Mathematics 300 B, C — Winter 2013

Instructor: John Palmieri, PDL C-538, 543-1785, palmieri@math.washington.edu, office hours Fridays 2:30-3:30, drop in, and by appointment.

Web page: http://faculty.washington.edu/jpalmier/Math300/

Text book: *How to Prove It*, second edition, by Daniel J. Velleman.

Goals. Study the basic language of mathematics and mathematical proofs: mathematical logic, sets, quantifiers, and functions; basic proof techniques, mathematical induction. You will need to know all of this material in many higher-level math courses: Math 327, 402/3/4, 424/5/6, 444/5, etc.

Class structure. The classes will be a mix of lecture and small group discussion. You must read the text book on your own: the lectures are intended to supplement the reading, not repeat it. You should also bring your book to class.

Homework. I will assign homework regularly; see the course web page for the assignments. There will be two kinds of assignments: assignments to be done individually, and assignments done in groups. All of the written work will be due on Friday at 3:30pm in my office (PDL C-538).

To learn to write proofs, you need to read a lot of proofs and write a lot of proofs. So you need to do the reading assignments (see below), and you need to do a lot of practice problems: the practice problems will form the individual homework assignments. These will be evaluated mainly for completeness: did you make a reasonable attempt on all of the problems? Each week, in addition, you must read one practice problem done by another student, and provide constructive feedback to that student.

The course grader will grade the group homework problems carefully.

The homework policy for the individual portion of the homework is: you may work with other people on your homework, but you must write your solutions yourself. If you find a solution in a book or some other source, please provide a reference. (But you will learn more if you don't rely too much on your classmates or outside references. I strongly encourage you to try the problems on your own.)

Late homework will not be accepted. I will drop your lowest individual homework score at the end of the quarter. (I won't drop any of the group homework scores – they all count.)

Reading reports, class discussion board. By 9:00pm each Sunday, you should post to the class discussion board (`https://catalyst.uw.edu/gopost/board/jpalmier/31250/`): how much did you understand, where did you get lost, what questions do you have, what issues would you like clarified, etc. You can miss one week of these posts and still get full credit for this portion of the grade. Of course, you are welcome to post other questions and comments on the discussion board.

Portfolio: You will turn in a portfolio of solutions to individual homework problems on **Monday, March 11**. This should include all of your homework solutions for the quarter, as well as revisions of some of those solutions. I will provide more details as the due date approaches.

Final exam: The final exam is on **Thursday, March 21, 8:30–10:20 am** for section B, **Monday, March 18, 2:30–4:20pm** for section C. Warning: if your score on the final exam is less than 50% of the class median, I reserve the right to assign you a grade below 2.0, regardless of the rest of your scores for the quarter.

Grading. The various components of the course are weighted as follows:

individual homework	20%
group homework	20%
reading reports	10%
feedback on homework	5%
participation	5%
portfolio	15%
final	25%

As noted above, I will drop your lowest individual homework score, and you may miss one week of reading posts and still receive full credit.