DIFFERENTIAL EQUATIONS 10:00-10:50AM SPRING 2006 HICKOK 305

Instructor:	Jonathan White
E-Mail:	JWhite@Coe.Edu
Web Page:	http://www.coe.edu/~jwhite/
Office:	Hickok 206A
Office Hours:	9:00-9:50 MWF, 2:00-2:50 MW, and by appointment
Office Phone:	399-8280
Home Phone:	841-5111 (between 7am and 11pm)
Text:	*Differential Equations*, 2nd Edition, Blanchard, Devaney, and Hall
Problem Sets and Labs:	There will be occasional problem sets, as well as lab assignments on designated class days, and together these will total 200 points (about 29% of the final grade).
Exams:	There will be three in-class exams administered during class time. The dates of these are indicated in the schedule on the back side of this sheet. These exams will be worth 100 points (about 14% of the final grade) each. The final exam will be held during the finals week at the date and time indicated on the back side of this sheet. The final will be worth 200 points (about 29% of the final grade).
Grading:	Grading will approximately follow a 90% A, 80% B, 70% C, 60% D scale.
Makeups:	Makeups for quizzes and exams will generally be allowed only under extenuating circumstances, with documentation and advance notice when humanly possible. Late problem sets and labs will generally not be accepted, and if accepted due to extenuating circumstances will generally be subject to a penalty of 20% of the possible points for each day past due.

This class is intended to give a solid modern introduction to differential equations. This means that graphical and numerical approaches will be taken as seriously as conventional analytic methods, and that qualitative statements will be as important as quantitative solutions.

The use of technology, particularly computer software, will be an important component of the course. Ability to compute with pencil and paper will also be important, as will conceptual understanding of the topics treated.

This combination of approaches is likely to prove challenging, partly because few people will find that all of these aspects play to personal strengths. Don't let that be overwhelming, though, and remember that I'm around to help. might be unsettling at first. Give it some time, and feel free to take advantage of my office hours to help past the rough spots.

Tentative Schedule

Monday, January 16th §1.1 Modeling via Diff. Equations	Wednesday, January 18th §1.2 Separation of Variables	Friday, January 20th §1.3 Slope Fields
Monday, January 23rd §1.4 Euler's Method	Wednesday, January 25th §1.5 Existence and Uniqueness	Friday, January 27th §1.6 Equilibria
Monday, January 30th §1.7 Bifurcations	Wednesday, February 1st §1.8 Linear Differential Equations	Friday, February 3rd Lab
Monday, February 6th §1.9 Changing Variables	Wednesday, February 8th Review	Friday, February 10th **Exam 1**
Monday, February 13th §2.1 Modeling via Systems	Wednesday, February 15th §2.2 The Geometry of Systems	Friday, February 17th §2.3 Analytic Methods
Monday, February 20th §2.3 Analytic Methods	Wednesday, February 22nd §2.4 Euler's Method for Systems	Friday, February 24th §2.5 The Lorenz Equations
Monday, February 27th §6.1 Laplace Transforms	Wednesday, March 1st §6.1 Laplace Transforms	Friday, March 3rd Lab
Spring Break – No Classes		
Monday, March 13th §6.2 Discontinuous Functions	Wednesday, March 15th Review	Friday, March 17th **Exam 2**
Monday, March 20th §3.1 Linear Systems	Wednesday, March 22nd §3.2 Straight-Line Solutions	Friday, March 24th §3.3 Phase Plane & Real Eigenvalues
Monday, March 27th §3.4 Complex Eigenvalues	Wednesday, March 29th §3.5 Repeated and Zero Eigenvalues	Friday, March 31st Lab
Monday, April 3rd §3.6 Second-Order Linear Equations	Wednesday, April 5th Symposium – No Classes	Friday, April 7th §3.7 The Trace-Determinant Plane
Monday, April 10th §3.8 Linear Systems in 3D	Wednesday, April 12th Review	Friday, April 14th **Exam 3**
Monday, April 17th §4.1 Forced Harmonic Oscillators	Wednesday, April 19th §4.2 Sinusoidal Forcing	Friday, April 21st §4.3 Undamped Forcing
Monday, April 24th §5.1 Equilibrium Point Analysis	Wednesday, April 26th Series Solutions	Friday, April 28th Review
Final Exam – 8am Wednesday, May 3rd		

Any students with disabilities which might affect their performance in this class should contact me as soon as possible to arrange accommodations.

Coe's faculty has adopted an academic integrity policy. It is your responsibility to understand and follow it.

Diversity, in all its forms, is valuable.