

Quantitative Research in Social Science II

203065002 - Spring 2013

Instructor: Wen-Yang Chang
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Office Hours: Tue 16:10-18:00
Office: 271306 North Wing of GBC

Class: Thu 14:10-16:00 in 270114
TAs:
TA Session: Monday 12:10-14:00 in Computer Lab 5

Textbooks (* as required)

Agresti and Finlay (2009)*, Gujarati and Porter (2009); Wonnacott and Wonnacott (1990).¹
An interesting book written by Crossen (1996) is readable. It has been translated and published by 時報文化：張惠美譯。1996。真實的謊言：揭開民調與統計的黑盒子。

Course Objectives

This course is designed primarily to providing first-years students a better understanding of quantitative skills. This is also core course and the second in a two-course sequence in applied statistics. I assume that you have already taken Quantitative Research in Social Science 1 offered in fall semester, and are familiar with descriptive statistics, probability distributions, statistical inference, and the χ^2 test.

In the first part of this semester we focus on multivariate relationships and group comparison by using Analysis of Variance (ANOVA). In the second part we turn to model building with these quantitative skills. Some advanced quantitative skills such as limited dependent variables are covered in the final section if time is allowed.

Statistical Software Package

This course uses primarily SPSS. You can download SPSS under NCCU Campus-Authorized Software via iNCCU and install it on your laptop/desktop. UCLA's <http://www.ats.ucla.edu/stat/> is very helpful for you when doing homework and writing group project.

Course Outline and Grading

There will be weekly homework assignments (30%), one (1) in-class exam (30%), one (1) group paper project (30%) and paper presentation (10%), and class participation and attendance (10%):²

- 1 Homework assignments: 6-8 assignments aimed at getting students familiar with statistical topics and the use of software. Each homework assignment is due by 16:00 the following Thursday and is sent to TAs. You are welcome to discuss homework with classmates, but must submit answers written on your own.
- 2 In-class exam is expected to hold after we finish Agresti and Finlay (2009, Ch. 11).
- 3 Group project: Each group should discuss potential topic(s) with the instructor no later than the fourth week. The term paper should be no more than 20 pages (read:

¹I do not mind if you get an older version of copy as long as it has no substantive revision.

²Yes, the total is 110

19-20), double-spaced and *double-sided*. This paper length includes bibliography, footnotes, graphs and tables, and abstract. This paper is due by 17:00 of June 20 and sent to the instructor. The paper should be in the style of a peer-reviewed journal, such as 問題與研究;

- 4 Paper presentation: Group projects are scheduled to present in the 16th and 17th weeks and such presentation accounts for 10% of your final grade. You will need to send draft to the instructor by June 6 (if presenting in the 16th week) or 13 (if the 17th);
- 5 Class attendance and participation: Attend classes and TA sessions regularly.

It should be noticed that no late assignment/paper will be accepted, except for a very few conditions. These conditions include medical emergency, a death in the family, and quite frankly, very little else. In all cases, you will be expected to bring in proof. As well, if you need to set up an makeup exam, you will be still required to meet these conditions.

Academic Honesty

Academic integrity and honesty is a very serious issue in the academic field. According to one definition, academic dishonesty includes “giving or receiving of unauthorized help in examinations or other assignments, plagiarism and other unacknowledged or undocumented use of source material, and forgery.”³

Students who violate any definition of academic dis/honesty will be punished in accordance with the university policy: <http://osa.km.nccu.edu.tw/xms/content/show.php?id=748>, in addition to receive an F (read: zero). If you have any further question, for example, do not know if you are violating or have violated it, consult your instructor immediately.

Class Schedule

Class schedule is subject to change without prior notice.

Week 01(02/21): Organizational Meeting and Introduction to Paper Writing, King, Keohane and Verba (1994, Chapter 1)

Week 02(02/28): **Peace Memorial Day, campus closed**

Week 03(03/07): Review of Statistical Concepts 1, Agresti and Finlay (2009, Chs. 1–4)

Week 04(03/14): Review of Statistical Concepts 2, Agresti and Finlay (2009, Chs. 4–8)

Week 05(03/21): Linear Regression and Correlation 1, Agresti and Finlay (2009, Ch. 9)

Week 06(03/28): Linear Regression and Correlation 2, Agresti and Finlay (2009, Ch. 9)

Week 07(04/04): **Spring Break, campus closed**

Week 08(04/11): Introduction to Multivariate Relationships, Agresti and Finlay (2009, Ch. 10)

³CGU Student Services, Academic Honesty, <http://www.cgu.edu/pages/1132.asp>

Week 09(04/18): Multiple Regression and Correlation 1, Agresti and Finlay (2009, Ch. 11)

Week 10(04/25): Multiple Regression and Correlation 2, Agresti and Finlay (2009, Ch. 11)

Week 11(05/02): [Mid-term](#)

Week 12(05/09): Comparing Groups: ANOVA Methods 1, Agresti and Finlay (2009, Ch. 12)

Week 13(05/16): Comparing Groups: ANOVA Methods 2, Agresti and Finlay (2009, Ch. 12)

Week 14(05/23): Combining Regression and ANOVA 1, Agresti and Finlay (2009, Ch. 13)

Week 15(05/30): Combining Regression and ANOVA 2, Agresti and Finlay (2009, Ch. 13)

Week 16(06/06): [Student presentation 1](#)

Week 17(06/13): [Student presentation 2](#)

Week 18(06/20): Paper due by 17:00

References

- Agresti, Alan and Barbara Finlay. 2009. *Statistical Methods for the Social Sciences*. 4th ed. Upper Saddle River, NJ: Pearson Prentice Hall.
- Crossen, Cynthia. 1996. *Tainted Truth: The Manipulation of Fact in America*. New York: Touchstone.
- Gujarati, Damodar N. and Dawn C. Porter. 2009. *Basic Econometrics*. 5th ed. Boston, MA: McGraw Hill.
- King, Gary, Robert O Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton, NJ: Princeton University Press.
- Wonnacott, Thomas H. and Ronald J. Wonnacott. 1990. *Introductory Statistics*. 5th ed. New York: Wiley.