

Math 412, Section 501
Theory of Partial Differential Equations
Fall 2006

Instructor: Yaroslav Vorobets

Time: MWF 10:20–11.10

Location: *Milner 317*

Web page: <http://math.tamu.edu/~yvorobet/math412.html>

Office: Milner 004 (phone: 845–0849, e-mail: yvorobet@math.tamu.edu)

Office hours: MWF 12.30–13.30, and by appointment

Text: Richard Haberman, *Applied Partial Differential Equations* with Fourier Series and Boundary Value Problems, 4th edition, Prentice Hall, NJ, 2004.

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

Course content: 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 180 points (extra points can be earned by solving bonus problems). Also, there will be homework assignments which will account for another 120 points. The final grades will be assigned according to the 90–80–70–60% scale, that is, A for 540+ pts, B for 480–539 pts, C for 420–479 pts, D for 360–419 pts, and F for less than 360 pts.

The *tentative* dates for the 3 exams are: September 22, October 20, and November 17 (Fridays). The final exam is scheduled for Tuesday, December 12, 8:00–10:00am.

I will assign and collect homework about once per week. Late homework will be accepted only for legitimate reasons and may be penalized if circumstances warrant.

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.

Academic integrity: Although students are encouraged to discuss homework problems, each student is expected to write his/her own solutions. Copying another student's work is dishonest and academically worthless.

Copyright notice: All course materials (both printed and web-based) are protected by U.S. Copyright Laws. No multiple copies can be made without written permission by the instructor.

Students with disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Disability Services Office, in Room B116 of Cain Hall or call 862–4570.