*Daniel J. Evans School of Public Affairs*
*University of Washington*

# MATH REVIEW CAMP

**September 15-19, 2008**

**Instructors:** Colleen Chrisinger (ckc24@u.washington.edu)
Lily Hsueh (lhsueh@u.washington.edu)

**Class**: Monday-Friday 9:00am-12:00pm
Bagley Hall Rooms 260 and 261, Computer Lab in Condon Hall 601c

**Course Goals**: The purpose of this week-long course is to: 1) review mathematics concepts with new and returning students; and 2) prepare students to enter the microeconomics and quantitative analysis courses offered by the Evans School.

We will proceed through the material at a deliberate pace such that every student's questions can be answered during class time. We will try our best to tailor our pace to the needs of those attending. Please let us know your questions throughout the sessions; you are welcome to ask for clarification at any point during class.

**Textbook:** There is no required textbook. However, we will be using assignments from Barbara Lee Bleau, "Forgotten Algebra: A Self-Teaching Refresher Course", 3rd ed. Barron's Education Series, Inc. 2003. This book is recommended, and is available at the University Book Store, as well as other retailers of your choice, for $12.50 used and $17 new.

**Homework:** Though the assigned exercises are optional, it is recommended that students do the work each night to regain a sense of comfort with the underlying concepts. When possible, work time will be provided during class sessions. No homework will be collected or graded, nor will there be a graded exam. At the beginning of each session there will be time to review homework from the previous day. Please come prepared with any questions you may have. Attendance each day is optional, but you are responsible for knowledge of topics covered in your absence.

**Daily Schedule:**

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|---|---|
| 9:00-9:30 | Introduction; Review homework problems |
| 9:30-10:30 | Lecture |
| 10:30-10:45 | Break |
| 10:45-11:45 | Lecture |
| 11:45-12:00 | Wrap-up; Homework problems |

**Useful References:**

http://www.purplemath.com/
http://mentorproducts.com/
http://www.sosmath.com/
http://www.algebralab.org/
http://www.math.com/

**Proposed Topics List:**

**1)** Number types, properties of numbers, and absolute values
Factors and multiples
Fractions, ratios, and proportions
Percentages, percentage changes, and rates
Rules of exponents
Scientific notation

**2)** Laws of algebra
Order of operations
Equations, functions, functional notation
Correlation vs. causation
Solving equations in one variable
Inequalities
Graphing linear equations; quadrants and plotting points
Simultaneous equations

**3)** **In Class:**
- Quadratic equations
- Factoring
- Quadratic formula
- Logarithmic functions
- Exponential functions, exponential growth and decay

**In Lab:**
- Introduction to Microsoft Word's Equation Editor
- Introduction to using Excel:
  - Inputting and importing data
  - Sorting data
  - Functions
  - Graphing
  - Statistic Interpretation using Excel

**4)** **In Class:**
Interpretations of data (mean, median, mode)
Distributions
Graphing non-linear functions
Slopes and introduction to the concept of derivatives

**In Lab:**
- Introduction to SPSS and Stata

**5)** Summation signs
Combinations and permutations
Probability

Note: The class will be split into two sections of students. On Wednesday and Thursday, Lily's group will be in the computer lab first (9-10:30), and Colleen's group in the lab second (10:45-12).

**** Please let the instructors know if you would like to cover topics that are not on the list****