UNIVERSITY OF WISCONSIN-MADISON
MATHEMATICS DEPARTMENT

SEMESTER II YEAR 2002-2003

COURSE NO.	COURSE TITLE	INSTRUCTOR
Math/CS 887	Approximation Theory	Carl de Boor

COURSE DESCRIPTION

The course will give an overview of basic and by now classical Approximation Theory, i.e., (best and) good approximation from a finitely generated (linear or nonlinear) family of functions in specific normed linear spaces (such as L_1, L_2, and C); especially, construction of good approximations, hence also consideration of approximation order (Jackson, Bernstein). The theory will be illustrated mainly by considering approximation by (mainly univariate) polynomials and splines, and by shift-invariant spaces. The latter will provide a platform for some discussions of wavelets.

LECTURES

13:20 MWF B231 Van Vleck

HOMEWORK

Assignments, typically three or four problems every other week, will be graded.

PREREQUISITE

Familiarity with real analysis; ideally Math 721, 722 and some Functional Analysis, or consent of instructor.

TEXTBOOK

None. TeXed lecture notes will be available on the web, in timely fashion.

OFFICE HOURS

WF11-12 7379 Computer Sciences.

e-mail and net `deboor` or `deboor@cs.wisc.edu`, `www.cs.wisc.edu/~deboor`;