

UNIVERSITY OF NEW BRUNSWICK

WINTER 2009

MATH 3073 (1B)

PARTIAL DIFFERENTIAL EQUATIONS

TIME, LOCATION: TTh 10:00-11:20, (P323)
INSTRUCTOR: Trevor Jones
OFFICE: Tilley 431 A
EMAIL: tjones1@unb.ca
WEBSITE: <http://www.math.unb.ca/~thj>

TEXT: *Partial Differential Equations: An Introduction*, 2nd Edition,
by Walter A. Strauss

GRADES: 20% Assignments
30% Test: February 24, 2009
50% Exam

PREREQUISITE: Math 2013 or both Math 2513 and Math 3503.

SYLLABUS: We will attempt to cover the following sections, plus additional material if time permits.

- Where do PDEs come from? (1.1-1.6)
- Waves and Diffusions (2.1-2.5)
- Reflections and Sources (3.1-3.5)
- Boundary Problems (4.1-4.3)
- Fourier Series (5.1-5.4)
- Harmonic Functions (6.1-6.4)
- Green's Identities and Green's Functions (7.1-7.4)
- Green's Functions Revisited (12.1-12.2)