Partial differential equations

Course Syllabus
Spring Term 2009 — SNU

Course Title	Partial differential equations (in English)
Course Number	881.423
Instructor	Gerald Trutnau
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Course Objective	The course gives an introduction to partial differential equations at undergraduate level.
Prerequisits	Solid knowledge of calculus, especially multivariate. Small amount of knowledge in ODE and linear algebra.
References	Textbook: W.A. Strauss: *Partial Differential Equations. An Introduction*, Wiley, 2008. Additional references may be given in the lecture.
Description	Basic properties of partial differential equations and techniques that have been proved useful in analyzing them are treated. We focus on the three classical equations (Laplace, heat, and wave) with possible boundary conditions in one, two, and three spatial dimensions. All important ideas can be understood in terms of them. The textbook is not conceived as a graduate text and advanced theoretical concepts as well as mathematical jargon is minimized.
Tentative content	We shall follow the starred sections of the textbook and treat additional chapters and/or sections as time permits.
Teaching Method	Lecture, exercises
Evaluation	Midterm (8th week, 75 minutes, 30 % of final score); Final exam (15th week, 75 minutes, 40 % of final score); Assignment sheets (20 % of final score); Attendance (10 % of final score). Students must solve exercises regularily, and will be given assignment sheets mostly every week.