

Math 104 Differential Equations Section: 042515
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Websites: Sample Tests: <http://www.ohlone.edu/instr/math/104tests/home.html>
 Course Information: <http://www2.ohlone.edu/people2/bbradshaw/math104>
 Calculator Help: <http://www2.ohlone.edu/people2/joconnell/ti>

Office Hours: Mon. 9:30 - 11:30 in HH 218, TWTh 9:15 - 10:15 in Room 2315

Text: Edwards and Penney, *Differential Equations and Boundary Value Problems*, 3rd ed., 2004, Prentice-Hall.

Calculators: No electronic devices will be allowed on the exams.

Prerequisites: Passing grade in Calculus II or the equivalent.

Grading:	A	100 % - 90%	Homework	10%
	B	89.9% - 80%	Tests and Quizzes	60%
	C	79.9% - 65%	Final	30%
	D	64.9% - 55%		

Student Learning Objectives: The student will

1. Solve first and second order linear differential equations using techniques including the methods of separation of variables, reduction of order, constant coefficients, and undetermined coefficients.
2. Solve an ordinary differential equation through the use of infinite series.
3. Solve an ordinary differential equation through the use of Laplace Transforms.
4. Convert a higher order differential equation into a system of first order differential equations.
5. Solve a partial differential equation by the method of separation of variables.
6. Apply the methods of solving differential equations to problems in spring-mass systems, electrical circuits, exponential growth and decay, mixing, and Newton's Law of Cooling.
7. Use computer software to draw direction fields and solutions to differential equations.

Homework: Homework will be assigned and discussed each class. It should be turned in as assigned. If the homework is one day late, there is a 10% penalty. If it is two days late, there is a 30% penalty. Homework will not be accepted more than two days late. Homework should be done neatly, preferably in pencil. Problems should be written on the page with the appropriate work. Answers only will not be accepted. The homework will be checked for completeness and selected problems graded.

Quizzes: There will be several short quizzes during the semester. These quizzes may be announced or they may be surprise quizzes. There will be no makeup quizzes. Missing a quiz will result in a score of zero. On the take-home quizzes, you may work with other people. The lowest 20% of your quiz scores will not be counted toward your grade.

Tests: There will be four tests during the semester. Missing a test will result in a score of zero. There are no dropped tests. The final will cover all the material discussed during the semester. Missing the final will result in a grade of F for the course.

Cheating: If you are caught cheating, I will follow the school policies. You are expected to be aware of Ohlone Board policy on this matter.

See <http://www.ohlone.edu/org/board/policy/chapter7reg.htm#r7.8.4>

Dropping: If you want to drop the class, do so according to the procedure listed in the schedule of classes. Failure to do so may result in a grade of F for the course.

Holidays: Sept. 7, Nov. 11, 26, and 27

Math Learning Center (HH218) Hours: M-Th 9:00 AM - 6:30 PM and Fri. 9:00 AM - 1:00 PM

Cellphones: Please turn off all cell phones during class.

Math 104 Practice Problems

- 1.1 3, 11, 13, 19, 25, 29, 33, 34, 36, 37, 39, 41, 43
- 1.2 5, 8, 13, 18, 21, 25, 26, 29, 30, 34, 36, 41
- 1.3 3, 10, 15, 19, 23, 30
- 1.4 5, 19, 24, 31, 33, 37, 39, 43, 54, 64, 69
- 1.5 3, 7, 17, 22, 29, 33, 37, 38, 46
- 2.1 7, 11, 21, 22, 25, 29
- 2.2 3, 5, 13, 14, 18, 19
- 2.3 1, 2, 4, 7, 8, 11, 12, 17, 18, 21, 22
- 2.4 4, 17

Exam 1 Sept. 25

- 3.1 4, 14, 20, 24, 33, 39, 45, 47
- 3.2 1, 7, 15, 21, 23
- 3.3 1, 7, 10, 15, 19, 23, 27
- 3.4 4, 5, 7, 8, 10, 12, 13, 14, 19, 22, 32
- 3.5 1, 7, 11, 20, 21, 25, 29, 35, 47, 53
- 3.6 3, 9, 13, 17, 20, 21, 22
- 3.7 3, 7, 10, 13, 17
- 3.8 3, 7, 12, 15, 17

Exam 2 October 16

- 4.1 1, 7, 11, 19, 24, 26, 29
- 4.2 7, 15, 23, 27, 34, 38, 45
- 7.1 3, 9, 11, 15, 23, 27, 31, 39
- 7.2 3, 9, 13, 17, 21, 25, 33
- 7.3 5, 7, 11, 17, 32, 39, 40
- 7.4 5, 9, 15, 19, 23, 33
- 7.5 3, 7, 15, 21, 27, 29, 37, 41
- 7.6 3, 7, 11, 13, 17, 19

Exam 3 November 13

- 8.1 1, 9, 19
- 8.2 1, 5, 13, 23
- 9.1 7, 9, 11, 19, 24
- 9.2 3, 10, 19, 24
- 9.3 7, 11
- 9.4 3, 14
- 9.5 5, 11, 15

Exam 4 December 8

Final Wednesday December 16, 7:00 - 9:00 A.M.