

## Master of Economics

<b>Lecture Title:</b>	<b>Statistics</b>		
<b>Lecturer:</b>	Derya Uysal		
<b>Lecture Code:</b>	017 902	<b>ECTS:</b>	6
<b>Term:</b>	Fall Term 2015	<b>Contact hours:</b>	40
<b>Lecture Dates:</b>	Sept 24 <sup>th</sup> – Dec 10 <sup>th</sup> , 2015		
<b>Final Exam:</b>	Dec 14 <sup>th</sup> , 2015	<b>Frequency of lecture:</b>	Twice a week
<b>Prerequisites:</b>			
<b>Language of instruction:</b>	English		
<b>Contact information</b>			
	Room 203		
	<b>Telephone:</b> +43 1 59991 156	<b>Email:</b> uysal@ihs.ac.at	
<b>Office hours</b>			
<b>Course website</b>	www.deryauysal.com		
<b>Learning Objectives:</b> (What are the intended learning outcomes? Which skills will be acquired?)			
	<p>The course provides an introductory treatment of statistics including the relevant prerequisites of probability theory. The course takes an abstract, formal point of view and centers on the explanation of the underlying concepts behind statistical inference. At the end of the course the students understand the mechanisms underlying statistical inference. They are able to properly interpret the outcomes of a test. Moreover, the students possess the tools necessary in order to design and execute tests on their own scientific hypotheses. Additionally the level of the course is set such that the students acquire the relevant skills in order to be able to cope with scientific literature in the econometrics community. The course lays the foundations for the following courses within the program.</p>		
<b>Content:</b> (Which professional competence and which contents will be imparted?)			
	<p>The course covers the following topics:</p> <ul style="list-style-type: none"> <li>Probability theory</li> <li>Expectations</li> <li>Random Variables</li> <li>Convergence Concepts</li> <li>Estimation Theory</li> <li>Statistical Testing</li> </ul>		
<b>Teaching Approach:</b> (Description of the learning and teaching methods)			
	<p>The lecture mixes conventional blackboard and PowerPoint presentations in combination with practice sessions, where students get hands on experience.</p>		

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<p><b>Workload:</b> (Definition of workload (ECTS), divided in pre-modules (e.g. pre-readings), core-modules (contact hours), post-modules (e.g. case studies)):</p>	
<p><b>Required literature:</b> (scripts, books, articles, cases, papers)</p>	<p>Casella, G. and Berger, R.: 2002, <i>Statistical Inference</i>, 2nd edn, Duxbury</p>
<p><b>Recommended literature:</b> (books, articles, cases, papers)</p>	<p>Other texts and support material will be introduced as needed.</p>
<p><b>Special features:</b> (e.g. excursion, guest speaker):</p>	
<p><b>Mode of examination:</b> (Mode of examinations and tests (e.g. oral or written examination, lecture, homework, papers, class participation)):</p>	<ul style="list-style-type: none"> <li>• Two written exams (midterm and final exam)</li> <li>• Practice sessions</li> </ul>
<p><b>Grading:</b></p>	<p>Class participation, Practice Sessions: (20 %) Midterm Exam: (40 %), Final written exam: (40 %) Others: (0 %)</p>