

Vanderbilt University, Department of Mathematics, Spring 08

Math 198 – Methods of Ordinary Differential Equations

Section: 2, Time: MWF 9:10-10:00, Room: SC 1320

Instructor: Simon Foucart, SC 1533, simon.foucart@vanderbilt.edu

Office hours: T 10:30–12:00, W 10:00–11:00 & 3:00–4:00, or by appointment.

Course web page: www.math.vanderbilt.edu/~foucart/teaching

Text: *A First Course in Differential Equations*, D. Zill, 8th edition.

Grading: Three in-class tests and one final examination will contribute to a total of 450 points. Each test is worth 100 points, and the final examination counts for 150 points. The usual percentage scale will be used for the course, that is

F: 0–59, D: 60–69, C: 70–79, B: 80–89, A: 90-100

Grades are based on the work shown, not on what was intended or implied. Excessively sloppy, poorly justified and disorganized work, even though displaying the correct answer, cannot be given full credit.

Homework policy: Homework will not be graded. It is, nonetheless, an integral part of the course. Thus, some notions introduced in the exercises may appear on a test. You are encouraged to come and see me during my office hours. I will gladly provide help on particular problems, provided that you genuinely attempted to solve them.

Calculators and integration tables: You may use them for homework. However, since they will not be allowed during the tests, you are advised to avoid them completely.

Attendance policy: Attendance will not be taken, but is expected. If you miss a class, you are responsible for any announcement made, any material covered, and any additional topic introduced during this class. Office hours will not be used for this purpose.

Make-up policy: Make-up tests will only be given in exceptional circumstances – *excused* absence as defined by the University catalog. In such cases, you must provide a *valid* reason for your absence and must normally notify me in advance. The final examination will be given on Tuesday, April 29 from 9:00am to 11:00am. No alternative final examination is scheduled.

Accommodation procedure: If a student needs course accommodations due to a disability, special arrangements in case the building must be evacuated, or has emergency medical information that needs to be shared with me, I should be contacted as soon as possible. The Opportunity Development Center (2-4705) provides services for students with disabilities. Specific accommodations can be made for students with either physical disabilities or learning disabilities. Upon receiving appropriate documentation from the student, the Opportunity Development Center will make arrangements with me for the accommodations.

Important dates:

Jan 16: last day to drop or add a course, to register for pass/fail status

Feb 6: first in-class test

Mar 1-9: spring break

Mar 12: second in-class test

Mar 14: last day to withdraw, to change from pass/fail to graded status

Apr 11: third in-class test

Apr 21: last day of class

Apr 29, 9:00–11:00: final examination

Academic honesty: Vanderbilt’s Honor Code governs all work subject to credit in this course.

Tentative outline:

Date	Reading	Exercises
Jan 9	1.1	1, 3, 5, 7, 9, 11, 13, 23, 27
Jan 11	1.1, 1.2	1.1: 36, 50; 1.2: 1,7,9
Jan 14	1.2	17, 19, 21, 23; read 1.3
Jan 16	2.2	1, 3, 5, 7, 9, 15, 21, 27
Jan 18	2.3	1, 3, 5, 11, 21, 23
Jan 21	2.4	1, 3, 5, 7, 11, 13, 15, 21
Jan 23	2.5	1, 3, 7, 9, 15, 17, 19, 23, 25
Jan 25	2.1	1, 5, 7, 9, 19, 25, 29
Jan 28	2.6	1, 3, 5, 7, 9
Jan 30	3.1	1, 3, 5, 11, 13, 19, 21, 25
Feb 1	3.2	1(a), 3, 9

Date	Reading	Exercises
Feb 4	Review	
Feb 6	Test 1	
Feb 8	4.1	1, 3, 5, 6, 7, 9
Feb 11	4.1	15, 17, 19, 23, 25, 27
Feb 13	4.2	1, 3, 5, 9, 11, 13
Feb 15	4.3	1, 3, 5, 7, 13, 15, 17
Feb 18	4.4	1, 5, 9, 13, 17
Feb 20	4.4	19, 21, 23; read 4.5
Feb 22	4.6	1, 3, 5, 7, 11, 15, 17
Feb 25	4.7	1, 3, 5, 7, 9, 11, 13, 21, 23
Feb 27	5.1	1, 3, 5, 6, 7, 9, 21
Feb 29	5.1	29, 31, 33, 35, 37
Mar 10	Review	
Mar 12	Test 2	
Mar 14	8.1	1, 3, 5, 7, 9, 17, 19
Mar 17	8.2	1, 3, 5, 7, 9, 11, 33, 35
Mar 19	8.2	19, 21, 23
Mar 21	6.1	1, 3, 5, 11, 13
Mar 24	6.1	17, 19, 21, 23, 25, 27
Mar 26	6.2	1, 3, 5, 7, 9, 15, 17, 19
Mar 28	7.1	1, 3, 5, 7, 9, 11, 13, 17, 23, 25, 31
Mar 31	7.2	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 27, 31, 35, 37
Apr 2	7.3	3, 5, 7, 11, 15, 19, 21, 23, 25, 37, 39, 43, 45, 47, 51, 53
Apr 4	7.4	3, 5, 9, 19, 21, 23, 25, 27, 29, 37, 39, 49, 53
Apr 7	7.5, 7.6	7.5: 1, 3, 5, 7, 9, 11; 7.6: 1, 3, 5, 7, 9
Apr 9	Review	..
Apr 11	Test 3	..
Apr 14	9.1	1, 3, 5, 7, 9
Apr 16	9.2	3, 5, 7, 9, 11
Apr 18	9.3	
Apr 21	Review	
Apr 29	Final Exam	