

## COURSE SYLLABUS

# Applied Econometrics, 7.5 credits

*Applied Econometrics, 7,5 högskolepoäng*

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|---------------|-----------------------------------|----------------------|----------------|
| Course Code:  | JAER26                            | Education Cycle:     | Advanced level |
| Confirmed by: | Director of Education Jun 3, 2015 | Disciplinary domain: | Technology     |
| Valid From:   | Aug 22, 2016                      | Subject group:       | ST1            |
| Version:      | 1                                 | Specialised in:      | A1N            |
| Reg number:   | IHH 2015/2626-313                 | Main field of study: | Statistics     |

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### Intended Learning Outcomes (ILO)

On completion of the course the students will be able to:

#### *Knowledge and understanding*

Students shall:

1. Apply modern microeconomic study designs and techniques in order to assess and analyze economic empirical issues involving causal relationships.

#### *Skills and abilities*

Students shall be able to:

2. Set up study designs and apply adequate microeconomic techniques to economic problems
3. Replicate empirical estimations
4. Use statistical softwares appropriate for econometric analysis

#### *Judgement and approach*

Students shall be able to:

5. Critically discern and judge upon the adequacy of the application of microeconomic techniques, and their interpretation as presented in e.g. published articles

### Contents

This course covers modern econometric models and empirical strategies for the analysis of register-based or experimental cross-sectional and panel micro-data. We go through the econometric theory behind these models and the course also requires reading, analysis and (replications using real as well as simulated data sets), of articles published in top economic journals.

Methods covered includes (1) the randomized experiment and social experiments, (2) instrumental variables estimation, (3) Fixed effects and difference-in-differences techniques applied to panel data, and to other data structures such as family-level and twin data, (4) regression discontinuity designs and (5) matching estimators, such as propensity scores and kernel-matching.

### Type of instruction

The course consist of Lectures and seminars.

The teaching is conducted in English.

### Prerequisites

Bachelor's Degree in Business or Economics equal to 180 credits including 15 credits in Statistics/Econometrics; and Mathematical Methods for Economic and Financial Analysis, 7.5 credits (or the equivalent).

### Examination and grades

The course is graded A, B, C, D, E, FX or F.

Registration of examination:

| Name of the Test            | Value       | Grading        |
|-----------------------------|-------------|----------------|
| Written report <sup>1</sup> | 7.5 credits | A/B/C/D/E/FX/F |

<sup>1</sup> Determines the final grade of the course, which is issued only when all course units have been passed

### Course evaluation

At the outset of the course the course coordinator ensures that course evaluators are elected (or exist) among the students. The course evaluation is carried out continuously and at the end of the course. At the completion of the course the course evaluators and course coordinator discuss the course evaluation and possible improvements. The result is reported among others to the Associate Dean for Education, the Council of Undergraduate and Master Education and the Board of Directors of JIBS. The course coordinator shall at the outset of the following course report results and measures from the previous course evaluation.

### Other information

JIBS students are expected to maintain a strong academic integrity. This implies to behave within the boundaries of academic rules and expectations relating to all types of teaching and examination. Copying someone else's work is a particularly serious offence and can lead to disciplinary action. When you copy someone else's work, you are plagiarizing. You must not copy sections of work (such as paragraphs, diagrams, tables and words) from any other person, including another student or any other author. Cutting and pasting is a clear example of plagiarism. There is a workshop and online resources to assist you in not plagiarizing called the Interactive Anti-Plagiarism Guide. Other forms of breaking academic integrity include (but are not limited to) adding your name to a project you did not work on (or allowing someone to add their name), cheating on an examination, helping other students to cheat and submitting other students work as your own, and using non-allowed electronic equipment during an examination. All of these make you liable to disciplinary action.

### Course literature

Compulsory literature:

Joshua D. Angrist and Jörn-Steffen Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton University Press

Selection of academic journals

Additional literature:

Colin Cameron and Pravin K. Trivedi. *Microeconometrics Using Stata*, Stata Press