

Math 55 – Differential Equations

Spring 2010
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Office Hours: M-Th : 8:35 – 9:35a.m., M: 12:10 - 1:40 p.m.

WEBSITE: <http://www.pccmathuyekawa.com>

The website is where you will find announcements, assignments, handouts, and useful links. You should check it often. 10 points of extra credit will be given to anyone who finds something pertaining to this course that I deem worthy to add to my site.

Course Description: Topics to be covered include: Ordinary differential equations with emphasis on the linear equation and its applications in engineering and physics, series solutions, Laplace transforms, Fourier series and their application in partial differential equations.

Prerequisites: Math 5C- Multivariable Calculus and Math 10 – Linear Algebra.

Text: Boyce & DiPrima, Elementary Differential Equations with Boundary Value Problems, 9th edition.

Attendance: Daily attendance is required. Excessive absences or tardiness may affect course grade. Ten hours of absence constitutes basis for dismissal from the course. Students missing class are responsible for finding out what they missed and what is due. I suggest you get contact information from a few classmates.

Grading : Grades will be determined based on the following percentages:

Homework	10 %
Tests	60 %
Final exam	30 %.

Letter grades will be given based on the following percentages

90-100%	A
80-89%	B
70-79%	C
60-69%	D
below	F

Homework: Homework will be assigned daily. Some of the homework in this class takes a lot of time (and paper!). The way to succeed on the homework portion of your grade (as well as in the class itself) is to do your homework neatly, completely, and consistently. Please note: no late homework will be accepted, even if you are absent. If you know you are going to be absent, you may turn in your assignment early or have a friend turn it in.

Exams: If you know ahead of time that you will be absent on the day of an exam, it is sometimes possible to arrange to take it early, but NO make-up exams will be given.

- 4-5 exams will be given.
- A final exam will be given. This exam will be two hours long and will cover ALL course material.

Calculator Usage: A scientific calculator is required. Graphing calculators will not be used on exams in this class.

Where to get HELP

Because of the level of this class, you will not have free tutoring available on campus. Options for help include:

- My office hour. Office hours are a great time to get individualized help. It would be helpful if when you come to my office you are organized and prepared with *specific* questions. The office hour is also a good time to discuss your concerns regarding the course and your performance. Again, come as soon as concerns arise. Unfortunately it is not possible for me to repeat entire lectures, teach lacking prerequisite skills or provide daily personal tutoring during this time.
- Study Groups. Forming study groups with classmates is one of the BEST ways to be more successful in this class.
- The Internet: There are SO many helpful websites. As we encounter useful sites, I will put links on my website. If you find something online that I put on my website, you will earn extra credit.

Personal Conduct

You are expected to be actively involved in your education. This includes being on time and alert in class and participating in class discussion. It is expected that you refrain from activities that could be distracting to your classmates or to me. This includes talking while someone else is talking, texting, falling asleep, doing homework, etc. Electronic devices such as ipods and phones should be turned off in class. Children or friends not enrolled in the class may not accompany you to class. Students caught cheating may be given an F in the course and reported to the Dean.

Important Dates:

March 31, April 19-25, May 31 - No school
May 14 - Last day to drop
Final Exam –
Monday, June 14, 8:00-10:00 a.m.

Student Learning Outcomes:

Upon successful completion of the course, the student will be able to:

Solve first-order separable and linear differential equations, and use these methods to solve applied problems.

Solve higher order constant-coefficient linear differential equations and systems of differential equations, and use these methods to solve applied problems.

Apply appropriate transform methods to solve differential equations.

Construct power series solutions for various classes of ordinary differential equations.

Solve classical problems in partial differential equations including boundary value problems.