

**MATH-5352 PDES
WINTER 2023**

Instructor: Prof. Xin Yang LU

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Classes: reading course

Office Hours: by appointment via email

DESCRIPTION

- **Textbook:** *Elliptical Differential Equations of Second Order*, by D. Gilbar and N.S. Trudinger.

- **Topics:**

- Chapter 2. Laplace's Equation
- Chapter 3. The Classical Maximum Principle
- Chapter 4. Poisson's Equation and the Newtonian Potential
- Chapter 5. Banach and Hilbert Spaces
- Chapter 6. Classical Solutions; the Schauder Approach
- Chapter 7. Sobolev Spaces
- Chapter 8. Generalized Solutions and Regularity

We will use approximately 2 weeks to cover one such section. You are encouraged to practice with the exercises (of your choice) at the end of each chapter, to acquire familiarity with the covered topics.

- **Midterm:** 1 midterm exam counting for 35% of the final grade.
- **Final Exam:** There will be a final exam which will count for 65% of the final grade. There will be *NO* 100% final option.
- **Policies:**
 - Important announcements will be made through MyCourseLink to registered students via MyCourseLink. You are responsible for reading the info posted on MyCourseLink.
 - I attempt to reply to e-mail in a timely fashion, but do not expect immediate responses.
- **Academic Dishonesty:** All cases of academic dishonesty will be dealt with according to the university's Code of Student Behavior and Disciplinary Procedures, copies of which are available from the university's web-site.
- **Accommodations:** 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>