

# MATH 5405 – Ordinary Differential Equations – Fall 2021

**Instructor:** Dr. Lucy Campbell

**Office:** 4269 Herzberg Building; **Office hours:** in **Brightspace**

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**Lectures:** Tues/Thurs 2:30–4:00, in **Brightspace**, starting Thursday September 9:  
<https://brightspace.carleton.ca>

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

## 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:

50% Term work

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 25–29.

## 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](mailto: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.