

Course: CE 501 Advanced Analytical Methods in Engineering

Instructor: Prof.Dr. Gokmen Tayfur

Contact: Email: gokmentayfur@iyte.edu.tr Phone: 7506815

Textbook

“Applied partial differential equations” by R. Haberman, Prentice Hall, 4th Edition, 2004.

Any book on ordinary and/or partial differential equations

Course Outline

Review of Ordinary Differential Equations (1 week)

Diffusion equation (heat flow) (2 week)

Solutions of 1D and 2D diffusion problems (2 weeks)

Wave Equation in 1D and 2D (2 week)

MIDTERM EXAM

Non homogeneous problems (2 weeks)

Laplace Transform (2 weeks)

Fourier Transforms (1 weeks)

Grading

Regular assignments (12%)

Midterm (40%)

Final (48%)