

Math 20580 Introduction to Linear Algebra and Differential Equations Spring 2012

Textbooks:

- Linear Algebra, and its applications, 4th edition, by David C. Lay, Addison Wesley, 2006 or 2012, ISBN 978-0-321-38517-8
- Elementary Differential Equations and Boundary Value Problems, 9th edition, by William E. Boyce and Richard C. DiPrima, Wiley, 2009, ISBN 978-0-470-38334-6.

What will we cover? We will spend 2/3 of the semester on linear algebra, covering chapters 1 through 6 in Lay's book. The remaining 1/3 of the semester (and the entirety of Math 30650, should you take it) will be spent on differential equations. In this semester, we'll cover Chapters 1 through 3 of Boyce and DiPrima. Time is short, and we won't have much time to discuss applications of the math we're learning, particularly the linear algebra. So we highly encourage you to look at the chapter introductions and some of the "application" sections (e.g. 1.6) in Lay's book. One can plausibly argue that linear algebra is the fundamental tool in modern applications of mathematics, used to determine airline schedules, rank webpages in search engines, compress electronic data, model the flow of oil underground, and so on and on and on.

Instructors: Follow the link to find office hours and other useful information about each instructor.

Section	Labs	Instructor	Class Schedule			email@nd.edu
20580-01		Laurence Taylor	8:30-9:20	NIEU	184	taylor.2@nd.edu
	22580-11	Katie Ansaldi	11:00-11:50	HAYE	231	kansaldi@nd.edu
	22580-12	David Karapetyan	12:55-1:45	HAYE	231	dkarapet@nd.edu
20580-02		Mario Borelli	10:40-11:30	HAYE	117	borelli.1@nd.edu
	22580-21	Han Liu	11:00-11:50	HAYE	117	hliu5@nd.edu
	22580-22	Han Liu	2:00-2:50	HAYE	229	hliu5@nd.edu
20580-03		Matthew Dyer	11:45-12:35	DBRT	136	dyer.1@nd.edu
	22580-31	David Karapetyan	3:30-4:20	HAYE	229	dkarapet@nd.edu
	22580-32	David Karapetyan	12:55-1:45	HAYE	229	dkarapet@nd.edu
20580-04		Dennis Snow	3:00-3:50	DBRT	140	snow.1@nd.edu
	22580-41	John Holmes	3:30-4:20	HAYE	117	jholmes6@nd.edu
	22580-42	John Holmes	2:00-2:50	HAYE	117	jholmes6@nd.edu
20580-05		Mario Borelli	9:35-10:25	HAYE	117	borelli.1@nd.edu
	22580-51	Somayeh Vojdani	9:30-10:20	HAYE	229	svojdani@nd.edu
	22580-52	Somayeh Vojdani	12:30-1:20	HAYE	117	svojdani@nd.edu

Schedule: A tentative schedule of the material to be covered in each class is available [here](#). You are expected to read the material before each class. We will not necessarily cover all the details of the section. Please come to class with questions about the aspects you did not understand from your reading and for which you still need clarification after or during the in-class lecture.

Homework: On the webpage, a list of the homework assignment for the material covered in each section is given. The due dates for this homework will be added as we proceed. You should attempt the problems the day that they are assigned, and seek help on those aspects of the material you are not understanding so as not to fall behind. The homework submitted must be stapled - no loose pages. If you tear it out of a binder, please be sure it tears along the perforated line and does not have little scraps hanging off - see [picture](#).

Tutorial and Quizzes: Attendance at your Tutorial each Thursday is mandatory. Most weeks in Tutorial you will have a short quiz to help you stay current with the material. Exceptions will be the first

week of classes and the weeks in which we have a Midterm Exam; for these weeks you will have tutorial, but no quiz.

Exams, Homework and Points:

	Date	Day	Time	Room	Points
Midterm 1	TBA	XXX.	8:00-9:15	On course webpage	100
Midterm 2	TBA	XXX.	8:00-9:15	On course webpage	100
Midterm 3	TBA	XXX.	8:00-9:15	On course webpage	100
Final	TBA	XXX.	1:45-3:45	On course webpage	150
Homework	Assigned and due as indicated on the web page				60
Quizzes	Computed as $40 \cdot \frac{(\text{sum your score on each quiz})}{(\text{sum of total possible on each quiz})}$				40
Total points:					550

Exams may be made up only with an official University excuse. If you oversleep go immediately to the scheduled exam site or, if after 9:15, to the Math. Office (255 Hurley Hall). Conflicts with exams in other courses must be resolved by January 27. The departmental exam schedule is [here](#). The official University policy on exam conflicts is [here](#) (scroll down to the Examinations section). If you will not be taking one or more of the exams, let your instructor know by email by January 27.

There are no makeups for quizzes. If you miss a quiz for an excused absence you will have a zero for the quiz and a zero for the total possible on that quiz so that quiz neither hurts your grade nor helps it.

Calculators will not be allowed on exams or quizzes.

Honor Code: The Homework, Quizzes and all Exams are conducted under the [honor code](#). Exams and Quizzes are closed book and are to be done completely by yourself with no assistance from others. Although collaboration on Homework is encouraged, directly copying the work of others without contributing to working out the solution would constitute an infringement of the honor code. Because tutorials meet at different times, you must attend your assigned tutorial section, not a different one. If it is necessary to change tutorial sections see your instructor. It is an honor code violation to discuss the quizzes until Thursday evening.