Math 5111 Course Outline

Fall 2024

Instructor: A.J. Dean, **email:** andrew.j.dean@lakeheadu.ca

Office hours: Mondays and Wednesdays 2:30pm to 3:30pm. RB 2009.

References:
Topology, 2nd edition, by James R. Munkres, Prentice-Hall, Upper Saddle River, New Jersey, 2000.

General Topology, by Stephan Willard, Dover Publications, Mineola New York, 1998.

Learner Outcomes: Successful students of this course will: understand and explain the basic definitions and concepts of topological spaces, including neighbourhoods, bases, and sub-bases; be familiar with common examples such as product spaces and weak topologies; be able to use nets and filters to describe convergence and solve problems; understand the various separation axioms and their consequences, including Urysohn's lemma and Tietze's extension theorem; understand the properties and uses of compact and locally compact spaces, including Tychonoff's theorem and compactifications; understand questions of metrizability; and be familiar with the concept of connectedness and its uses.

Marking Scheme: Grades will be based on weekly assignments. There will be 10 of these. They will be weighted equally.

Drop Date: The final date to withdraw from this course without academic penalty is Friday November 8.

Academic Dishonesty: All cases of academic dishonesty will be dealt with according to the university's Academic Integrity Code.

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