Math 342 – Applied Analysis

MWF 1:00-2:05 PM; CH 131 Spring 2016

Contact Information:
Instructor: Professor C. Crawford
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Office Hours:

Monday	10:00 AM – 11:00 PM
Tuesday	2:00 PM – 3:30 PM
Wednesday	11:00 AM – 12:00 PM
By appointment	

Course Description:
This is a partial differential equations course, which focuses on methods for solving boundary value problems. Topics include Fourier series, separation of variables, Laplace transforms with applications to such equations as the heat and wave equations. *Prerequisite: Math 341 Differential Equations*.

Instructional Materials:
Required Text: *Boundary Value Problems, 6th Edition* by David L. Powers.
Calculator: A graphing calculator such as one of the TI-8x or –9x series is recommended.

Grading

Homework/Projects	**100 points**	
Seminar	**15 points**	
2 Exams	**200 points (100 points each)**	***Tentative* Dates: 03/09 & 04/20 (Friday)**
Final Exam	**150 points**	**Date: 05/20 at 1:00 - 3:00 PM**
	465 points	

Your final **letter** grade for the course will be based on the percentage of total points earned. Excessive and consistent disruptions to the class (e.g. tardiness, bathroom/drink breaks, cell phones, etc.) may result in lowering your grade up to one full letter grade. ***All cell phones must be turned completely off and put away.*** *Having a cell phone out during an exam or quiz will result in an automatic 0 grade for the exam or quiz.*

HOMEWORK: Typically, homework will be assigned each class and will be due two class periods later. Additional problems may be suggested but not turned in. Each assignment is worth 10 points. You have **one-day** grace period on assignments without penalty (unless this option is abused or otherwise noted). You will be docked 10% for each *day* late thereafter. **Late homework will not be accepted after the assignment has been graded.** Homework scores will be based on solutions to a few of the problems and overall completeness. For every three homework scores, I will drop one. The remaining homework scores will be scaled to 100 points.

PROJECTS: Projects may be assigned periodically throughout the semester. They will typically be worth more than the daily homework and you will **not** be allowed to drop any of these project scores. These points will be incorporated into your homework scores and scaled as explained above.

EXAMS: Two in-class exams are ***tentatively*** scheduled for **March 09 and April 20**. You must take both exams in class on the announced dates (subject to change at my discretion). **No make-up exams will be allowed**. See below for the replacement policy.

FINAL EXAM: The cumulative final exam will be held on **Friday, May 20 from 1:00 - 3:00 PM.**

EXAM REPLACEMENT POLICY: If you take all of the course exams as scheduled then the lowest score will be replaced by your final exam percentage, if this is to your benefit. *You will not be allowed to take an*

exam early or late for any reason. If you miss any exam(s), your final percentage will serve as the score for the missed exam(s). Only the missed exam score(s) will be replaced.

SEMINAR: As part of your grade, you are **required to attend one of the math seminars** held Wednesdays 4:00-5:00 PM in CS 213 and hand in a 1-2 page Summary/Evaluation Paper. Seminar Summary/Evaluation Papers receive a holistic (overall) grade based on the guidelines below.

Seminar Summary/Evaluation Paper Guidelines:	
Attendance : • **Attendance and written paper**	**~60%**
Content: • **Clear summary of the main point(s) and some details of the talk** *[Note: You will often not understand everything in the talk, nor are you expected to. But you should be able to explain the main point(s)/some details clearly (e.g. Imagine trying to explain what you did understand of the talk to another math/science major who was not in attendance.).]* • **Evaluation of the topic** *[Note: The evaluation is not a critique of how well the speaker presented the material, but more about the ideas presented and their potential impact on you and to the broader science or education community. You should also consider any limitations or questions you have about the talk along with possible extensions for further work.]*	**~20%**
Mechanics & Format: • **1-2 pages, double-spaced, 1-inch margins** • **Clear and skillful organization and writing** • **Error-free** • **Neat and professional presentation**	**~20%**

Policies and Academic Integrity:

You are expected to adhere to the College Academic Integrity Policy as stated in the *E-Book* as it applies to this class.

- Test and quizzes, whether take-home or in-class are to be your own work unless otherwise stated. You may ask questions of me any time during an exam or quiz.
- Calculators and notes are not allowed on quizzes and tests unless otherwise stated. If calculators are allowed, you may not store any notes or unauthorized programs on the calculator.
- **You may work with others on your homework and are *encouraged* to do so**. But you must turn in your own homework unless specifically stated as group work requiring one submission.
- Individual projects should reflect your own work. However, feel free to obtain input, feedback, etc, from me and other students. Group projects should reflect quality contributions by all group members.
- Please feel free to ask questions of me for all work, especially if something is unclear.

Accommodations:

The College will make reasonable accommodations for persons with documented disabilities. If you have a disability that may have some impact on your work in this course, please contact the Disabilities Service Provider (630) 617-3753 and ***then contact me***.