## MA214-003 Calculus IV: Ordinary Differential Equations Spring 2009

| Instructor              | P. D. Hislop   |
|-------------------------|--|
| Office:                 | 753 POT  |
|                         | 859-257-5637 or hislop@ms.uky.edu                                |
| Text:                   | W. E. Boyce and R. C. DiPrima: Elementary Differential Equations |
|                         | and Boundary Value Problems, Eighth Edition, Wiley 2005          |
| Class Meetings:         | MWF 11:00–11:50PM CB 339   |
| Office Hours:           | M 4-5; W 10-11; F 4-5 and by appointment                         |
| Weekly Problem Session: | to be scheduled  |

## **Grading Policy**

| Item              | Date                 | Total Points |
|-------------------|----------------------|--------------|
| 10 Quizzes        | approximately weekly | 100          |
| at 10 points each |                      |              |
| First Hour Exam   | 27 February (target) | 100          |
| Second Hour Exam  | 10 April (target)    | 100          |
| Final Exam        | 8 May 1:00PM-3:00PM  | 200          |
| TOTAL             |                      | 500          |

The minimum cut-offs for letter grades are: A 450-500; B 400-449; C 350-399; D 300-349; E below 300. If your final total of all scores is within one of these intervals, you are guaranteed to receive the corresponding letter grade or higher. Homework will be assigned and discussed in the weekly problem session. *Cheating in any form will not be tolerated.* 

## **Course Content**

MA214 is a basic course in *ordinary differential equations*. The basic problem is to determine an unknown function from an equation that involves only the derivatives of the function. Differential equations are used to model a wide variety of physical and biological phenomena, from atoms to animal populations. We'll study basic equations for which the unknown function-the solutiondepends on one real variable only, like time or position. This is the meaning of the adjective *ordinary*. We will study first- and second-order ordinary differential equations extensively, especially linear differential equations. Approximate course material: Chapter 1, Chapter 2 (sections 2.1–2.6), Chapter 3, Chapter 6, Chapter 7 (sections 7.1–7.5).

## Special Dates

| 19 January  | Martin Luther King, Jr Day - No classes |
|-------------|---|
| 4 February  | Last day to drop with no W              |
| 9 March     | Midterm of Spring 2009 Semester         |
| 16–21 March | Spring Break - No Classes               |
| 3 April     | Last day to drop with no W              |
| 1 May       | Last Class                              |
| 8 May       | 1-3 PM Final Exam                       |