

Math 221-601 - Differential Equations **Second 5 week Summer Session, 2007**
Policy handout for Section 601

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Office Hours: 1:00-2:00 Monday, Tuesday, Wednesday, Thursday
- Textbook** *Differential Equations—Computing and Modeling*, Edwards & Penney,
3rd Edition, ISBN: 0-13-067337-4.
- Prerequisites** Math 208/208H with a grade of P or C or better.

You are welcome to drop by outside of office hours although I may be busy (in which case we can make an appointment), or out of the office (please leave a message; email is best).

Course Summary Finding and understanding the solutions of differential equations and systems of differential equations (henceforth, DEs) is an important step in solving many science and engineering problems. It is also an interesting and important part of mathematics. Although we emphasize finding exact solutions, for many differential equations finding exact solutions is very hard or impossible. Instead, identifying qualitative properties or finding numerical solutions becomes essential, and we will spend some time on these ideas, as well. A more detailed syllabus is given later in this document.

Expectations I expect that you will know the material from the prerequisite courses (especially methods of integration from Math 107!). Further, during the course, you should plan on reading the textbook before lectures, taking notes during lectures, and then doing the homework and reviewing your notes afterward. Especially in the summer, not keeping up with the course will lead quickly to problems.

Grading:

comprehensive final exam	150
four term tests	100 each 400
five quizzes	10 each 50
total	600

Grade Scale Here are cutoffs for various final grades. I may lower these cutoffs, but I will not raise them.

A+	570	B+	516	C+	456	D+	396
A	540	B	480	C	420	D	360
A-	528	B-	468	C-	408	D-	348

Grade Records These will be kept on Blackboard (my.unl.edu). Help for using Blackboard is available from this webpage. From time to time, check that your scores have been entered correctly.

Final Exam There is a common comprehensive final exam, on **Thursday, August 16, 11:00-12:35 pm**, in our regular classroom, Avery 110. **Do not make plans that conflict with the final.**

Term Exams There will be four one-hour tests, one each Friday in class, following a half hour review session. Specifically, they are

Friday, July 20, 11:35-12:35
Friday, July 27, 11:35-12:35
Friday, August 3, 11:35-12:35
Friday, August 10, 11:35-12:35

Homework You are expected to do most of the problems in each assigned section. I will list particularly important problems in class and post the homework daily on the course webpage. Doing the homework is essential to understanding the course material well-enough to pass the course.

Quizzes A 10 minute quiz will be given each Wednesday. The quiz will cover the material from Monday and Tuesday and will often (but not always!) be similar to the homework questions.

Makeups Makeup exams will **only** be given in extreme circumstances or for University sanctioned reasons. Within reason, be prepared to provide supporting documentation and, if possible, let me know **beforehand**.

Attendance “Students are expected to attend all lectures, recitations, quizzes, and laboratories regularly. The University has no regulation which permits cutting classes.” (2006-2007 Undergraduate Bulletin, page 11). If you miss a class, it is up to you to learn that material. While I am glad to discuss such material with you, I would encourage you to read the relevant section in the text and look at a friend’s notes before coming to me.

Calculators A graphing calculator is required; the TI-84 and TI-86 are both fine. If you have something else, it may be OK—check with me. You can use calculators as you like on quizzes and exams but be warned that quizzes and especially exams will be written to test your understanding of the material, not your ability to push buttons. **Cell phone calculators are not allowed during any test, quiz, or exam.**

Extra Help You can: 1) talk to me, 2) consult with other students in the class, and 3) look at the material on the course web page. There are many resources on campus but it’s up to you to decide to seek them out. I am glad to help you to find them.

Academic Dishonesty Academic dishonesty includes cheating on any test, plagiarism, fabricating an otherwise justifiable excuse to avoid or delay timely submission of academic work, and helping or attempting to help another student commit academic dishonesty. For a comprehensive list, see Section 4.2 of the Student Code of Conduct. In particular, plagiarism includes any one of the following acts: “(1) failing to cite quotations and borrowed ideas, (2) failing to enclose borrowed language in quotation marks, and (3) failing to put summaries and paraphrases in your own words” (Hacker, *A Writer’s Reference*, 4th Edition, p. 83).

For a student found to have committed an act of academic dishonesty, I can, and will, lower grades, up to giving an F in the course, in addition to referring

the case to the Judicial Officer. Both the determination of academic dishonesty and the penalty can be appealed (again, see Section 4.2 of the Student Code of Conduct).

Outline of Syllabus This is my best estimate of the pace and detailed content of the class. There may be small changes in content and the pace of the class may also vary. All changes will be clearly communicated in class.

Week	Topics	Textbook Sections
July 16-20	First Order DEs (esp. Separable, Linear, Exact)	1.1—1.6,
July 23-27	Modeling, Numerical Methods, General Linear DEs	2.1—2.4, 3.1,3.2
July 30-Aug. 3	2nd Order Linear DEs, Systems of DEs (esp. Linear)	3.3,3.5, 4.1, 5.1
Aug. 6-10	Eigenvalue Method, Stability, Laplace Transforms	5.2,5.4, 6.1, 7.1,7.2
Aug. 13-16	More on Laplace Transforms, Review, Final	7.3,7.4,7.5

Department Grading Appeals Policy: The Department of Mathematics does not tolerate discrimination or harassment on the basis of race, gender, religion, or sexual orientation. If you believe you have been subject to such discrimination or harassment, in this or any other math course, please contact the department. If, for this or any other reason, you believe your grade was assigned incorrectly or capriciously, then appeals may be made to (in order) the instructor, the department chair, the department grading appeals committee, the college grading appeals committee, and the university grading appeals committee.

Learning math is a lot more like learning a language than most students realize.
 ... Understanding the broad outline isn't good enough. You have to be fluent,
 conversant to such a depth that you just automatically know what to do.
 —from *How to Ace Calculus: The Streetwise Guide*.