MAT 314 Assignment List (Spring 2009)

1.1 1–8, 9, 11, 13, 15, 20, 21, 23, 26, 27

1.2 1, 7, 9, 11, 13, 17–27 odd, 30

1.3 1–4, 5, 7–10, 17, 21, 23, 24

2.1 1, 3, 5, 7, 21–29 odd, 40, 41

hand in 8, 24

2.2 1–21 odd, 25, 27, 33a

hand in 2, 14, 26

2.3 1–13 odd, 17, 19, 21, 25, 27

hand in 10, 14

2.4 1–29 odd

hand in 16, 22

2.5 1, 5–17 odd, 23, 25

2.6 1, 2 by hand; 3, 5–10 using Excel or by hand

Test 1 (target date March 2). Chapter 2 review problems 1, 5, 8, 9, 10acefjklm (delete Bernoulli, add autonomous), 11–21 odd

3.1 1, 3, 5, 9, 10, 13, 15, 31, 35ab, 39a, 41

hand in 4, 32

3.2 1, 2, 3, 8ab, 11, 15ab; there may be an answer in the back of the book with a misplaced decimal point.

3.3 1 (solve one at a time), 2 ($k_1 = -\lambda_1, k_2 = -\lambda_2$), 5, 7 (notice that the amount in each tank is not constant), 13, 15

4.1.1 1, 5, 9 (the answer in the book might not be correct), 11a

4.1.2 15, 17, 21, 22 all without using the Wronskian; 23, 25, 27 using the Wronskian

4.1.3 31

hand in 2, 28

4.2 1–13 odd, 17 do two the "long way," two by the formula, the rest your choice

hand in 4, 6

4.3 1, 3, 5, 9, 11, 13, 15, 17, 21, 23, 25, 29, 33, 37, 55

hand in 6, 10, 18

4.4 1, 3, 5, 25, 27, 37

4.5 1, 3, 11–29 odd, 35–67 every other odd

hand in 18, 44

4.6 1, 5, 7, 11, 21, 25

4.7 1–21 odd, 25, 43

Test 2 (target date April 8)

5.1.1 1, 3, 5, 9, 13

5.1.2 17–21, 25a, 27

5.1.3 29, 31

hand in 4, 26a

5.2 (may be partially skipped) 1, 3, 5, 9, 13, 25

5.3 (may be skipped) 1, 3, 5, 9, 13, 14; using *Mathematica* allowed on all problems

6.1 11, 17–25 odd, 29, 31, read 39

hand in 22

6.2 1–9 odd, 15, 17, 19, 23

6.3 1–5, 7, 8

7.1 1, 9, 11, 13, 15 using definition; 19–31 odd, 35, 37 using formulas; read 41, 42; try 17 if you desire a challenge

hand in 12 (definition), 28 (formula)

7.2 1–39 odd

hand in 12, 20

Test 3 (target date May 8)

7.3 1, 3, 5, 7, 11, 13, 15, 17, 21, 23, 25

11.1 1–11 odd

11.2 1, 3, 7

CUMULATIVE FINAL EXAM over all sections covered, Wednesday, May 20, 2:00 p.m.

Studying Mathematics

Studying mathematics is different from studying many of the other subjects. Some memorization is necessary, but concepts and skills are more important. Therefore, the study strategy employed by many students of doing little if anything until the night before a test and then cramming until the wee hours of the morning does not work very well for mathematics.

Mathematics is best learned slowly but consistently over time, not crammed into one night. Concepts and skills build upon one another. It is important to be prepared for each lecture; otherwise, you may not get anything out of that class period!

Recommendations include (1) read each section of the textbook before the lecture; (2) complete the assigned homework after the lecture over that material but before the next class period; and (3) get plenty of rest before a test so that your mind can think clearly.

Finally, don't forget that problem recognition skills are important. Look at the form of a problem, and its setting; learn how to recognize it.