

Math 412 - Theory of Partial Differential Equations, Section 200/501, Fall 2014 Tu, Th 9:35am - 10:50am, BLOC 161

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Office Hours: Tu, Th 10:50am - 11:45am

Textbook: Richard Haberman, Applied Partial Differential Equations with Fourier Series and Boundary Value Problems, 5th edition, Prentice Hall, NJ, 2004.

Prerequisite: Math 308 or Math 451 (ordinary differential equations)

Outline: This is an introductory course in partial differential equations. It will be focused on three important equations of mathematical physics: heat equation, wave equation, and Laplace's equation. Topics to be covered include: separation of variables, Fourier series and Fourier transforms, Sturm-Liouville problems, Green's functions, characteristics.

Grading System: There will be 3 in-class exams worth 100 points each, and the final comprehensive exam worth 200 points. Also, there will be homework assignments or quizzes, which will account for another 100 points. The student may drop the lowest of the four 100 point grades (i.e. the three in-class exams or the homework/quizzes). Thus each student will have a final score of up to 500 points. The final grades will be assigned according to the 90–80–70–60% scale, that is, A for 450+ pts, B for 400–449 pts, C for 350–399 pts, D for 300–349 pts, and F for less than 299 pts.

Homework Assignments: Homework assignments will be given in class one week before the due date, and also posted on this web page.

Make-ups: Make-ups for missed exams will only be allowed for a university approved excuse in writing. Wherever possible, students should inform the instructor before an exam is missed. Consistent with University Student Rules, students are required to notify the instructor by the end of the next working day after missing an exam. Otherwise, they forfeit their rights to a make-up.

Scholastic Dishonesty: Students may work together and discuss the homework problems with each other. Copying work done by others is an act of scholastic dishonesty and will be prosecuted to the full extent allowed by University policy. For more information on university policies regarding scholastic dishonesty, see [University Student Rules](#).

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