MATH 2234:
Topics in Abstract Algebra
Winter 2023

Instructor: Dr. Luis Santiago

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Lectures: Tuesdays and Thursdays from 8:30 AM to 10:00 AM in RB 3049.

Office hours: Thursdays from 10:00 AM–12:30 PM in RB3008.

Textbook: *Contemporary Abstract Algebra*, 9th ed by Joseph Gallian.

Course Content:

- Review of essential properties of groups and rings.

- Classification of cyclic groups.

- External direct products of groups.

- Fundamental Theorem of Finite Abelian Groups.

- Polynomial Rings.

- Factorization of Polynomials.

- Extension Fields.

- Algebraic Extensions.

- Finite Fields.

- Introduction to Galois Theory (if time permits).

The topics to be covered are, tentatively, the following:

Contemporary Abstract Algebra, 7th ed by Joseph Gallian.

- Second half of Chapter 4, Chapters 8, 11, 16, 17, 20, 21, 22, and 32.

Grading Scheme:

Assignments	20 %
Midterm Exam 1	40 %
Midterm Exam 2	40 %

Assignments: Assignments will be distributed on a regular basis to be submitted for grading. Not every problem will necessarily be graded, but solutions will be sent out for all assigned problems. Please note that late assignments will not be accepted under any circumstances.

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