COURSE OUTLINE     MATH-4500
Methods of Partial Differential Equations of Mathematical Physics
Spring 2001

Instructor: Professor I. Herron, x2649, e-mail herroi@rpi.edu, Amos Eaton, room 406

Description: This course is concerned with the formulation, analysis and solution of the classical second order partial differential equations (PDE’s) of Mathematical Physics; the heat equation, Laplace’s equation, the wave equation, and more general equations similar to these equations. Methods for first order PDE’s will also be studied. The course will cover parts of chapters 1,2,4,5,6,7,9 and 10 of the text.

Text:
+ Partial Differential Equations: An Introduction, by Walter A. Strauss

Recommended References:
    + In the Bookstore

Prerequisites: Ordinary Differential Equations and Advanced Calculus or their equivalents.

Assignments: There will be a problem set or a test every other week.

Examinations: There will be two in-class examinations and a final examination. One two-sided, 8.5”x11” sheet of will be allowed as a reference for each examination.

Grading: The course grade will be based on the home assignments (50%), in-class exams (25%) and the final examination (25%).
MATH-4500 Tuesdays, Fridays 10:00-11:50am, SA 4203

Class Days:
January 9,12,16,19,23*,26,30
February 2,6*,9,13,16,23**,27
March 2,6,9*,20,23,27*,30
April 3,6,10**,13,17,20,24*

Total 28 days
Assignment or test every other week
*Assignment Due Dates
**Test Days