Math 256 Outline

Instructor: Neil Balmforth, njb@math.ubc.ca, www.math.ubc.ca/~njb

Focus: This class concentrates on methods to solve ordinary differential equations (ODE's).

Topics:

1. Classification of equations
2. First-order ODEs (integrating factors, separable equations)
3. Second-order, constant coefficient ODEs (real, repeated and complex roots; homogeneous and inhomogeneous)
4. Systems of ODEs
5. Laplace Transform methods
6. Fourier series
7. Solution of partial differential equations by separation of variables

Text: No required text. Suggested reference text: "Elementary Differential Equations," by Boyce & DiPrima.

Approximate grading scheme: 50% final, 35% midterms, 15% assignments.