Math 220 Section 202
2013 Winter Term 2

Course Webpage: `http://www.math.ubc.ca/~alexandra/220.html`

Instructor: Alexandra Pettet
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Textbook: Gary Chartrand, Albert D. Polimeni, and Ping Zhang, *Mathematical Proofs – A Transition to Advanced Mathematics*, (3rd Edition).

Topics

Your main purpose in this course is to learn how to write clear and correct mathematical proofs. This will pave the way to doing more advanced mathematics. Topics covered include:

- Sets – definitions, set operations
- Logic – logical connectives, quantifiers
- Proofs – direct and contrapositive
- Proofs – existence and contradiction
- Induction
- Equivalence relations
- Functions – injective, surjective, bijective, inverses and compositions
- Cardinality of sets – finite sets and different types of infinite sets
- Elementary real analysis – limits of sequences and series, supremums.

Grading scheme

Grades will be determined based on better of the following:

- 10% homework + 20% midterm 1 + 20% midterm 2 + 50% final
- 10% homework + 15% midterm 1 + 15% midterm 2 + 50% final

Homework

Assignments will be posted weekly at

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`http://www.math.ubc.ca/~jychen`

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Problem sets will be collected each Thursday (except in the first week). Late homework will not be accepted. Copying solutions from any source, e.g., other students or the web, and turning them in as your own is considered cheating and violates the Academic Code.

Exams

Students are required to bring ID to all exams. There will be two 50 minutes midterm exams which are in-class and closed-book.

- Midterm 1: Thursday, February 6
- Midterm 2: Thursday, March 13

The date of the final exam will be announced later in the term.

No make-up exams will be given. Students who observe religious holidays on term exam dates must let the instructor know during the first two weeks of class. If another conflict (e.g., medical) arises, the instructor must be consulted within two working days of the exam, and sufficient documentation concerning the reason for the conflict must be provided. Travel plans are not accepted as a cause of conflict.