

# Math 221 Section CL1

## Final Exam Study Guide

### 0.1 General information

- **Exam date and time:** The exam will be given on **Friday, 12/19/2008, 8:00 am - 11:00 am** in the regular lecture classroom, **163 Everitt Hall**.
- **Exam rules:** No books, notes, calculators, iPods, blackberries, etc. are allowed. You should be prepared to show your student ID if requested when turning in your exam. Cheating is a violation of the Student Honor Code and any instances of cheating will be reported to the University Academic Affairs Committee. A copy of the Student Honor Code pertaining to Academic Integrity can be found at:

[www.admin.uiuc.edu/policy/code/ §1-402](http://www.admin.uiuc.edu/policy/code/§1-402)

- **Review sessions:** I will hold a review session on **Monday, 12/15/2008** from **11:30 am - 1:00 pm** in **245 Altgeld Hall**.

### 0.2 Exam content

The exam will be cumulative. We covered material from Chapters 0,1,2,3,4,5 and 8 in the book by Smith and Minton. More precisely, we covered

- all of Chapter 0 (this is review material from algebra and precalculus courses),
- sections 1.1 to 1.4,
- all of Chapter 2,
- sections 3.1 and 3.3 to 3.9,
- all of Chapter 4,
- sections 5.1 to 5.3 as well as 5.6,
- sections 8.1, 8.2 and 8.4,

with the exception of the following topics:

- the Integral Test for convergence of a series (pages 637–638)
- the Error Estimate for the Integral Test (Theorem 3.2, page 640)
- logarithmic differentiation (section 2.7, page 213)
- Newton's method (section 3.1, pages 246–250)
- indeterminate forms and L'Hopital's Rule (all of section 3.2)

Questions on the exam will be distributed roughly equally across material from the entire semester. Some questions will ask you to synthesize topics from multiple chapters. Some questions may be aimed at conceptual knowledge: statements of definitions, convergence tests, or formulas. Other questions will be more computational, similar to homework problems. At least one of the problems will have an “applied” component, and will be related to the previous labs.