

MA 226 Differential Equations, Summer II, 2003

M,T,Th 6-8:30pm in MCS B31

Instructor: Margaret Beck

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Office Hours: T 4:30-5:30; Th 12-1; or by appointment.

<http://math.bu.edu/people/mabeck/Summer03/MA226.html>

Text

The text we will be using is Differential Equations, 2nd edition, by Blanchard, Devaney, and Hall, 2002. ISBN 0-534-38514-1

Prerequisites

MA 225 (Multivariable Calculus)

Topics Covered

In this course we will cover the following material:

- First-Order Differential Equations. Chapter 1, Sections 1.1 - 1.8 and Appendix A.
- First-Order Systems. Chapter 2, Sections 2.1 - 2.3.
- Linear Systems. Chapter 3, Sections 3.1 - 3.7.
- Forcing and Resonance. Chapter 4, Sections 4.1 and 4.2.
- Nonlinear Systems. Chapter 5, Sections 5.1 and 5.2.
- Laplace Transforms. Chapter 6, Sections 6.1 and 6.2.

If time permits we may also cover sections 4.3 - 4.4 and/or 5.3 - 5.4. Please note that this list is tentative and may be changed during the course.

Class Attendance

University policy requires that attendance be taken at the beginning of each class. Class attendance will not affect your grade, but I encourage you to attend class regularly. You are responsible for all assignments and material presented in class. If you miss a class when an assignment is due and do not hand the assignment in by the beginning of class time, the assignment will be considered late.

Homework

Homework will be assigned each week and collected at the beginning of class each Thursday. NO LATE PAPERS WILL BE ACCEPTED. Of the problems assigned each week, approximately five will be randomly selected to be graded. You are encouraged to work together on the assignments, but the work you turn in must be written up yourself. You must SHOW ALL YOUR WORK or no credit will be given.

Exams

There will be two in class exams on **Thursday July 17th** and **Thursday July 31st** which will be approximately 1 - 1 1/2 hours long. These exams WILL NOT be cumulative. The final exam will be on **Thursday August 14th**, the last day of class. The final will be about 1 1/2 - 2 hours long and WILL be cumulative. ALL WORK MUST BE SHOWN on all exams or no credit will be given.

NO MAKE-UP EXAMS WILL BE GIVEN. Make sure you attend class on exam days. Missed exams will result in a grade of zero. If you must miss an exam for a personal emergency or severe illness, please contact me as soon as you are able.

Grading

Your grade will be calculated as follows:

- 30% Homework grade
- 40% Average of the two (non-cumulative) exams
- 30% Final exam

Calculators

The use of calculators WILL NOT be permitted on any exam. You may use them on homework assignments but it will not be necessary. I encourage you not to do so in order to better prepare for the exams.

Academic Conduct

Cheating in any form will not be tolerated. You are responsible for knowing the CAS Academic conduct code. Copies are available in CAS 105 and at <http://www.cs.bu.edu/ugradprogram/conduct.html>.

Important Dates

In addition to the exam dates, please be aware of any dates which are important to the registrar. These dates include Friday, July 11, which is the last day to register and/or add a class and the last day to drop a course without a 'W' grade. Also Friday, July 25, is the last day to drop a class with a 'W' grade. You can go to <http://www.bu.edu/reg/dtsum03.htm> for more information.