

COURSE OUTLINE FOR MATH 220, Section 201, Winter 2009-10

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Lecture: T Th 11:00-12:30, Room 200, LSK

Textbook:

- Analysis with an introduction to proof, by Steven R. Lay, 4th edition

Topics:

- **Chapter 1: Logic and Proof** Logical connectives, quantifiers, techniques of proof (Section 1 - Section 4).
- **Chapter 2: Sets and Functions** Basic sets operations, relations between sets, functions and their properties, cardinality (Section 5 - Section 8 (except Ordering of Cardinals)).
- **Chapter 3: The Real Numbers** Natural numbers, induction, completeness axiom, open sets, closed sets, accumulation points (Section 10 - Section 13).
- **Chapter 4: Sequences** Convergence, limit theorems, monotone sequence, Cauchy sequences, subsequences, limsup and liminf (Section 16 - Section 19).
- **Chapter 8: Infinite Series** Infinite series, convergence tests (Section 32 - Section 33).

Grade Policy:

- Two Midterms (20% each) + Assignments (10%) + Final Exam (50%).
- Closed book exams (midterms and final).

Midterm Exam Dates:

- February 9 (Tuesday), March 23 (Tuesday).

Problem Sets:

- Homework assignments and solutions will be posted weekly at <http://www.math.ubc.ca/~jychen> and the assignment is due on Thursday of the week.
- No late assignment accepted.
- Copying solutions from another student, from the web or from any other source, and turning them in as your own is a violation of the Academic Code.