

Fall 2006
Math 2243: Linear Algebra and Differential Equations
Homework List

Homework: due each Tuesday, September 12 – December 12.

September 12: suggested: 1.1 (p. 7) #23–27; 1.2 (p. 16) #2, 3, 6, 7, 13–18, 20, 23, 24, 26, 29, 30.

write up: 1.1 # 26ab; 1.2 #6, 13–18.

September 19: suggested: 1.3 (p. 23) #12, 13, 16–26, 29, 31, 32, 39, 40, 43–47, 53, 54; 1.4 (p. 33) #1, 7–10, 12; 1.5 (p. 42) #2–4, 7–12, 21, 23.

write up: 1.3 #16, 25, 40; 1.4 #8 ($\Delta t = 0.2, 0.1$ on $[0, 2]$); 1.5 #2, 12, 21.

September 26: suggested: 2.1 (p. 55) #7–12; 2.2 (p. 63) #1–6, 9–15, 19, 20, 25, 26, 30–35, 45, 46; 2.3 (p. 71) #1–5, 7, 14, 16, 17, 21, 24, 26, 33.

write up: 2.1 #8, 12; 2.2 #4, 18, 32; 2.3 # 2, 18.

Exam 1 is on Thursday, September 28. Covers through section 2.2.

October 3: suggested: 2.4 (p. 79) #2, 4, 7, 8, 11–13, 17–19; 2.5 (p. 90) #13–18, 21–24.

write up: 2.4 #4, 8; 2.5 #14, 17a.

October 10: suggested: 2.6 (p. 105) #1–3, 5–7, 11, 14–17, 23; 3.1 (p. 125) #4, 5, 31–34, 40, 42, 44–46, 51, 54, 61; 3.2 (p. 140) #5–10, 29–33, 35.

write up: 2.6 #6, 14; 3.1 #8, 9, 10, 44, 54; 3.2 #2, 6, 22.

October 17: suggested: 3.3 (p. 152) #7–10, 14, 17, 18, 24, 25; 3.4 (p. 162) #1, 4–7, 11, 12, 16–18, 20, 23, 29–32, 34–36; 3.5 (p. 173) #2, 4–6, 8, 9, 12–14, 16–20, 22, 23, 25, 26, 34, 36–38, 43–51, 56.

write up: 3.3 # 10, 14; 3.4 # 4, 20, 30; 3.5 #12, 13, 14, 38, 56.

October 24: suggested: 3.6 (p. 188) #1, 2, 5–8, 11–14, 16, 17, 18, 20–22, 26–32, 38, 39, 42–45, 47–50, 54–58, 64, 65; 4.1 (p. 200) #4–6, 8–10, 14–16, 21, 22, 25–28, 31–39, 49, 52.

write up: 3.6 #6, 16, 54; 4.1 #4, 14, 24.

Exam 2 is Tuesday, October 24. Covers through section 3.6.

October 31: suggested: 4.2 (p. 213) #16–24, 28–30, 35, 38–41, 43, 47, 55, 56, 59–62; 4.3 (p. 225) #13, 15–28, 34–36, 41, 42.

write up: 4.2 #16, 21–24, 34, 54; 4.3 #16, 18, 36 (find general solution).

November 7: suggested: 4.4 (p. 236) #4–6, 22–33, 36, 39, 40; 4.5 (p. 247) #4–13, 15–17, 20, 22, 23; 4.6 (p. 257) #1, 2, 8–13, 17–20, 32, 33, 40, 41, 44.

write up: 4.4 #6, 26, 30; 4.5 #8–11, 16.

November 14: suggested: 5.1 (p. 271) #6–10, 13–15, 17–29, 33, 34, 37–43, 47–59, 61–63, 65–67, 70–73, 78–80; 5.2 (p. 286) #2, 3, 6, 7, 10–14, 23, 30, 34, 35, 38, 39, 44–47, 50–52, 55–61; 5.3 (p. 301) #6–9, 15, 18, 20, 22, 24, 26–29, 31, 33–36, 39–41, 45–47.

write up: 5.1 #14, 34, 52, 70; 5.2 #10, 30, 50; 5.3 #6, 30.

November 21: suggested: 5.4 (p. 315) #1–3, 7–9, 13–15, 20–23, 27–33, 39–41, 43–44; 6.1 (p. 331) #3, 5, 7, 9, 17–19, 23–26, 33–35; 6.2 (p. 340) #15–23.

write up: 5.4 #2, 22a, 39ab (recall 5.3 #30); 6.1 #8abcd, 17 (recall 5.3 #30); 6.2 #16, 26.

November 28: suggested: 6.2 (p. 340) #28, 31, 39, 40, 43; **6.3** (p. 349) #14–17, 23–27, 30, 33; **6.4** (p. 357) #3–5, 9–11, 15, 16.
write up: 6.2 #28; **6.3** #16, 30; **6.4** #4, 10.

Exam 3 is Thursday, November 30. Covers through section 6.4.

December 5: suggested: 6.5 (p. 365) #1–12, 14, 15, 17; **7.1** (p. 375) #11, 13, 15, 17, 19, 21, 23, 27–33, 35, 37.
write up: 6.5 #2, 8; **7.1** #14, 28.

December 12: suggested: 7.2 (p. 386) #1–9, 11–18, 20–2; **8.1** (p. 414) #3, 5, 11, 13, 15–17, 24, 25; **8.2** (p. 423) #3–9, 12–15, 18, 19.
write up: 7.2 #4, 8; **8.1** #6, 14, 18; **8.2** #6, 14.

Final exam is Thursday, December 14, from 1:30 – 4:30 pm.
Room TBA.