practise. You are expected to spend at least two hours on work for the course outside class for every class hour. That makes six (6) hours per week! Your two lowest homework grades will be dropped. As a consequence, late homework will not be accepted, NO EXCEPTIONS. Homework which is messy or difficult to read will not be graded. If you could not come to class, and missed the assignment, it is your responsibility to find out what the assignment is (see below).

Web page: Homework assignments and other important information concerning this class will also be posted on the web at

<http://www.math.unt.edu/~allaart/classes.html>

Whenever you miss class, check this page to find out about assignments that you missed. *Posting homework assignments on the web is an extra service to you. In the rare instance that I forget to do so, this does not mean no homework is due - contact me to find out the assignment.* Do not look for homework assignments, exam reviews etc. on Blackboard - I do not use Blackboard for this course. You will find my personal class web page much more reliable and easier to use.

Student Evaluation of Teaching Effectiveness: The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Attendance: Attendance is not required for this class. However, I strongly recommend that you come to class each class day, in order to keep track of what is going on and not to fall behind.

Extra credit: Do not expect to be able to do some extra work to help your grade either before or after the final exam. There will be no extra credit other than perhaps an extra problem on an exam. Your best bet to help your grade is to do the required work at the time it is assigned.

Disabilities: The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

Cheating: No cheating will be tolerated. Anyone caught cheating will be subject to any penalty the instructor deems appropriate, up to and including an automatic F for the course. Furthermore, a letter will be sent to the appropriate dean.

List of topics:

Lecture(s)	Section(s)	Topic(s)
1	1.1	Systems of linear equations
2	1.2	Row reduction and echelon forms
3	1.3	Vector equations
4	1.4	The matrix equation $\mathbf{Ax} = \mathbf{b}$
5	1.5	Solution sets of linear systems
6	1.6	Applications of linear systems
7	1.7	Linear independence
8	-	Review
9	-	Exam 1
10	1.8	Introduction to linear transformations
11	1.9	The matrix of a linear transformation
12	2.1	Matrix operations
13	2.2	The inverse of a matrix
14	2.3	Characterization of invertible matrices
15	3.1	Introduction to determinants
16	-	Review
17	-	Exam 2
18	3.2	Properties of determinants
19	4.1	Vector spaces and subspaces
20	4.2	Null spaces, column spaces, and linear transformations
21	4.3	Linearly independent sets; bases
22	4.5, 4.6	The dimension of a vector space, rank
23	5.1	Eigenvectors and eigenvalues
24	-	Review
25	-	Exam 3
26	5.2	The characteristic equation
27	5.3	Diagonalization
28	-	Final exam review