

MATH 234 – Fall 2012

Differential Equations – Section 01

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Class: MWF 9–9:50 in King 237
 Office Hours: M 11–12, W 10–11, Th 1–2,
 and by appointment.

Course Description

An introduction to analytic, qualitative and numerical methods for solving ordinary differential equations. Topics include general first order equations, existence/uniqueness of solutions, linear first and second order equations, numerical methods (Euler, Runge-Kutta), systems of first order equations, phase plane analysis and Laplace Transforms. There is emphasis throughout the course on topological, geometric and qualitative interpretations of differential equations, as well as applications to the natural sciences.

Prerequisite

MATH 231 (Multivariable Calculus).

Textbook

Elementary Differential Equations, 9th ed., W.E. Boyce and R.C. DiPrima, John Wiley & Sons, 2009.

Grading

Grades will be given based on the following scale and your overall percentage in the course.

Letter	A	A-	B+	B	B-	C+	C	C-	D	F	W
Point	4.00	3.67	3.33	3.00	2.67	2.33	2.00	1.67	1.0	0.0	0.0
%	[93, 100]	[90, 93)	[87, 90)	[83, 87)	[80, 83)	[77, 80)	[73, 77)	[70, 73)	[60, 70)	[0, 60)	

QP credit and Pass/No Pass: to earn QP credit one must pass the course. If the course is taken for a grade, then $\geq D$ is considered passing. If the course is taken Pass/No Pass, then $\geq C-$ is considered passing and is given the grade Pass (P); work $< C-$ is considered not passing and is given the grade No Pass (NP).

45% Homework

Homework will be assigned approximately weekly on Blackboard. Some subset of the problems will be graded. Homework must be written up neatly with multiple pages stapled. Students are encouraged to work together to learn the material, but each student must independently write up his/her own solutions. Homework is a major part of the course. No late homework will be accepted.

30% Midterm Exams

15% each. Friday, October 5 and Friday, November 9 in class. No electronic devices, notes, or books are allowed on exams.

25% Final Exam

Tuesday, December 18, 2–4 p.m. No electronic devices, notes, or books are allowed on exams.

Disabilities

The college will make reasonable accommodations for persons with documented disabilities. Students should notify the Office of Disability Services located in Peters G-27/G-28 and their instructor of any disability related needs within the first two weeks of class.

Honor Code

The College requires that students sign an Honor Code for all assignments. This pledge (which is written out on each assignment) states: "I affirm that I have adhered to the Honor Code in this assignment." For further information, see the student Honor Code, which you can access via Blackboard>Lookup/Directories>Honor Code.

Important Dates

- First day of classes: Tuesday, September 4.
- Add/drop deadline: Thursday, September 13.
- Yom Kippur (no classes): Wednesday, September 26.
- Midterm Exam I: Friday, October 5 in class.
- Fall recess: Saturday, October 20 – Sunday, October 28.
- Midterm grades available via PRESTO: Thursday, November 1.
- Last day to declare P/NP or to withdraw: Tuesday, November 6.
- Midterm Exam II: Friday, November 9 in class.
- Thanksgiving break: Thursday, November 22 – Sunday, November 25.
- Last day of classes: Friday, December 14.
- Final Exam: Tuesday, December 18, 2–4 p.m.