

# MATH 602: Methods and Applications of Partial Differential Equations

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Office hours: Mondays, Wednesdays, 11:10am–12:10pm and on request

Class: Mondays, Wednesdays, Fridays, 10:20am–11:10pm  
Blocker Bldg., Room 105

## Textbook

D. Bleecker, G. Csordas: Basic Partial Differential Equations, International Press, 1996

## Prerequisites

Prerequisites: MATH 601 or MATH 308 and 407

## Course Outline and Schedule

Classification of linear partial differential equations of the second order. Fourier series, orthogonal functions, applications to partial differential equations; special functions, Sturm-Liouville theory, application to boundary value problems' introduction to Green's functions, finite Fourier transforms.

Chapter 1 (Review and Introduction)  
Chapter 2 (First-Order PDE)  
Chapter 3 (The Heat Equation)  
Chapter 4 (Fourier Series)  
Chapter 5 (The Wave Equation)  
Chapter 5 (The Laplace Equation)  
Chapter 7 (Fourier Transform)

## Webpage + Support

Homework assignments and other course information will be posted at the course webpage

<http://www.math.tamu.edu/~kanschat/teaching/>

If you feel you need help, do not hesitate to come to my office hours; I will also offer appointments if your class schedule does not allow you to see me during office hours.

I will answer email questions, usually within 24 hours on weekdays. Depending on the complexity, a personal appointment might be necessary.

## Exams + Grading

Final course grades will be computed from homework and programming assignments (50%) and exams (50%).

One midterm exam (tba, during class hour, 17%) and one comprehensive final exam (May 8, 2007, 8–10am, 33%).

Grades will be at least A, B, C or D for averages over 90%, 75%, 60% or 45%, respectively.

*Make-up exams:* Students must make arrangements in advance if they will not be handing in homework on time or will miss an exam. Absences due to recognized University-related activities, religious holidays, verifiable illness, and family/medical emergencies will be dealt with on an individual basis, but require a written excuse. Please let your instructor know about this as soon as possible, and preferably in advance.

## Policies

*Academic integrity:* The Aggie Honor Code “An Aggie does not lie, cheat or steal, or tolerate those who do” applies, see also the Honor Council Rules and Procedures at

<http://www.tamu.edu/aggiehonor.html>

Students are strongly encouraged to work together and discuss homework problems with each other. However, copying or stealing work done by others is an act of academic dishonesty and will be persecuted according to the University policy.

*Disabilities:* If you have a disability and need special assistance, please contact me so we can make accommodations. 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 also contact Services for Students with Disabilities, Koldus 126, 845-1637.

For other policies and other information, please read

<http://www.math.tamu.edu/teaching/operationspg.html>