

統計學與實習二 社科3

- 上課時間:
週二 14:20-16:20 (單數週上課), 週三 10:20-12:10。
- Office Hour: 週三 14:00-15:00。
- 課程目標: 使學生在修完本課程之後, 擁有從事實證研究所需的基本工具。
- 課程網頁: <http://ccms.ntu.edu.tw/~luohm/stats2012s/stats2012s.htm>
- 教材:
(SW) Stock and Watson (2011), *Introduction to Econometrics*, Addison Wesley, 3rd edition.
- 成績計算: 小考 30%, 期中考 30%, 期末考 40%。
- 實習課:
楊宗翰助教, 網頁 <https://sites.google.com/site/ntu2011stat/>
- 上課日期:
2012/2/21, 22, 29,
3/6, 7, 14, 20, 21, 28,
4/11, 17, 18,
4/25, 期中考
5/1, 2, 9, 15, 16, 23, 29, 30,
6/6, 12, 13,
6/20, 期末考。
- Topics:
 1. Introduction and Review
 - Economics Questions and Data (SW 1, SW 2, SW 3)
 - Review of Probability

- Review of Statistics
- 2. Bivariate Regression (SW 4, SW 5, SW 17).
 - Probability framework.
 - Estimation and hypothesis testing.
 - Homoskedasticity.
- 3. Multiple Regression (SW 6, SW 7, SW 18).
 - Omitted variable bias.
 - Multiple regression model.
- 4. Nonlinear Regression Models (SW 8).
 - Modeling nonlinear regression functions.
 - Interactions between independent variables.
- 5. Assessing Regression Studies (SW 9).
 - Internal and external validity.
 - Threats to internal validity.
- 6. Panel Data (SW 10).
 - Panel data with two periods.
 - Fixed effects regression.
- 7. Binary Dependent Variable Models (SW 11).
 - Linear Probability Model.
 - Probit and Logit Models.
- 8. Instrumental Variables Regression (SW 12).
 - General IV regression model.
 - Checking instrument validity.
 - Where do IV come from?
- 9. Experiments and Quasi-Experiments (SW 13).
 - Difference-in-difference estimator.
 - Quasi-experiments.
 - Average treatment effect.