

**Math/Econ 108: Quantitative Thinking for Policy Analysis**  
Macalester College  
Department of Math and Computer Science & Department of Economics  
Spring 2007 T-TH 10:10-11:40 a.m.

**Professor David Bressoud**

Ohlin-Rice 224  
Office Hours: TBA and by appt.  
Office Phone: 696-6559  
email: bressoud@macalester.edu

**Professor Raymond Robertson**

Carnegie Hall 310C  
Office Hours: TBA and by appt.  
Office Phone: 696-6739  
email: robertson@macalester.edu

**Overview:** This course offers you an overview of how data are generated, analyzed, and used in the context of public policy. The main goal of this course is to help you become familiar with basic concepts in quantitative analysis and to help you critically interpret quantitative information in the popular media.

**Course Texts:** Best, Joel [Damned Lies and Statistics](#) (DLS) and Best, Joel [More Damned Lies and Statistics](#) (MDLS). Other handouts and readings will supplement the text.

**Teaching Assistants:** Cassie Warren. Contact information will be given out in class.

**Grading:** The course consists of eight (8) homework assignments, two (2) exams, and a final project. The homework assignments are worth 4% each (32% for all eight homework assignments). The first exam is worth 18% and the second exam, which is cumulative, is worth 25%. The project is worth 20%. The remaining 5% is for class participation, which will be important in this class. The homework assignments are due at the beginning of the class day indicated. No late homework assignments are accepted for any reason.

**Research Project:** During the semester you will have the opportunity to analyze how quantitative analysis has been used in a policy topic of your choice. This project will be described in more detail in class.

**Cheating:** Don't even THINK of cheating in this class. If you feel the need to cheat, come see me in advance and I will try to find other ways to help you succeed in this class. If I catch you cheating, I will devote considerable amounts of time to get you removed from Macalester. Even if you do not get expelled, I can promise you an "F" for the course and months and months of misery. Just say NO.

**Holidays and Missed Exams:** The class itinerary is included with this syllabus. Please check it now for any conflicting religious holidays. If you have a conflict, you MUST see me at least one week in advance to get an excused absence. The ONLY other legitimate excuse for a missed exam is a verifiable medical emergency. No make-up exams will be given that are not scheduled at least one week before the scheduled exam time. In the event of an excused missed exam, the average of the other exams will serve as the grade of the missed exam.

**Tips for Success:** People who miss class get lower grades because I make exams from my lectures and not the textbook. Therefore, it is an excellent idea to never miss class. Readings are all listed and should be read BEFORE class. Read actively and write down questions. Visit me and/or the TA to make sure you are clear on ideas presented in class. Problems at the end of each chapter are often very relevant and helpful: practice these to prepare for exams. You should also check your email at least twice a week for class information.

**Compliance with Section 504 of the Rehabilitation Act of 1973:** Students who may need special consideration because of any sort of disability should make an appointment to see me. Please anticipate problems and talk to me well in advance of exams.

## Our Schedule

<b>Date</b>	<b>Topic</b>	<b>Readings</b>	<b>Events</b>
Tue, Jan 23	Introduction and Examples		Pre-test
Thu, Jan 25	Data Sources		
Tue, Jan 30	Introduction to Excel	On-line Tutorial*	HW1 Due
Thu, Feb 01	Intermediate Excel	On-line Tutorial*	
Tue, Feb 06	Basic Number Sense I	DLS 1-2	HW2 Due
Thu, Feb 08	Basic Number Sense II		
Tue, Feb 13	Correlation and Causation	MDLS Intro, 1-2	HW3 Due
Thu, Feb 15	Correlation and Causation		
Tue, Feb 20	Confounding Variables	MDLS 3-4	HW4 Due
Thu, Feb 22	Confounding Variables		
Tue, Feb 27	Review		
Thu, Mar 01	Exam 1		Exam 1
Tue, Mar 06	Sampling	DLS 3-4	
Thu, Mar 08	Sampling		
Tue, Mar 13	Spring Break		
Thu, Mar 15	Spring Break		
Tue, Mar 20	Detection	MDLS 3-4	
Thu, Mar 22	Detection		
Tue, Mar 27	False Positives, False Negatives		HW5 Due
Thu, Mar 29	False Positives, False Negatives		
Tue, Apr 03	Relative Probabilities	DLS 5-6	
Thu, Apr 05	Relative Probabilities		
Tue, Apr 10	Growth Rates		HW6 Due
Thu, Apr 12	Growth Rates		
Tue, Apr 17	Trade Offs	MDLS 5-7	
Thu, Apr 19	Trade Offs		
Tue, Apr 24	Cost Benefit Analysis		HW7 Due
Thu, Apr 26	Cost Benefit Analysis		
Tue, May 01	Presentations	Last Class Day	HW8 Due Exam 2

\* There are several Excel tutorials on-line. For example, see <http://www.gslis.utexas.edu/technology/tutorials/office/excel/>.