

Math412-200: Theory of Partial Differential Equations

Summer 2006

Professor Emil J. Straube

MTWRF 10:00 - 11:35, BLOC 163

Office: Miln 215, 845 3721, straube@math.tamu.edu

Office hours: daily 1:00 - 1:45, and by appointment

Text: Richard Haberman: *Applied Partial Differential Equations* with Fourier Series and Boundary Value Problems, 4th edition

Prerequisite: Math308 or Math451

Course Content: This is an introductory course in partial differential equations. Topics covered include: heat equation, separation of variables, Fourier series, wave equation, Sturm-Liouville problems, higher dimensional equations, nonhomogeneous problems, characteristics (the latter two time permitting). This corresponds to (parts of) chapters 1-5 and 7 in the text, and (parts of) 8 and 12.

Grading Policy: There will be three exams (including the final exam), each worth 100 points. (The final exam is comprehensive.) In addition, there will be 10 quizzes, each worth 10 points.

Course Syllabus:

week 1: 1.1-1.4, quiz 1 (F)

week 2: 2.1-2.5, 3.1-3.3, quizzes 2&3 (T,F)

week 3: 4.1-4.4, Exam 1 (Wed.), 5.1-5.6, quizzes 4&5 (T,F)

week 4: 7.1-7.5, 8.1 - 8.3, quizzes 6&7 (T,F)

week 5: 8.4, review, Exam 2 (Wed.), 12.1-12.3, quizzes 8&9 (T,F)

week 6: review, quiz 10 (M), final exam: Wed., Aug. 9, 10:30-12:30