SYLLABUS
Spring 2005
DIFFERENTIAL EQUATIONS (Math 3336-1, 2)

Dr. Elaydi
Department of Mathematics

OFFICE:	MMS 115D	**OFFICE HOURS:**	M: 4:00-6:00, T: 3:00-5:00;
EMAIL:	*selaydi@trinity.edu*		R: 3:00-5:00, or by appointment
BUS. PHONE:	(210) 999-8246	**CLASS MEETS:**	TR: Section 1 (8:30-9:45)
			Section 2 (12:45-2:00), MMS 140

TEXT: Edwards and Penney, *Differential Equations & Linear Algebra, 2nd Edition*

COURSE CONTENT: This course covers the basic concepts in linear algebra needed to study scalar differential equations as well as systems of linear differential equations. Linear systems and matrices, vector spaces, and eigenvalues and eigenvectors are covered at appropriate times in the course. The course offers an introduction to mathematical modeling, stability and qualitative properties of differential equations, and numerical methods. In addition, Laplace transform methods will be treated with a goal of handling the piecewise continuous and periodic forcing (control) functions.

Week 1
Week 2   } First Order Differential Equations
Week 3   Mathematical Modeling
Week 4   Linear System and Matrices
Week 5
Week 6   } Vector Spaces
Week 7
Week 8   } Linear Equations of Higher Order
Week 9   Eigenvalues and Eigenvectors
Week 10
Week 11   } Linear Systems of Differential Equations
Week 12
Week 13   } Laplace Transform

GRADES: There will be regular homework assignments, which will be collected at the beginning of each class except on test days. **Late homework will not be accepted** unless you are ill or traveling on an approved school trip. However, the three lowest grades on homework assignments will be dropped. There will be **three** tests and a final exam. Course grades will be computed as follows:

GRADE CHART	
20% x 3 = 60%	Tests I, II, III
15%	Homework
25%	Final

EXAM DATES:

Exam I	Thursday, February 24, 2005
Exam II	Thursday, March 31, 2005
Exam III	Tuesday, April 26, 2005
Final Exam	*To be determined*

NOTES:

I.   *Regular attendance is a requirement in this class. Excessive absences will result in dismissal from the class.*

II. *In the case of an excused absence (e.g., a documented illness or a sanctioned University activity), the instructor may approve a replacement for an in-class exam. Appropriate written documentation must be presented to the instructor for approval, preferably in advance.*

III. *The Final will be given only at the scheduled date and time.*

HONOR CODE/ACADEMIC INTEGRITY POLICY: All students are covered by a policy that prohibits dishonesty in academic work. The Academic Integrity Policy (AIP) covers all students who entered Trinity before Fall 2004. The Academic Honor Code covers all those who entered Fall 2004 or later. Students who are under the Honor Code are required to pledge all written work that is submitted for a grade: "*On my honor, I have neither given nor received any unauthorized assistance on this work*" and their signature. Alleged violations will be reported to the Honor Council. Students who are under the AIP will be requested to make the same pledge, which for them will mean that they acknowledge that use of unauthorized assistance will be handled by the instructor under the guidelines of the AIP. For each type of written work submitted, authorized assistance will be defined as any assistance outside of the resources specifically stated in the syllabus.