Course Description: MATH 216-040, Winter 2003
Prof. Gavin LaRose

Who, Where and What:
- MWF, 11am-noon, 296 Denn + recitation/lab Th.
- All labs meet in EH B743. Times and recitation locations are 041: 10–11am, 1339 MH; 042: 11am-noon, 1339 MH; 043: 2–3pm, B129 MLB; 044: 3–4pm, 455 Denn.
- Text: Special ed. of Edwards & Penney, *Differential Equations, Computing and Modeling*, 2nd ed.
- Lecturer: Gavin LaRose (`glarose@umich.edu`)
- Office Hours: (East Hall B736) W noon-1pm, Th noon-2pm + by appointment.
- GSI: Kamran Kashef (`kkashef@umich.edu`)
- Web: `http://www.math.lsa.umich.edu/courses/216/` & `http://www.math.lsa.edu/~glarose/classes/diffeq/` webHW: `http://instruct.math.lsa.edu/`

What is differential equations? This course is an introduction to differential equations (which involve derivatives of the function we're trying to find) with supplementary topics in complex numbers and matrix algebra. Most (not all) of the material will be presented in a manner consistent with the text.

Why are you taking it? Differential equations appear in many real-world applications of mathematics. And, of course, the material we cover is fun. No, really.

How will I do well in the course? The only way to learn math is by doing it. **Do the homework**. Read the book. Work the example problems in the book to be sure you understand them. Do the Labs. Do the in-class activities.

Ask questions—the whole point of spending the large sum of money you're spending to take this course is to learn: if you don't understand we're wasting time and money, so **please ask questions when things don't make sense**. Do the homework.

Tests, Grading, and Other Such Stuff:
- There are two midterms and one final:
  - **1st Test**: Tue, 2/11, 6–8pm
  - **2nd Test**: Thu, 3/20, 6–8pm
  - **Final**: Mon, 4/21, 8–10am
- There are 5 labs, done in the lab sections. These are important. Plan on spending the time to learn from them.
- There are 10 homework assignments. These include *by-hand* and *web-based* parts. The by-hand part must be done for recitation or lab; the web-based part is due Fri by 5pm.
- There are ≈ 9 quizzes, done in the recitations. There are no quiz makeups, but the lowest quiz score will be dropped.
- **Your Grade**:

1st test	150pts	2nd test	250pts
final	350pts	quizzes/hw	150pts
labs	100pts	= total	1000pts

- Your final grade will be at least (some sort of) an A if you have a 90% or higher, (...) a B with 80% or higher, etc. These thresholds may be lowered at the end of the semester. The weight of the final may be slightly increased for students doing well on the final (but not decreased conversely).

. . . you have to respect someone who can spell Tuesday, even if they can't spell it right.   —A.A. Milne

Prerequisites and Requirements:
- Calc prereq: differentiation, integration, integration by parts, integration using substitution and partial fractions. Geometry and Algebra prereqs: properties of exponentials, logs, 45-45-90 and 30-60-90 right triangles.
- **What you need to know**: *You are responsible for material in any section of the book we cover, everything covered in class or in the homework, anything sent to the class e-mail list or on the class Web page* **and** *the labs and material covered in recitation.*
- *Read the book*: you are tested on the material in the book. Read it. Before going to class.
- *Go to class, labs, and recitation*: we cover important material in class, lab and recitation. *Labs, HW and quizzes are 25% of your grade!*

Final notes: ○ This is a **4 hour course**: *plan on spending 12 hours a week outside of class on the course.* Really. Only by doing all of the assigned work will you learn the material and do well.   ○ I think **math and learning are fun**. I hope in this course you will agree with me.   ○ You are taking this course to learn. *Ask questions, come to office hours, or make an appointment to see me if you do not understand any part of the material we cover.*