

Differential Equations and Linear Algebra
math 210, Fall 2018

Class: MWF 8:30-9:40 in Briggs 423

Instructor: Professor Alan Parks, Briggs 409, x6738, parksa@lawrence.edu

Documents available at <http://www2.lawrence.edu/fast/parksa>

Text: *Introduction to Differential Equations and Linear Algebra*, Fifth Edition

Problems document

My schedule

Course schedule

date	text	topic
W 9/12	1.1, 2.1	Integration, Separable DE's
F 9/14	2.2	First Order Linear DE's
M 9/17	2.3	Applications
W 9/19	3.1, 3.2	Matrix Algebra
F 9/21	4.1, 4.2	Linear Equations
M 9/24	3.3	More on algebra and equations
W 9/26		Problems and applications
F 9/28	5.1	Matrix Inverses
M 10/1	5.2	Curve Fitting
W 10/3		Exam 1
F 10/5	6.1, 6.2	Determinants
M 10/8	1.2, 1.3, 1.4	Complex Exponential Function
W 10/10	7.1, 7.2	Constant Coefficient DE's
F 10/12	7.2, 7.3	Repeated Roots; Trigonometric Solutions
M 10/15	7.4	Non-Homogeneous Problems
W 10/17	7.5	Applications
M 10/22	7.6	Applications and Uniqueness
W 10/24	8.1, 8.2	Vector Spaces and Finite-Dimensional Spaces
F 10/26	8.3	Dimension and Basis
M 10/29	8.3	Computing Bases
W 10/31		Exam 2
F 11/2	9	Eigenvalues
M 11/5	10.1, 10.2	Systems of Linear DE's
W 11/7	10.3	Exponential of a Matrix
F 11/9	10.4, 10.5	Applications
M 11/12	11.1	Linear Transformations
W 11/14	11.2	More on Linear Transforms
S 11/18		Final Exam (3:00-5:30)

Course Information math 210

Your part. You are expected to attend class, participating interactively, to read the text, and to complete all assignments and exams at their scheduled dates.

Accommodations. If you believe you need an adjustment in exam duration, or in any other aspect of the course, you are invited to speak with me to work out an arrangement. You can always consult with the Center for Academic Success to obtain a more formal channel. When extended time is appropriate for the two in-class exams, you will be allowed to start earlier than 8:30.

Honor Pledge. Because problem sets and exams figure into your course grade, please remember to reaffirm the Honor Pledge before turning in these works.

Tutoring and help. You are always allowed to ask me about any topic in the course and any problem in our text or in another text – in class or in my office. I expect you to seek me out when you have questions on the material or assigned problems. Outside of my scheduled classes, I am usually in my office during the day, and I am accessible evenings via email. There is no peer tutoring through the CAS for this course. Learning the material through class, reading, and working problems is a main goal of the course.

Collaboration. In general, I want each of you to learn the course material thoroughly. When collaboration with other students is allowed on problem sets, the specifics will be indicated clearly and explicitly. In other words, if a given assigned problem does not have an indication of allowed collaboration, then you are expected to work that problem on your own or with my help individually. Exams will not involve collaboration. On the other hand, in going over material covered in class, you may work with anyone you wish.

Concerning additional text and online references to the course material: please clear any of these sources with me first and then you should list them in reaffirming the Honor Pledge. I want to be sure you understand what you are reading and that the referenced material is appropriate to what you are learning.

Grades. Assuming that you are attending class and turning in work on time, your grade will be computed from 15 units: 5 units for problem sets, 3 units for each of the two midterm exams, 4 units for the final exam. I make allowances for progress and for unevenness -- e.g. one grade that is significantly lower than the others.