

MATH 256
Differential Equations
Session 2013W, Term 1 (Sep–Dec 2013)
<http://www.math.ubc.ca/~nagata/256/>

Description:

- From the UBC Calendar: “Linear ordinary differential equations, Laplace transforms, Fourier series and separation of variables for linear partial differential equations.”
- Unlike the (outdated) calendar description, this version of the course is intended for students in the EECE program.

Topic prerequisites:

- Integral calculus including some ordinary differential equations (e.g. MATH 101)
- Linear systems including eigenvalues of matrices (e.g. MATH 152)
- Corequisite: multivariable calculus including partial derivatives (e.g. MATH 253)

Instructors:

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- Section 103: Wayne Nagata (office: Math 112, e-mail: nagata@math.ubc.ca)

Textbook:

- W.E. Boyce and R.C. DiPrima, *Elementary Differential Equations and Boundary Value Problems*, Wiley (10th Edition, 2012).

Topics:

1. First order ordinary differential equations [Chapters 1, 2]
2. Second order linear ordinary differential equations [Chapter 3]
3. Systems of first order linear ordinary differential equations [Chapter 7]
4. The Laplace transform [Chapter 6]
5. Partial differential equations and Fourier series [Chapter 10]
6. If time permits: Boundary value problems and eigenvalue problems [Chapter 11]