Quantitative Research Methods
862002001 - Fall 2015

Instructor: Wen-Yang Chang
Contact Info: nccu.wychang@gmail.com
Office Hour: By appointment

Office: 271306 North Wing, GBC
Class: Wed 09:10-12:00 in 271112
TA:
TA Session: 12:10–14:00 in Lab 6 (Room No. 260627)

Textbook
Agresti and Finlay (2009); Levin, Fox and Forde (2015). I will use primarily Agresti and Finlay and encourage you to purchase Levin, Fox and Forde for price concern.

Course Objectives
This is core course of IMPIS. After taking this class I expect that you can apply quantitative research methods to study world politics, international political economy, and other world politics-related events, and read quantitative articles. High school algebra and fundamental probability and probability distributions are helpful for understanding course materials, though not required. In the first part of this course we focus on descriptive statistics, hypothesis testing, and the $\chi^2$ test. In the second part students will be asked to present research idea(s) before turning them into real work.

Statistical Software Package
This course uses Stata 10. If you would like to purchase it, the price is NT$ 6,600 (the current version is Stata 14).

Course Outline and Grading
There will be weekly homework assignments (25%), two (2) in-class exams (20-20%, 40% in total), one (1) term paper (30%), and one (1) oral presentation:

1 Homework assignments: There will be 5-7 assignments aimed at getting students familiar with statistical topics and the use of software. Each homework is assigned after we finish one topic, and is due by 9 AM the following Wednesday and is sent to TA directly. You are welcome to discuss homework with classmates, but must submit answers written on your own.

2 The will be two in-class exams. The first exam is expected to hold after we finish statistical inference and the second after multiple regression and correlation. Each test will be given a review lecture one week before.

3 Term paper: Each student should discuss potential topic(s) with the instructor no later than the fourth week. The term paper should be no more than 15 pages and 1.5-spaced. This paper length includes bibliography, footnotes, graphs and tables, and abstract. This paper is due by 17:00 of January 06, the last and final exam week of fall semester, and sent electronically to the instructor via nccu.wychang@gmail.com. The paper should be in the style of a peer-reviewed journal, like American Political Science Review.

4 Paper presentation: You are scheduled to present your paper in the 15th, 16th, or 17th week before turning in it to the instructor. Such presentation accounts for 10% of your final grade. Your presentation will be 15 mins, followed by another 15 mins of Q & A.

Academic Honesty and Class Conduct
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. [1]

*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](http://osa.km.nccu.edu.tw/xms/content/show.php?id=748)* in addition to receiving 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.

Finally, it should be noticed that no makeup exams/late assignments and/or 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. Each student is allowed to have only one (1) chance of arranging makeup exam. As well, if you need to set up an makeup exam, you will be still required to meet these conditions.

**Tentative Class Schedule**

Class schedule is subject to change without prior notice.

- 0916: Organizational meeting
- 0923: Sampling and measurement
- 0930: Descriptive statistics
- 1007: Probability distributions
- 1014: Statistical inference: Estimation, and Significance tests
- 1021: First in-class exam review
- 1028: 1st In-class Exam
- 1104: Comparison of two groups
- 1111: Analyzing association between categorical variables
- 1118: Linear regression and correlation
- 1125: Introduction to multivariate relationships and Multiple regression and correlation
- 1202: Second in-class exam review
- 1209: 2nd In-class Exam
- 1216: Student Presentation I
- 1223: Student Presentation II
- 1230: Student Presentation III
- 0106: Paper due by 17:00

**References**

