Topology

Prerequisites: Permission of instructor.

Web-page: `http://web.unbc.ca/~casper/Semesters/2011F/725.php` (not yet created)

Instructor: David Casperson;   **Office:** T&L 10-2040;   **Phone:** 960-6672;   **Administrative Assistant:** Marva Byfield;   **AA's Phone:** 960-6490;   **e-mail:** `casper@unbc.ca` .

Lecture times: as arranged.   This is a reading course.

Office Hours: To be scheduled.

Text Books: [2] is required.

References: [1] is the definitive reference for most point-set topological theorems. [3] 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.

Homework:	100%

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.