

TA: N. Doi, T. Hirano, H. Matsuyama, S. Minami, Y. Onishi  
**Syllabus**

This course introduces you to econometrics. The first half of the course covers the cross-section data analysis and the second half, taught by Professor Yoichi Arai, covers the panel data and time series data analysis. We study the leading econometric model, the linear regression model and its variations used to examine economic issues. For each of the variations, we study appropriate methods to estimate the parameters of the linear regression model. Five estimation methods covered in the first half are the ordinary least squares (OLS) method and its weighted version, the instrumental variable (IV) method and its weighted version, and the maximum likelihood (ML) method. For each of the method, we examine

1. underlying assumptions each method is based for having desirable properties,
2. how the properties of the estimation method are established, and
3. how these models and estimation methods are used in practice.

As you will learn, these methods have many limitations. However, these are also the bread and butter methods many practitioners use currently around the world to examine empirical issues not just in economics but also in any science. If you can improve any of these methods in a significant way that will be an important contribution to the knowledge.

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**Lectures:** Tuesdays, 13:10-14:50 and Fridays 10:20-12:00

**Recitations:** Fridays 8:30-10:10

**Web-page:** <http://econome2008.seesaa.net/>

**TA-mail-address:** econome2008@gmail.com

**Textbook:** Jeffrey M. Wooldridge (2008) "Introductory Econometrics" 4th edition, South-Western Cengage Learning, USA.

**Office-Hours:** Mondays 16:40-17:30 and Fridays 12:15-13:30

**TA-Office-Hours:** Wednesdays 15:00-16:00, Thursdays 15:00-16:00

**Home-works:** There will be a problem-set each week which will be reviewed in recitations a week later.

**Grades:** Grade is based on five 20 minutes exams and an exam (January 6, 2009). Twenty minutes exams are meant to examine if you have done your home work.

### Lectures

Lectures will follow the textbook as much as possible and will be augmented by a lecture note. 20 minutes exams will be held on dates with asterisks (\*) after the lectures and on the 5th of December.

1. Empirical studies in economics (10/7) W-1, W-A, B, C
2. Simple regression model (10/10) W2
3. Regression model (Estimation) (10/10, 14) W3
4. Regression model (Inference) (10/17\*, 21) W4
5. Asymptotic analysis of the OLS estimator (10/24) W5
6. Other topics in the regression analysis (10/28) W6

7. Dummy variables and the regression analysis (10/31\*) W7
8. Heteroskedasticity (10/31) W8
9. Specification and data issues (11/4) W9
10. Instrumental variable method (11/7\*, 11, 14) W15.1–15.6, W16.1–16.4
11. Limited dependent variable models (11/18, 21\*, 25) W17, W7.5