

MATH 107.01
LINEAR ALGEBRA & DIFFERENTIAL EQUATIONS
SUMMER 2012 TERM I

Instructor.

- Brian D. Fitzpatrick
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 - URL (Personal): <http://www.dukemath.wordpress.com>
- Trang Nguyen (TA)
 - Help Room Hours:
 - * M 2:00 PM - 6:00 PM
 - * W 12:00 PM - 6:00 PM

Scheduled Lectures. This course consists of five weekly lectures.

- M-F 11:00 AM - 12:15 PM (Physics 235)

Office Hours. I will hold office hours on every lecture day for one hour.

- M-F 12:30 PM - 1:30 PM (Physics 274E)

I will also be available to meet with students by appointment.

Online Resources. All information about this course can be found under the “Teaching” tab on my personal webpage.

- <http://www.dukemath.wordpress.com/teaching>

Textbook. We will cover most of chapters 1-6 and chapter 9 of Peterson and Sochacki’s *Linear Algebra and Differential Equations*.

- *Linear Algebra and Differential Equations* (1st edition), Gary Peterson and James Sochacki, ISBN 0-201-66212-4

Prerequisites. MATH 102, 103, or 105 or consent of instructor.

Course Content. Topics include systems of linear equations, matrix operations, vector spaces, linear transformations, orthogonality, determinants, eigenvalues and eigenvectors, diagonalization, linear differential equations and systems with constant coefficients and applications, computer simulations.

Attendance. Attendance is the responsibility of the student. I will not take attendance in lectures, however missed work resulting from an unexcused absence will count as a 0.

Absences will only be excused by your dean for reasons such as serious illness, family emergency, or official university activities. Under these circumstances, you must present a written excuse from your dean. If you are absent due to illness, you must complete the online “Short-Term Illness Notification” *before* the class in question.

For an excused absence during an exam, I will use the final exam score to replace the missed exam.

Grades. Your grade in this course will be weighted as follows:

Homework	15%
Exam I	25%
Exam II	25%
Final Exam	35%

Grading for this course will be done on a curve.

Homework. Homework will be assigned and collected (roughly) everyday and will be posted on the course webpage.

It should be noted that an important part of the homework assigned is *reading the textbook*. This is a study habit that many students are not accustomed to, but is essential to thoroughly understanding the material.

Exams. There will be two in-class exams and one final exam. These exams are scheduled to take place on the following dates, and additional information about them will be posted on the course webpage as the semester progresses.

- Exam I: June 5
- Exam II: June 22
- Final Exam: June 27

If an in-class exam is missed by a student with an excused absence, then his or her final exam grade will replace the missed exam. *Unexcused missed exams will be counted as a 0.*

MIT OpenCourseWare. MIT's OpenCourseWare is a free online publication of MIT course materials that reflects almost all the undergraduate and graduate subjects taught at MIT. In particular, the OCW has an excellent collection of linear algebra and differential equations video lectures. I will frequently assign some of these videos as optional "homework." Links to the videos are posted on the course webpage.