Mondays, Wednesdays and Fridays from 11:50 to 12:40 in JTB 120.

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Prerequisite: Math 3220, Foundations of Analysis II.

Office Hours: Mondays 2:00-3:00, Wednesdays and Fridays 10:00-11:00, and by appointment.

Course Outline: This is an introductory course in the theory and applications of partial differential equations (PDEs). No prior experience with PDEs is necessary or assumed. We will cover selected topics from the first seven chapters of the text. Topics will include: general theory of PDEs, first-order equations, classification of second-order equations and basic properties of each type, classical PDEs of mathematical physics (wave equation, heat equation, Laplace equation), and Fourier analysis techniques.

Exams: There will be two take-home exams. The first will be distributed around February 18; the second will be given out near the end of March. The comprehensive final exam will be on Friday, April 30, from 10:30 to 12:30.

Homework: Problems (usually from the text) will be assigned to be turned in. There will be approximately six homework assignments. Additional problems will be suggested. In addition, a 1-3 page (typed, double-spaced) summary of the previous week’s material will be due each Wednesday, with occasional exceptions. It is recommended (but not required) that you use LaTeX
in preparing these summaries. You should strive for clear, mathematically accurate, complete and well-written reports.

**Grading:** Each of the take-home exams counts for 25% of the overall grade. The final exam contributes 30%, and the homework (including the summaries) makes up the remaining 20%.

**Computing and Group Study:** Each enrolled student has an account on the department computer system. The undergraduate computing lab in LCB is open from 8:00 AM to 8:00 PM Monday through Thursday, and Fridays from 8:00 to 6:00. The math system can be accessed from the computer lab in 205 South Physics at other times. LaTeX (among many other things) is available on these computers. Group Study rooms in the Math Center may be reserved by groups of students. Make reservations at the tutoring center desk.