

*Welcome to*  
**MATH 2111 - Ordinary differential equations**  
*Fall term 2017*

**INSTRUCTOR:** Dr. Monica Ilie

- **Contact info:** RB 2019 ★ ph: 766-7224 ★ *milie@lakeheadu.ca*
- **Office hours:** M 11:00-12:00, Th 1:00-2:00

**COURSE OBJECTIVES**

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.

This course provides a large catalog of differential equations with their methods as well as applications to real world problems, all possible with a solid grasp of calculus methods, integration and differentiation. As a result, your calculus skills will also be improved by using them every day.

**COURSE INFORMATION:**

- **Class time:** Tu/Th 10:00-11:30 (RB 1022)
- **Required Textbook:** *Differential equations with boundary value problems* by Dennis G. Zill and Warren S. Wright, 8th or 9th edition.
- **Websites:** course website and WebWork a free online homework system  
<http://flash.lakeheadu.ca/~milie/Math2111.html>  
<https://webwork.lakeheadu.ca/webwork2/Math-2111-FA/>
- **Grading:** Your final grade will be determined according to

Webwork (online)	Written Assignments	Midterm	Final Exam
5%	5%	40%	50%

- **Bonus cellphone policy:** students that decide to put their phones away on the main table during the class receive one bonus point for each class they decide to do that. Each 5 points accumulated will earn you one percent bonus for your total mark, to a maximum of 4%.
- **Midterm:** Thursday, October 26 (in class)

**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

Each assignment will have two parts: one online through Webwork (multiple choice type questions) and the second part to be handed in with full length solutions. The second part will contain two or three problems from the ones given online as multiple choice.

*WebWork online assignments*

Log in through the website

<https://webwork.lakeheadu.ca/webwork2/Math-2111-FA/>

You will need to sign in using your Lakehead University email address (*without the @lakeheadu part*) for your username and your student ID number for your password. Once you have logged in, you can change your password if you wish.

*Written assignments* All the handwritten assignments are to be deposited in the assignment box marked **Math 2111** on the second floor foyer of the Ryan Building. Every assignment must contain a cover page that contains the course number, instructor name and assignment number. On the next page please put your name, and ID number, so that it is covered by the cover page. Homework must always be stapled together (no paper-clips, folding the pages, folders, etc. will be accepted). **Late assignments will not be accepted.**

## MISSED MIDTERM POLICIES

If you miss the midterm for a legitimate reason which you can document (e.g. doctor's note), the weight of the midterm will be *transferred* to the final exam. There will be no make-up exams! **The documented proof of absence should be provided to me no later than 10 days after the exam was written.**

## MISSED FINAL EXAM POLICIES (University Regulations)

*In cases where a student misses a formal examination due to an incapacitating illness, the student must have the Certificate of Illness or Incapacitation completed by a Medical Professional and submit the completed form to Enrolment Services no later than three (3) working days after the date of the original final examination. The Certificate of Illness or Incapacitation must be dated as seen by the Medical Professional no later than one (1) working day after the examination.*

*In other exceptional circumstances, official supporting documentation must be provided (e.g. copy of a death certificate or letter from the funeral home).*

*Accommodation shall be granted only when the documentation indicates that the onset, duration and severity of the illness or other circumstances are such that the student could not have reasonably been expected to complete the examination on the scheduled date.*

## MAKE UP FINAL EXAM DATE:

**December 18, 2017: 9:00-12:00** (this is the exam contingency date)

**December 19, 2017: 9:00-12:00** (only in case the exam contingency date is used by the university)

**University Regulations** *Students will not be given another opportunity to write the examination if it is missed a second time. In some cases, when extraordinary circumstances*

*beyond a student's control prevent him/her from completing the rescheduled examination, a student may be eligible to petition Enrolment Services to explain the circumstances.*

*A friendly piece of advice:* don't book your plane ticket home until the final exam schedule is published. A booked flight is not an acceptable excuse for missing an exam.

### **CHANGING MARKS**

If you disagree and/or have a problem with a particular mark on an assignment or exam, please use the following procedure. First, check your assignment/exam against the solutions. If this does not clear up any problems, on the front of the assignment/exam, please write the question number you want re-graded, and why it should be re-graded. Then hand it back in. I will then take a look at the assignment/exam and see if the mark needs to be adjusted. If there is simply an addition error with the marks, please hand it back in to me with the correct number at the top.

### **LECTURE POLICIES**

*Attendance* is not mandatory; however, it is strongly recommended that you come to class. I would appreciate the fact that you show up on time if you do decide to come to class. Arriving late disturbs both me and your fellow classmates.

*Cellphones policy:* If you decide for personal reasons to not participate in the bonus policy, I strongly recommend to turn off you cell phone or place it in your bag. Texting during class disturbs you, your colleagues and the friend you are communicating with as they might be in a class as well.

### **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 18, 2017:** last day for registration

**November 3, 2017:** last date for course withdrawal without academic penalty

**December 18, 2017:** 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)