

Partial Differential Equations
Math 570
Syllabus, Spring, 2010

Class meets Monday and Wednesday 4:00–5:50 p.m., JB 387

Instructor: Dr. Charles Stanton
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Office hours: Monday, Wednesday, and Friday, 11 a.m.– noon
Monday and Wednesday 3:20–3:50 p.m.
and by appointment

Textbook: *Partial Differential Equations for Scientists and Engineers* by Stanley J. Farlow, Dover, 1993

Prerequisite: Math 270 and Math 355. Math 241 recommended.

Grading: Your grade will be based on homework, two midterms, a project, and a final exam.

Homework	100 points total
Project	50 points
2 Midterms	200 points total
Final exam	150 points
Total	500 pts

Grading Scale:

A	92–100
A–	89–91
B+	86–88
B	78–85
B–	74–77

C+	71–73
C	62–70
C–	60–61
D	50–59
F	0–49

Homework: Homework will be assigned and collected weekly. Homework should be done neatly and turned in with problems in the proper order.

Project: Each student will complete a project, due on Monday, June 14. Possible projects include:

- Read and do the problems from one of the chapters in the book that we do not cover in class.
- Use Maple or another mathematics program to solve PDE's.

- Use Excel to solve Laplace's equation.
- Read and report on the Millennium Navier–Stokes problem.
- Read and do some problems on the Schrödinger equation.

Midterms: The first Midterm will be on Monday, May 3, and the second will be on Wednesday, May 26.

Final Exam: Wednesday, June 16, 4 p.m.

Course content: The course will cover the fundamental second order PDE – the heat equation, Laplace's equation, and the wave equation, as well as related equations. Solutions will be found using techniques from ODE, integral transforms, and Fourier series. The physical meaning of the equations studied will be emphasized.

Students with Disabilities: If you are in need of an accommodation for a disability in order to participate in this class, please contact Services to Students with Disabilities at UH-183, (909)537-5238.

State Budget Closure Days and Furlough Days: Tuesday April 27 and Friday, May 28 the campus will be closed. Monday, May 31 is Memorial Day (state holiday). In addition, Dr. Stanton will be on furlough Thursday, April 8, Thursday May 13, Thursday, June 3, and Tuesday, June 15.

Last Day to Drop: April 23