

# Linear algebra and differential equations

**Instructor:** Vera Serganova

**Email address:** [serganov@math](mailto:serganov@math)

- **webpage:** <http://math.berkeley.edu/~serganov>
  - **Phone Number:** 642-2150
  - **Office hours:** Monday, Wednesday 2-3:30 in 709 Evans
- 

- **Text:** Lay, Nagle, Saff, Snyder, Linear algebra and differential equations, Second 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 25** and on **Friday, October 30** during usual class hours.
- **Final Exam** is on **Friday, FRIDAY, DECEMBER 18, 2015 1130-230P.**
- **Grading policy:** Your grade will be computed according to the following proportions: 20% for quizzes, 20% for each midterm and 40% for the final.
- **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 Thomas Brown [brown@berkeley.edu](mailto:brown@berkeley.edu)
- [Sample midterm.](#)
- **First midterm, Friday, 9/25, 12-1 PM:**
- **Whereabouts:** Last name starts with A-N in Wheeler Auditorium, last name starts with O-R 60 Evans, last name starts with S-Z in 145 Dwinelle. DSP students 740 Evans.
- **Second midterm, Friday, 10/30, 12-1 PM.**
- [Sample midterm.](#)
- [Sample final.](#)

## Tentative Course Plan

- **Part 1, Linear Algebra.**
- **Week 1**
- Wednesday 8/26. Sections 1.1, 1.2. p. 12 #7,11,19,21,27; p. 23 # 1,3,11,15,23,31.
- Friday 8/28. Sections 1.3, 1.4, 1.5. p.34 # 5,7,15,17,29; p.42 # 11,17,19,31; p.49 # 7,15,29,31.
- **Week 2**
- Monday 8/31. Sections 1.7, 1.8, 1.9. p. 62 #3,11,17,27,33; p.70 #3,9,17,25, p. 80 #7,11,17.
- Wednesday 9/2. Sections 2.1, 2.2, 2.3. p. 102 #3,7,11,17,27; p.112 #3,11,13,21. p.123 #7,10.
- Friday 9/4. Sections 3.1, 3.2. p.155 #5,11,27,29, p.163 #11,17,25,29.
- **Week 3**
- Monday 9/7. Labor Day, no class.
- Wednesday 9/9. Sections 3.2, 3.3, p.163 #29,31,33,39; p.172 # 5,9,11,21,23,27,31.
- Friday 9/11. Section 4.1 p. 183 #1, 5,7,9,13,25,27,33.
- **Week 4**
- Monday 9/14. Section 4.2, p. 193 #1,3,5,15,17,19,27,31,35.
- Wednesday 9/16. Sections 4.3, 4.4, p. 201, # 1,3,5,7,9,11,15,23,25; p. 210, # 3,5,7,11,23,27.
- Friday 9/18. Sections 4.5, 4.6, p.217, #1,5,11,13,21,25,26, p.224, #3,7,9,19,27,31.
- **Week 5**
- Monday 9/21. Sections 4.6, 4.7 p.230 #1,3,7,11,13.

- Wednesday 9/23. Review
- Friday 9/25. Midterm
- **Week 6**
- Monday 9/28. Sections 5.1, 5.2, p.241 #3,5,11,15,19,21,26; p.249 #3,7,9,15,20.
- Wednesday 9/30. Sections 5.2, 5.3, p.256 #1,3,7,13,15,21,29,31.
- Friday 10/2. Section 5.4, 5.5, p.263 #1,3,5,9,11,15,25,26; p.270 #3,7,13,25.
- **Week 7**
- Monday 10/5. Section 6.1, p.282 #1,3,5,7,13,15,17,19,24,25,29,31.
- Wednesday 10/7. Sections 6.2, 6.3, p.290 #3,5,11,13,15,27,29; p. 298 #1,3,5,7,11,13,19,21.
- Friday 10/9. Section 6.4, p.304 #3,5,9,11,15,17,19.
- **Week 8**
- Monday 10/12. Section 6.5, p.312, #1,3,5,7,9,13,15,19,21.
- Wednesday 10/14. Sections 6.7, p.328, #3,5,7,9,11,13,17,21,23.
- Friday 10/16. Section 7.1, p.345 #3,5,7,11,15,17,19,21,23,27,31.
- **Part 2, Differential equations**
- **Week 9**
- Monday 10/19. Sections 4.1, 4.2 p.399, # 1,2,7, p.407 # 5,9,15,17,27,29,35,37.
- Wednesday 10/21. Sections 4.3, 4.4, p.415 #3,5,7,11,13,21, p.424 #3,5,13,21.
- Friday 10/23. Sections 4.4, 4.5 p. 424 #33, p.429 #1,3,7,9,15,19,23,25,31,33.
- **Week 10**
- Monday 10/26. Section 4.6 p.435, # 3,5,7,9,13.
- Wednesday 10/28. Review
- Friday 10/30. Midterm
- **Week 11**
- Monday 11/2. Sections 6.1, 6.2, p.482 #1,3,5,7,9,15,21,29, p.488 #3,9,15,19.
- Wednesday 11/4. Section 9.1, 9.4, p.524 # 1,3,5,13,15,23,25.
- Friday 11/6. Sections 9.5, 9.6, p. 535 #15,17,18,19,25,33, p.543 #3,5,13,15,21.
- **Week 12**
- Monday 11/9. Section 9.7, p.548 #3,5,7,13,15,21,23.
- Wednesday 11/11. No class.
- Friday 11/13. Section 9.8, p.558, #3,5,7,9,11,17,19,21.
- **Week 13**
- Monday 11/16. Sections 10.1, 10.2, p.577, #3,5,9,13,15,19,23,27.
- Wednesday 11/18. Section 10.3, p.592, #7,9,15,17,23,29.
- Friday 11/20. Section 10.4 p. 599, #1,3,5,7,11,13,17,19.
- **Week 14**
- Monday 11/23. Section 10.5 p.611, #1,7,11,15,17,19.
- Wednesday 11/25. No class
- Friday 11/27. No class.
- **Week 15**
- Monday 11/30. Sections 10.6 p. 622, #1,5,7,9,11,13.
- Wednesday 12/2. Section 10.7 p.634 #1,3,9,11,17,19.
- Friday 12/4. No class.
- **Review week**
- Monday 12/7. Review
- Wednesday 12/9. Review for final exam.
- Friday 12/18. Final Exam.