MATH 301A - REAL ANALYSIS
FALL 2008

TTH: 1:10 - 2:30 P.M. (HATHORN 305)

Instructor: Peter Wong

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Textbook: *Understanding Analysis* by Stephen Abbott, Springer, New York, 2001.

Office hours: TTh: 11:00 am - 12:00 pm, or by appointment

Grading: Attendence/Class Participation - 5%; homework - 30%; 2 mid-terms @20% each; Final Exam - 25%

Prerequisites: Math 206 and Math s21

This is a *rigorous* introduction to analysis. We study basic concepts *in depth* such as *limits, sequences, series, convergence, continuity, differentiability* and *integrability* (as in first year calculus). We plan to cover most of Ch.2 - Ch.7 of the text.

Note on exams:

All exams will be take home and they will be handed out one week before due date. The due dates for the exams are (1) Exam I - due October 9; (2) Exam II - due November 18; and (3) Final Exam - due December 12. Under **NO** circumstances are you allowed to discuss the exam problems with anyone else BUT me. Collaboration, in any form, with other classmates on any exam problem is prohibited. I TAKE THIS VERY SERIOUSLY.

Homework problems from the text will be assigned frequently and reading assignment will be given at the end of every lecture. Be sure to read ahead of time before coming to the next class. **Late homework may NOT receive any credit.** I will post the HW problems on my page: `http://www.bates.edu/~pwong/teaching/Fall2008/Math301A/Math301.html`.

Tentative Syllabus:-

week 1: §§2.1 - 2.4;

week 2: §§2.5 - 2.8; **HW#1** - due on September 11

week 3: §§3.1 - 3.3; **HW#2** - due on September 18

week 4: §4.1, §4.3; **HW#3** - due on September 25

week 5: §§4.4 - 4.6; **HW#4** - due on October 2

week 6: §§5.1; **Exam I** - due October 9, **Fall Recess** - October 15 - 19

week 7: §§5.2 - 5.3; **HW#5** - due on October 21

week 8: §5.4, §6.1 - 6.2; **HW#6** - due on October 28

week 9: §§6.3 - 6.5; **HW#7** - due on November 4

week 10: §6.6, §7.1 - 7.2; **HW#8** - due on November 11

week 11: §§7.2 - 7.3; **Exam II** - due on November 18, **HW#9** - due on November 20

Thanksgiving Recess - November 22 - 30

week 12: §§7.3 - 7.4. **HW#10** - due on December 4