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|--------------------------------|---|-----------------------------|---|
| <b>Course Code &amp; Title</b> | <b>LISS249 Econometric Methods for Causal Inference</b>                             |                             |   |
| <b>Convenor(s)</b>             | <a href="#">Dr Filipa Sa</a> , Senior Lecturer in Economics, King's Business School |                             |   |
| <b>Institution</b>             | King's College London   | <b>Department</b>           | LISS DTP  |
| <b>Academic Year</b>           | 2019-20   | <b>Term</b>                 | Summer  |
| <b>Number of Sessions</b>      | 2   | <b>Length of Session(s)</b> | 7 hours   |
| <b>Day, Date</b>               |   | <b>Start : End</b>          | <b>Room Location</b>                                      |
| Monday 08 June 2020            |   | 1000 : 1700                 | Online via Microsoft Teams – Link to be sent to enrollees |
| Tuesday 09 June 2020           |   | 1000 : 1700                 |   |
| <b>Enrolment Link:</b>         | You may be prompted to log into SkillsForge   |                             |   |

**Course Description:**

This course is a two-day applied econometrics workshop that provides an introduction to and overview of regression based evaluation methods for assessing causal effects. The course starts by introducing the problem of identifying treatment effects in a quasi-experimental setting as compared to an experimental setting. We explore methods for taking into account selection (into treatment) on observables, including matching techniques. We then consider methods for taking into account selection on unobservables, including difference-in-differences, instrumental variables and regression discontinuity design. We discuss typical limitations and interpretation of treatment effects. The course comprises a taught component and a number of practical exercises using STATA, using data sets distributed by the module leader. By the end of the course students should have a good understanding of the basic impact evaluation problem and the main methods used to address this problem. They should be in a position to design and implement identification strategies for the assessment of causal effects and critically evaluate and interpret the output of such analyses. The course does not cover experimental methods.

**Course Outline:**

**Day 1 Morning:**

1. The impact evaluation problem:  
Introduction to some basic concepts
2. Methods for dealing with selection on observables
3. Methods for dealing with selection on unobservables: Difference-in-differences (DID)

**Day 2 Morning:**

1. Methods for dealing with selection on unobservables: Instrumental Variables (IV)
2. Methods for dealing with selection on unobservables: Regression Discontinuity Design (RDD)

**Day 1 Afternoon:**

1. Implementing matching and DID estimators in STATA
2. Exercises using STATA

**Day 2 Afternoon:**

1. Implementing IV and RDD estimators in STATA
2. Exercises using STATA



**London Interdisciplinary Social Science Doctoral Training Partnership**

**Advanced Research Methods in Social Sciences**

**Reading List:**

Joshua Angrist & Jörn-Steffen Pischke, "Mostly Harmless Econometrics"

**Eligibility:**

A pre-requisite of an Intermediate Econometrics course (at undergraduate or postgraduate level)

**Pre-course preparation:**

Students that register should have some prior experience of using STATA.

**Number of students: 5**