

**George Mason University**  
**School Of Public Policy**  
**PUBP 704 Statistical Methods For Policy Analysis**  
**Fall 2003**

**Basic Course Information**

Instructor: Wayne D. Perry  
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Meeting: Thursday, 4:30 p.m. to 7:10 p.m.  
Room: West 255  
Office Hours: Tuesday 2:00 to 5:00 p.m. or by appointment

**Prerequisites**

This course uses an introductory graduate-level approach with no specific prerequisites but a good facility with college algebra is necessary and an undergraduate course in basic statistics (STAT 250 or DESC 210 or equivalent) is very helpful. The course is not a requirement for PhD students who have recently taken a graduate-level statistics course that adequately covers the topics and readings listed below in the course outline.

**Required Text**

Wannacott, Thomas, H. and Wannacott, Ronald, J., "Introductory Statistics," John Wiley, 5<sup>th</sup> Ed., 1990.

**Reference Text**

"Probability and Statistics," Schuam's Outline Series, McGraw-Hill, Latest Ed.

**Description and Objectives**

The course introduces students to statistical methods commonly used in policy analysis. Topics covered include descriptive statistics, probability theory, probability distributions, estimation, hypothesis testing, simple regression to multiple regression and correlation analysis. While the emphasis is not on sophisticated computer data analysis, this course will introduce students to standard statistical software packages.

**Requirements**

The student's performance will be based on (1) class attendance, participation, and homework (25%); (2) mid-term examination; (25%) and; (3) final examination (50%).

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## COURSE OUTLINE

<u>Topic/ Readings</u>	<u>Wonnacott and Wonnacott Chapters</u>
Introduction To Statistics	1
Descriptive Statistics	2
Probability Theory	3
Probability Distributions and Bivariate Random Variables	4-5
Sampling and Statistical Estimation	6-7
Confidence Intervals And Hypothesis Testing	8-9
Mid Term Examination	
Computer Processing	(Handout)
Simple Regression Analysis	11-12
Multiple Regression Analysis	13
Correlation Analysis	15
Extensions Of Multiple Regression	14
Final Examination	