

Syllabus: Short-term Teaching
Course Title: Introduction to Applied Economics and Model Application

Instructor:

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Course Description and Objective

This short course is designed to introduce the statistical tools that economists use to study relationships among economic variables, bridging the gap between economic theory and real-world economic events.

Prerequisites and Textbooks

This course requires students have fundamental knowledge in calculus, statistics and microeconomics.

James H. Stock, Mark W. Watson. Introduction to Econometrics, Update, 3rd Edition (SW)

Joshua D. Angrist, Jörn-Steffen Pischke. Mostly Harmless Econometrics, 2009 (MHE)

Learning Outcomes

- Get to know applied economics and related software;
- Understand the mechanism of widely-used econometrics models;
- Choose appropriate model when developing research ideas

Honor Code

All students are responsible for knowing and adhering to Shanghai Ocean University's Honor Code. For detailed information please visit <http://jwzx.shou.edu.cn/>.

Evaluation Criteria and Assignments

By the end of the class, we will have an evaluation based on group project presentations, which includes one written detailed project description, dataset, econometrics model and potential outcomes.

Schedule and Required Readings

Please note: we may deviate from the following outline and plan as necessary.

Week 1

- I. **Introduction: Basic Elements**
SW Part I

- II. **Applied economics and Regressions**
SW Part II

- III. **Difference-in-Differences (DID): What does it mean?**
MHE Chapter 5

IV. DID (continued)

MHE Chapter 5

V. Group Project Presentation 1/Guest Speaker (Tentative)

No specific readings.

Week 2

VI. Dealing with endogeneity: An Instrumental Variable (IV) Approach

MHE Chapter 4

VII. Regression Discontinuity Designs (RDD)/ Propensity Score Matching (PSM)

MHE Chapter 6

VIII. How does applied economics connect the world?

No specific readings.

IX. Researches based on DID, IV and RDD

Research papers list based on schedule will be sent out before class.

X. Group Project Presentation 2

No specific readings.