## Information for Math 421/510 final exam

The exam will be held on Tuesday, April 9, 12PM - 3PM in MCLD 202. Books, notes and calculators are not allowed.

REVIEW SESSION, SUNDAY, APRIL 7, 2PM - 4PM, MATH 126.

OFFICE HOURS: FRIDAY, APRIL 5, 1:30PM - 3:30PM, MATH 126 MONDAY, APRIL 8, 2PM - 4PM, MATH 218 + by appointment

The exam will cover the entire course material, as given in lecture. This largely corresponds to Chapter 5 of Folland. But also parts of chapters 4, 6 and 7, notably:

Chapter 4: topologies, bases, nbhd bases, topologies generated by collections of sets, convergence of sequences, open sets, closed sets, compact spaces, Hausdorff space, continuous maps, product topology, statements of Tychanoff's Theorem and Stone-Weirstrass Theorem.

You are *not* responsible for nets.

Chapter 6: sections 6.1 and 6.2

Chapter 7: sections 7.1 and 7.3, but only the statements of the main results (Theorem 7.2, Lemma 7.15, Theorem 7.17, Corollary 7.18) and only the special case where X is a compact metric space.

There are a few items in chapter 5 which I did not cover in class. You are *not* responsible for those items.

Other things: you are responsible for all topics covered in lecture; some of these are not in the text. These include non-compactness of the unit ball in the norm topology, weak closure of the unit sphere is the unit ball, Hamel bases, Schauder bases, Borel probability measures  $(M(\Omega))$ , invariant Borel probability measures  $(M_T(\Omega))$ 

I recommend that you focus your study on the homework sets and the two past final exams listed within the undergraduate tab of the UBC Math department website (you will recognize that some problems on those final exams involve material that we did not cover and for which you are not responsible).