Syllabus for Mathematics 3350 - Differential Equations - Spring 2008

Please read this syllabus carefully. You will be responsible for all the information given here, and for any modifications to it that may be announced in class.

Text: The textbook for this course is *Fundamentals of Differential Equations and Boundary Value Problems* (7th edition) by Nagle, Saff and Snider.

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Expected Learning Outcomes: The students will understand the concepts of differential equations, their solutions, and applications to physical sciences and engeeniring. In particular the students will learn to

- recognize a differential equation and its solution,

- compute solutions of first order and second order differential equations,

- compute solutions of linear differential equations,

- use Laplace transforms,

- recognize Fourier series,

- use elementary linear algebra.

Methods for Assesment of the Learning Outcomes: The expected learning outcomes for the course will be assesed through:

Class Participation: You are expected to attend all lectures, and are responsible for all information given out during them. As explained under "Grading System" later in this syllabus, excessive absences will result in points lost from your class participation grade, while superior attendance will add a few extra points to your total.

This course requires your full effort, so it is expected that you will give your complete attention to the instructor for the full class period. Activities such as eating, sleeping, reading, listening to headsets, using laptops, conversing with other students, and so on do not constitute class participation. Students engaging in such behavior during the lecture may be counted as absent.

Homework: *It is absolutely essential to work a large number of problems on a regular basis.* Problem assignments are given in the Class Schedule and Homework Assignments page. You must enter the final answers in Webwork.

The homework assignments are the *bare minimum* for most students to gain basic familiarity with the material. As manager of your own education, it is up to you to work whatever additional problems may be necessary for you to achieve a good understanding of the subject.

There is no make-up for missed homework assignments. The lowest homework will be dropped.

Quizzes: There will be a quiz each Thursday of non-exam weeks.

There is no make-up for missed quizzes. The lowest quiz will be dropped.

Testing: *The exams will test understanding of some of the theoretical ideas and additional techniques presented in the lectures. These are part of the course and should be learned along with the basic problem-solving techniques used in the homework problems.* Examinations will be given during the regular lecture hour on the following dates, covering the listed sections.

Exam 1	Thursday, Jan 24	Sections 1.2, 2.2–2.6
Exam 2	Thursday, Feb 21	Sections 3.2, 3.3, 4.2–4.4
Exam 3	Thursday, Mar 27	Sections 4.5, 4.6, 7.2–7.6

The final examination will be held on Saturday, May 03, 1:30 p. m. to 4:00 p. m. University regulations require that you take it at that time. It will cover all sections listed in the class schedule.

All tests must be taken at the scheduled times, except in extraordinary circumstances. Please do not arrange travel plans that prevent you from taking any of the exams at the scheduled time. If you cannot take a test at the scheduled time, you should contact me *in advance*. Check the grading of your exams carefully when they are returned; all grading errors should be brought to my attention as soon as possible.

Grading system: There will be 300 points possible as follows:

Points:	Percent:	
30	10	Class participation
45	15	Homework & Quizzes
50	16.67	Exam 1
50	16.67	Exam 2
50	16.67	Exam 3
75	25	Final exam
300	100	Total possible

The class participation grade will be determined as follows. If you have 4 absences or less, you will receive the full 30 points of class participation credit, plus three bonus points for each class fewer than 4 missed (thus you can earn up to 12 bonus points for superior class participation). The 5th through 10th absences will each subtract 5 points from the 30 points of class participation grade.

Course grades will be determined according to the following scale:

Total points:	Percent:	Grade:
262.5−300.0	87.50−100.00	A
232.5−262.0	77.50− 87.34	B
202.5−232.0	67.50− 77.34	C
165.0−202.0	55.00− 67.34	D
0.0−164.5	0.00− 54.84	F

Grades are calculated by computer but errors in recording or entering scores can occur. Please keep your tests and homework so that you can verify the posted totals at the end of the semester, if you think that an error may have occurred.

Withdrawal Policy: The last day to drop a course is March 12. First-time freshmen entering fall 2004 or after can only have 4 W's during their academic college career. Transfer students can only have 3 W's.

Grade of Incomplete: The grade of "I" is a special-purpose grade given when a specific task needs to be completed to finish the coursework. This is typically a term paper or other special assignment, so rarely makes sense in a mathematics course. An "I" cannot be given to avoid receiving a low grade.

Calculators: This is a course of mathematical concepts and techniques, not a course of mechanical computation, so we will have little use for calculators. A few of the homework problems may require the use of a basic scientific calculator, which can perform numerical calculations, and can give values of the trigonometric, inverse trigonometric, exponential, and logarithm functions. Such a calculator can be purchased at discount stores for a few dollars. A basic scientific calculator can be used during exams, although it is not necessary to have one. However, since knowing the graphs of the standard functions from trigonometry and calculus is an essential skill, *use of graphing calculators during exams is prohibited.* Use of any calculator with the capability to store formulas or other information is also prohibited during exams.

Cell phones: Cell phones must be turned off before entering the classroom - there are no exceptions. Cell phone calculators cannot be used in exams.

Academic Misconduct: Cases of academic misconduct are inexcusable and will be punished to the maximum extent possible under University regulations. *Don't do it.*

Students with Disabilities: Any student who, because of a disability, may require special arrangements in order to meet the course requirerments should contact

the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information you may contact Student Disability Services at 335 West Hall or 806-742-2405.

Observance of religious holy day:

1. "Religious holy day" means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code 11.20.

2. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

3. A student who is excused under section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.