

COURSE ANNOUNCEMENT

FALL 2008

MAT 598 (APM 503)

Applied Analysis I

Instructor: Hal L. Smith, PSA 631,
URL: <http://math.la.asu.edu/~halsmith>

Time: 1:30 – 2:45 Tuesday & Thursday

Location: Glbl Inst. of Sustain L1-14

Class Number: 85345

Credits: 3

Course Description: The course covers the basics of applied analysis including: modes of convergence (pointwise, uniform, and mean square) of sequences and series of functions with particular attention to Fourier series; metric space topology with emphasis on compactness and completeness and the Ascoli-Arzelà Theorem; the Contraction Mapping Principle with application to the initial value problem for ordinary differential equations and the Implicit Function Theorem; A brief treatment of Lebesgue integration leading to L^p -spaces; elementary properties of orthonormal bases for Hilbert space; The Fourier transform and its elementary properties.

Prerequisites: Knowledge of Linear Algebra, Multi-variable Calculus, and Analysis at the undergraduate level.

Textbook: To be determined.

Requirements: Homework and Exams.