

# MATH 412: Theory of Partial Differential Equations

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Office hours: Wednesdays, 9:00–11:30am

Lecture: Tuesdays + Thursdays, 11:10am-12:25pm  
Blocker Bldg., Room 164

## **Textbook**

R. Haberman: Applied Partial Differential Equations, 4th edition, Prentice Hall

## **Course Outline**

Refresher of functions of several variables and multivariate calculus; formulation and solution of partial differential equations of mathematical physics; solution by separation of variables, Fourier series and transform methods; methods of characteristics and first order equations.

## **Prerequisites**

Prerequisites: MATH 308 or 451 or approval of instructor.

## **Webpage**

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

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

## **Exams + Grading**

Final course grades will be computed from homework (40%) and exams (60%).

One midterm exam (10/25/2007, counts 30%) and one comprehensive final exam (12/7/2007, 30%).

Grades will be A: 90-100%, B: 75-90%, C: 60-75%, D: 45-60%.

*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.

*Incompletes:* I will consider giving an incomplete if you have successfully com-

pleted all but a small portion of the work of the course, and are prevented from completing the course by a severe, unexpected event. Simply being behind work is not a reason for an Incomplete, though; in that case you should consider dropping the course.

*S/U grades:* If you are registered S/U your grade will be ‘S’ if your letter grade is C or above, and ‘U’ otherwise.

### **Policies**

*Academic integrity:* The usual rules of academic integrity apply. In particular, the Aggie Honor Code “An Aggie does not lie, cheat or steal, or tolerate those who do” should be selfevident, see

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

Students may, and are encouraged to, work together and discuss homework problems with each other. However, copying work done by others is an act of scholastic dishonesty and will be persecuted to the full extent allowed by University policy.

*Absences:* Let your instructor know if you have to miss a class in the future. If you missed a class without telling, let him know as soon as possible afterwards. In general, Rule 7 of the Texas A&M University Student Rules applies, as do the other rules.

*Disabilities:* If you have a disability and need special assistance, please contact me so we can make accomodations. 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 accomodation of their disabilities. If you believe you have a disability requiring an accomodation, 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>