

**Public Affairs 818:  
Intro to Quantitative Methods for Public Policy Analysis**

**Fall 2012**

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**Office Hours:** Wednesday 8:55-10:55, or by appointment

**Course Website:** [http://www.ssc.wisc.edu/~gwallace/PA\\_818/pa\\_818.htm](http://www.ssc.wisc.edu/~gwallace/PA_818/pa_818.htm)

**Teaching Assistant:** Wilson Law

**Office:** TBA

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**Phone:** TBA

**Office Hours:** TBA

**Class Meeting Times:**

Lecture: Van Hise 114, 06:00 PM – 07:15 PM, Tuesdays and Thursdays

Discussion 301: Nicholas Hall 1125, Fridays 1:00-1:50 PM

Discussion 302: Nicholas Hall 1125, Fridays 1:55-2:45 PM

Discussion 303: Nicholas Hall 1125, Fridays 2:50-3:40 PM

\* You may attend any discussion section that you like, space permitting.

**Course Description:** This course will cover the basics of probability, statistics, and quantitative methods with an emphasis of conferring an understanding of statistical inference and its applications to policy analysis. Prerequisites: Graduate standing and LF student status (or permission from instructor).

**Required Text:** Modern Business Statistics with Microsoft Excel, (any edition) by Anderson, Sweeney, and Williams. (hereafter ASW)

**Strongly Recommended Text:** Introduction to Econometrics (2<sup>nd</sup> edition), by James H. Stock and Mark W. Watson. (hereafter S&W)

ASW does a fine job with the material up to the point that we start talking about regression analysis, but it does not provide an adequate treatment of regression analysis. Once we start talking about regression the readings will come from S&W. These readings we be placed on electronic reserve at the library, but purchasing S&W is strongly recommend as it will be a valuable reference for years to come and is required for PA819.

**Course Requirements:** Students are expected to attend all lectures and discussions sessions. In addition, students will be responsible for the completion of weekly problem sets. These problem sets will be graded using a check+, check, check- grading scale. Students are encouraged to work in groups on problem sets, but each student must turn their own work. Under no circumstance will late homework be accepted. The problem sets will account for 20 percent of the grade and are intended to provide intensive practice in applying the tools developed in lecture. You should look at homework as an opportunity to make some mistakes and learn from them. We expect that you will put time and effort into completing assignments, but we do not expect they will be perfect and error free.

**Discussion Sections:** All students enrolled in this class should be assigned to a discussion section with a Wilson Law. These discussion sections will meet once a week throughout the course of the semester. In discussion sections the problem sets from the previous week will be reviewed, old material may be rehashed, questions will be answered, and, on occasion, new material will be presented. To get the most out of the course attendance and active participation in these discussion sections will be vital.

**Exams:** There will be two midterm examinations and one final. The midterm examinations are scheduled during regular class hours and will cover material covered over the course of the previous 4 to 6 weeks. The final examination is cumulative.

**Grades:** The following weights will be used in computing your final grade

Midterm Exam 1 . . .	20 percent
Midterm Exam 2 . . .	20 percent
Final Exam . . . . .	30 percent
Weekly Homework .	20 percent
Participation . . . . .	10 percent

If you have questions about the grading of your examination or homework assignments please contact Wilson. In most instances questions will be answered and mistakes will be corrected as a result of these interactions. If, after meeting with your Wilson to discuss questions about the grading of your examinations, you are still unsatisfied, email me an explanation of the grading dispute and I will intervene.

## Tentative Class Schedule (subject to change)

<b>Dates</b>	<b>Topics(s)</b>	<b>Readings</b>
Sept. 4, 6	Syllabus, Intro to Probability, Bayes' Theorem, Probability Distributions	ASW 4, 5
Sept. 11, 13	Discrete Probability Distributions	ASW 5
Sept. 18, 20	Continuous Probability Distributions	ASW 6
Sept. 25, 27	Data and Statistics, Sampling and Sampling Distributions	ASW 1, 2, 3, 7
Oct. 2	Interval Estimation	ASW 8
<b>**MIDTERM #1 – Thursday October 4 – 6:00-8:00 PM</b>		
Oct. 9, 11	Interval Estimation, Hypothesis Testing	ASW 8, 9
Oct. 16, 18	Hypothesis Testing, Statistical Power	ASW 9
October 23, 25	Statistical Inference – Two Populations	ASW 10
October 30, Nov. 1	Statistical Inference – Two Populations	ASW 10
November 6	Bivariate Regression	ASW 14, S&W 4
<b>**MIDTERM #2 – Thursday November 8, - 6:00-8:00 PM</b>		
Nov. 13, 15	Bivariate Regression, Multivariate Regression	S&W 4, 5, 6
Nov. 20	Multivariate Regression Application #1	S&W 7, 8
Nov. 27, 29	Multivariate Regression Application #1	S&W 8
Dec. 4, 6	Multivariate Regression Application #2	S&W 8
Dec. 11, 13	Multivariate Regression Application #2	S&W 8
<b>**FINAL EXAM – Sunday December 16 – 1:00-4:00 PM – room TBA</b>		