Linear algebra and differential equations

Instructor: Vera Serganova

webpage: http://math.berkeley.edu/~serganov

Office hours: Monday, Wednesday 1-2:30 in 709 Evans

Text: Lay, Lay, McDonald, Nagle, Saff, Snyder, Lienar algebra and differential equations,

Custom edition for UC Berkeley

Homework:

Homework will be posted on the web.

It is strongly recommended

to read a section before the lecture that covers it.

Exams: There will be two midterms on Friday, September 27

and on Monday, October 28 during usual class hours.

Final Exam is on TUESDAY, DECEMBER 17, 2019 7-10P.

Grading policy:

Your grade will be computed according to the following

proportions: 5% lecture participation (top hat), 15% for quizzes, 20% for each midterm and 40% for the final.

We will be using the Top Hat (www.tophat.com

(Links to an external site.)

) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message.

You can visit the Top Hat Overview (https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide

(Links to an external site.)

) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation will be sent to you by email, but if don't receive this email, you can register by simply visiting our course website: https://app.tophat.com/e/241063

(Links to an external site.)

Note: our Course Join Code is 241063

Top Hat may require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing

(Links to an external site.)

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Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.

Enrollment:

I am not able to help you with this. Please do not send me email

asking to add you to the class. All questions concerning

enrollment should be addressed to Jennifer Sixt via enrollment@math.berkeley.edu.

Tentative Course Plan

Part 1, Linear Algebra.

Week 1

Wednesday 8/28. Sections 1.1, 1.2. p. 10 #2,3,7,11,17,18,21,28; p. 21 # 1,3,11,15,23,31.

Friday 8/30. Sections 1.3, 1.4. p.32 # 5,7,15,17,29; p.40 # 11,17,19,31.

Week 2

Monday 9/2. No class.

Wednesday 9/4. Sections 1.5,1.7. p.48 # 7,15,29,23,31; p.61# 3,11,17,27,33.

Friday 9/6. Sections 1.8, 1.9. p.69 #3,9,17,25,26, p. 79 #7,11,17,23.

Week 3

Monday 9/9. Sections 2.1, 2.2, 2.3. p. 102 #3,7,11,17,27; p.111 #3,11,13,21. p.117 #7,11,26.

Wednesday 9/11. Sections 3.1,3.2. p.169 #3,5,13,15,31,33,39.

Friday 9/13. Sections 3.2, 3.3 p.177 # 3,5,9,11,21,23,27,31; p. 186 # 3.15.17,25.

Week 4

Monday 9/16. Section 4.1. p. 197 #1, 5,7,9,13,25,27,33.

Wednesday 9/18. Section 4.2. p. 207 #1,3,5,15,17,19,27,31,35.

Friday 9/20. Sections 4.3, 4.4 p. 215 # 1,5,9,11,15,23,25; p. 224, # 3,5,7,11,23,27.

Week 5

Monday 9/23. Sections 4.5, 4.6. p.231 #1,5,11,13,21,25,26; p.238 #3,7,9,19,27,31.

Wednesday 9/25. Review.

Friday 9/27. Midterm.

Week 6

Monday 9/30. Sections 4.7, 5.1. p.244 #1,3,7,11,13 p.273 #3.5.11.15.19.21.26.

Wednesday 10/2. Sections 5.2, 5.3. p.281 #1,3,7,13,15,25; p.288 #1,4,7,17,29.

Friday 10/4. Section 5.4, 5.5. p.295 #1,3,5,9,11,15,25,26; p.303 #3,7,13,25.

Week 7

Monday 10/7. Section 6.1. p.338 #1,3,5,7,13,15,17,19,24,25,29,31.

Wednesday 10/9. Sections 6.2, 6.3. p.346 #3,5,11,13,15,27,29; p. 354 #3,5,7,11,13,19,22.

Friday 10/11. Section 6.4. p.360 #3,5,9,11,15,17,19.

Week 8

Monday 10/14. Sections 6.5,6.6. p.368, #1,3,5,7,9,13,15,19,21; p.376 #3,7,9.

Wednesday 10/16. Sections 6.7. p.384 #3,5,7,9,11,13,17,21,23.

Friday 10/18. Section 7.1 , p.401 #3,5,7,11,15,17,19,21,23,27,31.

Week 9

Monday 10/21. Section 7.2. p.408 #1,3,9,19,25.

Wednesday 10/23. Section 7.4. p 425 #3,7,13,17,19.

Friday 10/25. Review.

Part 2, Differential equations.

Week 10

Monday 10/28. Midterm.

Wednesday 10/30. Section 4.2, p.164, # 1,3,7, 13,17,21,23.

Friday 11/1. Section 4.3. p.172 # 5,9,15,17,27,29,35,37.

Week 11

Monday 11/4. Section 4.4, p.180 #3,5,7,11,13,21, 27.

Wednesday 11/6. Section 4.5, p.184 # 1,7,9,23,25.

Friday 11/8. Section 4.6, p. 191 # 7,11,17,23.

Week 12

Monday 11/11. No class,

Wednesday 11/13. Sections 9.1, 9.4, p.500 #3,5,7,13; p.521 # 1,3,5,13,15,23,25

Friday 11/15. Section 9.5, p.531 #11,15,17,21,23,31,35.

Week 13

Monday 11/18. Section 9.6, p. 537 # 3.9,13,15,21.

Wednesday 11/20. Section 9.7, p.542 #3,5,7,13,15,21,23.

Friday 11/22. Section 9.8, p.551, #3,5,7,9,11,17,19,21.

Week 14

Monday 11/25. Section 10.3, p.584, #7,9,15,17,23,28.

Wednesday 11/27. No class

Friday 11/29. No class.

Week 15

Monday 12/2. Section 10.4, p.591, #1,7,11,15,17,19.

Wednesday 12/4. Section 10.5, p.603 #1,3,9,11,17,19.

Friday 12/6. Review.

Review week

Monday 12/9. Review

Tuesday 12/17. Final Exam.