

MATH 5405 – Ordinary Differential Equations – Fall 2023
School of Mathematics and Statistics, Carleton University

Instructor: Dr. Lucy Campbell

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Lectures: Tues/Thurs 8:30–10:00 AM, Southam Hall, Room 408, starting Thursday September 7.

Office hours: Virtual in **Brightspace**, and in-person in-office, time to be decided.

Course information: <http://www.math.carleton.ca/~campbell/MATH5405> and in **Brightspace**.

Topics:

- Introduction. Review of elementary differential equations and analysis.
- Existence and uniqueness theorems.
- Linear and nonlinear systems.
- Boundary-value and eigenvalue problems.

References:

- L. Perko, Differential Equations and Dynamical Systems
- W. Walter, Ordinary Differential Equations

Prerequisites: Undergraduate level differential equations and analysis.

Grading scheme:

The final grade will be calculated as:

25% Assignments

25% Midterm exam (during class time, October 31)

50% End-of-term exam (during the exam period in December)

Students are required to do all the term work except in case of documented illness or other emergency situation beyond your control, in which case the final exam will be counted for the missing portion of grades. There will be no make-up tests.

Comprehensive exam:

The final exam for the course may be counted towards the Comprehensive Exam requirement for Ph.D. students in the Ottawa-Carleton Institute.

Fall Break (Reading Week): Oct 23–27.

Academic Accommodation:

The Paul Menton Centre for Students with Disabilities (PMC) provides services to Carleton University students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodation in this course, please contact the PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation as soon as possible at the beginning of the term. After requesting accommodation from the PMC, email me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodation for the formally-scheduled exam (if applicable). For pregnancy or religious obligations, write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.