

Course Syllabus for Math 54
MWF 2:10–3:00, P. Vojta, Spring 2015
To be kept for the whole semester

Text: Lay, Nagle, Saff, & Snider, *Linear Algebra and Differential Equations* (UC Berkeley custom edition).
(See the bookstore web site for exact details.)

Prof. Vojta's office: 883 Evans

Prof. Vojta's office hours: M 12:30–1:30, WF 11–12; drop-in (no appointment necessary)

Course web page: <http://math.berkeley.edu/~vojta/54.html>

General information concerning the syllabus on the reverse side:

- (1) You are requested to do the assigned reading *before* each lecture. Most lectures will begin with clicker questions on the readings. Note that mathematical texts are not meant to be read like novels: very often you will come across passages that must be read many times before they make sense to you. In fact, you may find yourself stuck on *one sentence* for 30 minutes or longer. This does not happen often, but when it does, don't be unduly alarmed. Being stuck there means there is probably a gap in your understanding. Just be glad you find this out now instead of during an exam.
- (2) Never fall behind in this course, either in the reading assignments or in the homework assignments. Mathematics has the peculiar characteristic that each step is built on the preceding one, so the failure to understand one step would likely mean the failure to understand all the steps that follow.
- (3) Problem sets get rather heavy at times. This is intentional. Sometimes there is simply no substitute for repetitive drills. Homework (and reading) assignments are subject to change.
- (4) Homework assignments will all be from the book (there will be no online assignments). Problem sets do not need to be handed in, but should be done by Tuesday of the following week. Answers to even-numbered exercises will be available on bCourses in pdf format at around that time.
- (5) We will use i>clickers in class. Results will not count toward your course grade (but this may change in the future if things don't work out). See the course web page for more details.
- (6) Quizzes will be given in discussion sessions most weeks.
- (7) There will be two midterms (2/27 and 4/17) held during normal class hours. If exam times violate your religious creed, you need to inform me about this no later than the second week of classes.
- (8) This course is in **exam group 6**: Tuesday, May 12, 2015 11:30am–2:30pm. Do not enroll in this course if you cannot take the final exam at that date and time, whether because of a conflict, too many exams on that day, or any other reason. (For your other courses, check the “exam group numbers” in the online Schedule of Classes.)

Things worth knowing:

- (1) Enrollment questions (e.g., getting into a discussion section or switching sections) are handled by teleBears. I have no control over enrollment, so please do not send me email asking to get into this class or any particular discussion section. If you have questions about enrollment send them to Thomas Brown (brown@math.berkeley.edu).
- (2) You **must** attend the discussion section that you are registered for.
- (3) The course grade will be computed essentially as follows: Midterm I 10%, Midterm II 20%, work in section (e.g., quizzes and homework) 25%, Final Exam 45%.

Week	Dates	Reading	Exercises
1	1/20–1/23 (1/19 is a holiday)	1.1–1.4	p. 12: 5, 7, 13, 15, 18, 31; p. 24: 3, 11, 15, 19, 26; p. 34: 5, 13, 14, 26, 28, 32.
2	1/26–1/30	1.5, 1.7–1.9, 2.1	p. 42: 9, 11, 13, 15, 25, 33, 36; p. 49: 5, 9, 13, 17, 21, 37, 38; p. 62: 5, 8, 13, 33, 36, 40; p. 70: 5, 10, 12, 15, 17, 20, 32; p. 80: 10, 12, 19, 34.
3	2/2–2/6	2.2, 2.3, 3.1, 3.2	p. 102: 3, 5, 8, 9, 10, 23, 34; p. 111: 7, 8, 12, 24, 31, 38; p. 117: 5, 8, 23, 27, 36, 39; p. 155: 4, 9, 12, 17, 26, 27, 29, 38; p. 163: 5, 8, 14, 18, 21, 25, 34, 37.
4	2/9–2/13	3.3, 4.1, 4.2	p. 172: 3, 9, 13, 20, 21, 30; p. 183: 2, 7, 8, 11, 16, 21, 27, 30; p. 194: 3, 6, 9, 12.
5	2/17–2/20 (2/16 is a holiday)	4.3–4.5	p. 194: 28, 34; p. 201: 3, 5, 6, 14, 15, 19, 26, 29, 34; p. 210: 3, 5, 7, 11, 13, 18, 20, 24, 28; p. 217: 5, 7, 11, 14, 26, 31.
6	2/23–2/27	4.6, 4.7 MT I: 2/27	p. 224: 3, 7, 12, 15, 21, 22, 30, 32; p. 230: 1, 5, 9, 12, 16, 20a.
7	3/2–3/6	5.1–5.4	p. 241: 5, 7, 12, 15, 25, 26; p. 249: 3, 11, 17, 18, 20; p. 256: 5, 7, 9, 13, 17, 24, 32; p. 263: 3, 7, 11, 20, 22, 25.
8	3/9–3/13	6.1–6.4	p. 282: 5, 9, 13, 17, 22, 26, 30; p. 290: 3, 9, 11, 16, 22, 27, 28; p. 298: 1, 3, 9, 11, 15, 24; p. 304: 3, 9, 13, 20.
9	3/16–3/20	6.5, 6.7, 7.1	p. 312: 3, 7, 11, 15, 20, 24, 25; p. 328: 3, 5, 7, 17, 19, 21, 25; p. 345: 9, 17, 28, 30, 35.
	3/23–3/27	Spring Break	
10	3/30–4/3	4.1–4.5	p. 399: 1, 3, 9; p. 407: 5, 9, 13, 19, 29, 31, 32, 35, 37, 39; p. 415: 17, 19, 27, 29a, 30, 37; p. 424: 3, 5, 6, 8, 31, 33, 35; p. 429: 1, 21, 27, 31, 36, 39, 46.
11	4/6–4/10	4.6, 6.1, 6.2, 9.1	p. 435: 3, 7, 9, 11, 15; p. 482: 2, 4, 10, 12, 17, 21, 34; p. 488: 3, 9, 14, 17, 19, 21; p. 503: 1, 4, 5, 7, 11, 12.
12	4/13–4/17	9.4–9.7 MT II: 4/17	p. 524: 3, 5, 11, 15, 23, 25, 28, 29; p. 535: 9, 13, 21, 33, 39, 45; p. 542: 1, 7, 13ab, 19; p. 548: 3, 9.
13	4/20–4/24	9.8, 10.1–10.4	p. 558: 3, 5, 21; p. 577: 3, 5, 11, 17, 19, 23, 28, 33; p. 592: 7, 8, 9, 16, 17, 24, 28; p. 599: 4, 7, 12, 17.
14	4/27–5/1	10.5–10.7	p. 611: 3, 8, 15, 18, 19; p. 622: 3, 7, 9; p. 634: 1, 5.
RRR	5/4–5/8	Review	(No more exercises!)
FINAL EXAM: Tuesday, 12 May, 11:30am–2:30pm			