

# Topology

**Prerequisites:** Permission of instructor.

**Web-page:** <http://web.unbc.ca/~casper/Semesters/2016W/725.php> (not yet created)

**Instructor:** David Casperson;      **Office:** T&L 10-2080;      **Phone:** 960-6672;  
**Administrative Assistant:** Marva Byfield;      **AA's Phone:** 960-6490;  
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**Lecture times:** as arranged. This is a reading course.

**Office Hours:** To be scheduled.

**Text Books:** [?] is required.

**References:** [?] is the definitive reference for most point-set topological theorems. [?] is a wonderful text for better understanding the limits of theorems, and for learning about topological constructions.

**Grading Scheme:** There will be no formally assigned examinations. There will be no formally assigned papers or essays.

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Homework: 100%

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Students will be expected to report on material read, and solve mutually agreed upon homework problems from the text and others as invented by the instructor.

**Course Content:** The calendar says:

Topological spaces, Tychonoff Theorem, Tietze extension theorems, Urysohn lemma, compactification, homotopy theory, fundamental group, uniform spaces, knot theory.

The course will contain a thorough review of point-set topology, and then an exploration of what can be added to point-set topology, either through the combination of topology with other structures, or through functorial approaches to classification (homotopy, closed two-manifolds, *etc.*)

## References

- [1] Nicolas Bourbaki, *Elements of mathematics: General topology*, Springer-Verlag, New York, NY, 1989.
- [2] Klaus. Jänich, *Topology*, Springer-Verlag,, New York, NY, 1984.
- [3] Lynn Arthur Steen and Jr Seebach, J. Arthur, *Counterexamples in topology*, second edition ed., Springer-Verlag,, New York, NY, 1978.