

ENGR 8102 Computational Engineering: Elliptic Partial Differential Equations Fall 2007 Syllabus

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Course website: <http://www.math.uga.edu/~caner/07engr8102/>

Office Hours: TBA

Text: *Numerical Analysis* by Timothy Sauer

Objective: The formulation, analysis, and numerical solution methods of elliptic partial differential equations.

Prerequisites: ENGR 6101

Topics: Here's tentative schedule of topics to be covered:

Topics	Dates
Transport equations, numeric and analytic solutions	Week 1
Forward and backward solution techniques, elliptic PDE's	Week 2
Vector norms, fourier transformation, Parseval equality	Week 3
Von Neumann stability analysis	Week 4
2d elliptic PDE's with sources and sinks	Week 5

Grading: The course grade will be based on homework assignments. Homework's will be posted on the course website on Fridays, and they will be due Fridays by noon (the following week) in my mailbox.

HW Policy: You need to show all your work on solutions of all HW assignments. Grades will be assigned to correct solutions, not correct answers. Just a correct answer will be graded as 0/10 unless there is a solution in your paper that leads to this answer. On the other hand, a solution attempt based on a correct idea will definitely get partial credit even though the final answer might be wrong. All academic work must meet the standards contained in "A Culture of Honesty". Students are responsible for informing themselves about those standards before performing any academic work.

Attendance: Attendance is required. If you miss any classes, it is your responsibility to get notes from your classmates and make up for the class you missed.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.