

Mathematics 1271 ADE:
Discrete Mathematics
Summer 2023

Instructor: Dr. Luis Santiago

Email: lsantiag@lakeheadu.ca

Lectures: Tuesdays, Wednesdays and Thursdays from 10:00 AM to 12:00 PM.

Labs: Tuesdays from 2:00 PM to 4:00 PM.

Textbooks:

A Beginner's Guide to Discrete Mathematics, by W. D. Wallis, 2nd edition. (Note: This book is available for free download from the Lakehead Library.)

Course Content: This course is an introduction to discrete mathematics. We will cover most of the material in the text, skipping over Chapter 8. The topics to be covered are, tentatively, the following:

1. Properties of Numbers.
2. Sets and Data Structures.
3. Boolean Algebras and Circuits.
4. Relations and Functions.
5. Theory of Counting.
6. Probability.
7. Graph Theory.
8. Number Theory and Cryptography.
9. Theory of Voting.

Lectures/Labs: Lectures and labs will be delivered through Zoom. The lab will reinforce concepts through explanations and examples, as well as provide

students with the opportunity to ask questions about the content given in class or assignment problems.

Grading Scheme:

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| Assignments | 19 % |
| Midterm Exam 1 | 27 % |
| Midterm Exam 2 | 27 % |
| Midterm Exam 3 | 27 % |

Exam Dates:

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|---------------------|--|
| First Midterm Exam | Tuesday July 18th from 3:00 PM to 4:00 PM |
| Second Midterm Exam | Tuesday August 1st from 3:00 PM to 4:00 PM. |
| Third Midterm Exam | Tuesday August 15th from 3:00 PM to 4:00 PM. |

Assignments: Assignments will be distributed on a regular basis. 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, but your lowest assignment mark will be dropped in calculating your final grade.

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>

Important Dates: Please note the following important dates:

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|---------------------------|---------------------------|
| Tuesday, July 4, 2023: | First day of classes |
| Tuesday, August 15, 2023: | Final day of class |
| Thursday, July 6, 2023: | Final date to register |
| Thursday, July 27, 2023: | Final date for withdrawal |