

## SYLLABUS

<b>Name of the course:</b>	Applied econometrics			
<b>Teacher:</b>	Prof. Prudence Magejo (Nee Kwenda)			
<b>University / organisation:</b>	University of the Witwatersrand			
<b>Language of teaching:</b>	English			
<b>ECTS:</b>	10			
<b>Semester (S1, S2, S3 or S4):</b>	<input type="checkbox"/> S1	<input checked="" type="checkbox"/> S2	<input type="checkbox"/> S3	<input type="checkbox"/> S4
<b>Teaching method(s):</b>	<input checked="" type="checkbox"/> Lecture courses		<input type="checkbox"/> Flipped classroom	
	Other: _____			
<b>Type(s) of evaluation<sup>1</sup>:</b>	<input checked="" type="checkbox"/> Sitting exam		<input checked="" type="checkbox"/> Written report	
	<input checked="" type="checkbox"/> Oral defence		<input type="checkbox"/> Group project	
	Other / comments: Your final grade will be based on assignments (replications, critiques, presentations) [40%]; class tests [20%] and the final assessment (practical [20%] + written exam [20%]).			
<b>Expected deadline(s) for the evaluation(s)</b>				
<b>Expected date of final results:</b>				
<b>Summary of the content:</b>	This course covers an extensive range of empirical methods in economics that can be applied to micro data e.g. social experiments, propensity score matching, regression discontinuity designs, instrumental variable techniques and panel data analysis. This course balances theoretical discussions and practical applications. Emphasis will be on the underlying theory, strengths and potential drawbacks associated with modern econometric techniques. The course is designed to equip candidates with skills relevant for conducting and evaluating applied empirical work based on micro-data.			
<b>Indicative list of lectures:</b>	<p>BLOCK 1</p> <p>Week 1</p> <p>Introduction</p> <p>Preliminaries -Questions about questions - Randomized Control Trials - Assignment groups</p> <p>Week 2</p> <p>Making regression make sense</p>			

<sup>1</sup> If the evaluation of the course includes various assessment methods, tick all the relevant boxes. You can add explanations in the "Other/comments" box.

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	<p>Week 3 Propensity Score Matching</p> <p>Week 4 Instrumental Variables</p> <p>Week 5 GMM</p> <p>Week 7 Panel data models</p> <ul style="list-style-type: none"> <li>- Fixed effects</li> <li>- First difference</li> <li>- Random effects</li> </ul> <p>Week 8 Diff-in-Diff</p> <p>Week 9 Regression Discontinuity Designs (RDD)</p> <p>Week 10 Quantile Regressions (QR)</p>
<b>Short bibliography:</b>	<p><b>Key books</b></p> <p>There are many good graduate textbooks, which differ in approach. Topics covered in this course closely follow Angrist, J. and J. Pischke (2009); however, we draw information from various books. The following will be useful references:</p> <ul style="list-style-type: none"> <li>• Angrist, J. and J. Pischke, 2009. <i>Mostly Harmless Econometrics</i>, Princeton University Press.</li> <li>• Wooldridge, J., 2002. <i>Econometric analysis of Cross-sectional and Panel Data</i>, MIT Press.</li> <li>• Marno, Verbeek, 2002. "A guide to modern econometrics", Wiley.</li> <li>• Koenker, R., 2005. "Quantile Regressions", Cambridge University Press.</li> <li>• Cameron, C. and Trivedi P.K. 2005. "Microeconometrics: Methods and Applications", New York: Cambridge University Press.</li> <li>• Glennerster, R and K. Takavarasha (2013). <i>Running randomized evaluations, a practical guide</i>. Princeton University Press.</li> <li>• Cunningham, S. (2021). <i>Causal inference: The Mixtape</i>. Yale University Press.</li> </ul>



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