

## SYLLABUS

<b>Name of the course:</b>	Econometrics			
<b>Teacher:</b>	Louis Dumas			
<b>University / organisation:</b>	Ecole Nationale des Ponts et Chaussées			
<b>Language of teaching:</b>	English			
<b>ECTS:</b>	6 ECTS			
<b>Semester (S1, S2, S3 or S4):</b>	<input type="checkbox"/> S1	<input type="checkbox"/> S2	<input checked="" type="checkbox"/> S3	<input type="checkbox"/> S4
<b>Teaching method(s):</b>	<input checked="" type="checkbox"/> Lecture courses		<input type="checkbox"/> Flipped classroom	
	Other:	Mix of lectures and practical exercises on software		
<b>Type(s) of evaluation:</b>	<input type="checkbox"/> Sitting exam		<input checked="" type="checkbox"/> Written report	
	<input checked="" type="checkbox"/> Oral defence		<input type="checkbox"/> Group project	
	Other / comments:			
<b>Expected deadline(s) for the evaluation(s)</b>	Grading and evaluation will be based on individual reproductions of an article featuring one or several methods covered in class and on a subsequent oral defence. It will be organised at the beginning of the 4 <sup>th</sup> Semester.			
<b>Expected date of final results:</b>	A few days after oral defence.			
<b>Summary of the content:</b>	<p>The goal is to provide students with a practical understanding of the basic linear model and of widely used approaches in econometrics, without dwelling too much on technicalities and underlying mathematics (although there will be some). Emphasis will be put on instrumental variables and panel data and, if time allows, on difference-in-difference estimators. Students will also be taught some practical skills on R: coding basics, estimation of econometric models and generation of tables and graphs. The class will alternate between theoretical presentations and practical implementation on R.</p> <p>The paper we will try to reproduce is the following: Johnston, A., &amp; Regan, A. (2017). Global finance, labor politics, and the political economy of housing prices. <i>Politics &amp; Society</i>, 45(3), 327-358. It covers panel and time-series techniques. The data are graciously provided by Alison Johnson: <a href="https://sites.google.com/site/dralisonjohnston/research">https://sites.google.com/site/dralisonjohnston/research</a></p>			
<b>Indicative list of lectures:</b>	The beginning of the course (Sessions 1 to 3-4) will cover some basic points in probability and statistics, mostly to provide students with the intuition of the mathematical object they will be manipulating. It is recommended to students to brush up somewhat their probability and linear algebra basics.			

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	<p>The remaining of the class will be dedicated to studying the paper at hand, laying some criticism and beginning its reproduction.</p> <p>All sessions will alternate between lecture-style classes and software practice. It is recommended to all students to install R on their machines.</p>
<p><b>Short bibliography:</b></p>	<p>Introduction to econometrics with R, available at <a href="https://www.econometrics-with-r.org/">https://www.econometrics-with-r.org/</a></p> <p>Joshua Aizenman and Yothin Jinjarak, “Current Account Patterns and National Real Estate Markets,” <i>Journal of Urban Economics</i> 66, no. 2 (2009): 75-89.</p> <p>Johnston, A., &amp; Regan, A. (2017). Global finance, labor politics, and the political economy of housing prices. <i>Politics &amp; Society</i>, 45(3), 327-358.</p>