

Welcome to
MATH 2111 - Ordinary differential equations
Fall term 2021: hybrid delivery

INSTRUCTOR: Dr. Monica Ilie

- **Contact info:** RB 2019 ★ *milie@lakeheadu.ca*
- **Office hours:** Monday and Thursday 1:00-2:00 (in person or Zoom), or by appointment

COURSE OBJECTIVES

In this course we will study methods of solving first and second order differential equations, including separable, exact and linear equations.

At the end of this course you will be able to translate various real life problems from biology, chemistry, physics into diverse mathematical models that involve ordinary differential equations. Then, using the tools developed in the first part of the course you will be able to recognize the type of ordinary differential equation that needs solving and choose a proper method of solving it. You will have a good grasp of what is a general solution and what is a particular solution to an ordinary differential equation.

A solid grasp of calculus methods, integration and differentiation is needed to succeed.

COURSE INFORMATION:

- **Class time:** M/W 10:00-11:15 (hybrid: face to face and synchronous zoom meeting)
- **Midterms:** Midterm: Wednesday, October 27
- **Suggested textbook:** *Differential equations with boundary value problems* by Dennis G. Zill and Warren S. Wright, 8th or 9th edition.
- **Grading:** Your final grade will be determined according to

Webwork Assignments	Midterm 1	Final Exam
15%	40%	45%
	(Oct 27)	(TBA)

- **Website:** mycourselink.lakeheadu.ca

On the course website you will find all the information related to the course: full lecture notes, links to videos, links to surveys and activities, homework details.

SYLLABUS

The topics to be covered are, tentatively the following: Chapter 1.1-1.3; Chapter 2: 2.2-2.5; Chapter 3: 3.1, 3.2; Chapter 4: 4.1-4.7; Chapter 5: 5.1-5.2; Chapters 6: 6.1-6.4 (time permitting)

ASSIGNMENTS

There will be weekly online assignments on the WebWork network. A link will be provided on the course website that signs you in automatically, hence there is no need for a separate login.

ACCOMODATIONS

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please visit: <http://studentaccessibility.lakeheadu.ca>

IMPORTANT DATES:

- **September 20, 2021:** last day for registration
- **November 5, 2021:** last date for course withdrawal without academic penalty
- **December 20, 2021:** contingency date (all exams that are missed by the closure of the university during the exam period, due to unforeseen circumstances, will be rescheduled this day)