MATH 234 – Fall 2014
Differential Equations

Instructor: Jack Calcut
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Class: MWF 9–9:50 in King 343
Office Hours: M 1–2, T 10–11, W 11–12, 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

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

<table>
<thead>
<tr>
<th>Letter</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D</th>
<th>F</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point</td>
<td>4.00</td>
<td>3.67</td>
<td>3.33</td>
<td>3.00</td>
<td>2.67</td>
<td>2.33</td>
<td>2.00</td>
<td>1.67</td>
<td>1.0</td>
<td>0.0</td>
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<tr>
<td>%</td>
<td>[93,100)</td>
<td>[90,93)</td>
<td>[87,90)</td>
<td>[83,87)</td>
<td>[80,83)</td>
<td>[77,80)</td>
<td>[73,77)</td>
<td>[70,73)</td>
<td>[60,70)</td>
<td>[0,60)</td>
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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).

40% 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 Exam
Wednesday, October 15 in class. No electronic devices, notes, or books are allowed on exams.

30% Final Exam
Wednesday, December 17, 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>

Important Dates

- First day of classes: Tuesday, September 2.
- Add/drop deadline: Thursday, September 11.
- Midterm Exam: Wednesday, October 15 in class.
- Fall recess: Saturday, October 18 – Sunday, October 26.
- Midterm grades available via PRESTO: Thursday, October 30.
- Last day to declare P/NP or to withdraw: Tuesday, November 4.
- Thanksgiving break: Thursday, November 27 – Sunday, November 30.
- Last day of classes: Friday, December 12.
- Final Exam: Wednesday, December 17, 2–4 p.m.