

# Syllabus

## MAP 6356: Partial Differential Equations, Spring 2006

**TIME and ROOM:** MW 4:30-5:45 pm, MAP 109

**Prof:** Dr. Warren Qi   **Office:** MAP 127   **Phone:**823-2810   **Email:** yqi@pegsus.cc.ucf.edu

**OFFICE HOURS:** MW 2:00 pm–4:00 pm, T 5:30 pm-6:30 pm or by appointment

**Textbook:** Partial Differential Equations, 2nd ed, by Robert C. McOwen, Prentice Hall, 2003.

**HOMEWORK:** Homework will be assigned through the semester and collected.

**PREREQUISITE:** Under-graduate PDE and Boundary-Value problems:

- (1) 2nd order linear, constant coefficients ODEs, and 1st order variable coefficients by variation of parameters.
- (2) Heat and Laplace equation for 1D and 2D rectangular and circular domains, separation of variables and eigenfunction expansions, Poisson's Formula.
- (3) Transport Equation, Fourier series and Laplace transform.

**EXAMS:**   1 Midterm,                      1 Final

**Testing Dates:** Midterm: **Feb 27**;   Final, TBA

**GRADING POLICY:** Midterm 25 %, Final 50 %, Homework 25 %

**Grading Scale:** A: 90-100 %,   B: 80-89 %   C: 70-79 %   F: 0-69 %

**Suggested Topics:**

**Chapter 1: First order Equations**

**Chapter 2: Principles for High-Order Equations**

**Chapter 3: The Wave Equation**

**Chapter 4: The Laplace Equation**

**Chapter 5: The Heat Equation** and

**Topics of my choice**

**References:**

1. Partial Differential Equations: An Introduction by W. A. Strauss (elementary)
2. Partial Differential Equations by L. C. Evans (Advanced)

Remarks: 1) This is a **tough course**, hence please **Work Hard**.

2) I do not discuss score or grade.

3) **Makeup Policy:** In case of documented absence due to religious holidays, family emergencies, illness or official university functions, the university policy for make-up tests, quizzes will be followed. Any other make-up is at the the discretion of the instructor.