

# Math 256 Outline

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**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.