

MA401, Fall 2009

Textbook: Partial Differential Equations with Fourier Series and Boundary-value Problems, by N. Asmar

Instructor: Professor K. Ito, Room 3270, HA, x57140

Homework: Accumulated homework assignments for each week are due the following Thursday.

3 Term Exams

Sept. 15 (Tuesday)

Oct. 15 (Thursday)

Nov. 19 (Thursday)

Final Exam: Comprehensive, Dec. 17 (Thursday)

Grade: 3×150 points (for Term Exams), 200 points (Final Exam) and 100 points (Homework).

Lectures:

Introduction and Basic method of solution, 1.1–1.2

Orthogonality and Fourier Series, 6.1 and 2.1–2.5

P.D.E. in Rectangular Coordinates,

3.1-3.2 (Examples), 3.3 (Separation of Variable), 3.3–3.4 (Wave equation),
3.5-3.6 (Heat equation)

3.7-3.9 (Higher dimensional equations and Laplace's equation)

Sturm-Liouville theory and Eigen-function expansion, 6.1–6.2

P.D.E. in Polar Coordinates, 4.1–4.6

Fourier Transform Method, 7.1–7.7

Office Hours: MWF 11:00-12:00 a.m., otherwise Appointment.