

## M.Sc. in Economics

<b>Code:</b>	017 902	<b>Type:</b>	M.Sc. 2011-2012 1 <sup>st</sup> year, Fall/Winter 2011/12
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<b>Title:</b>	Statistics
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<b>Lecturer:</b>	Derya Uysal
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<b>ECTS:</b>	6	<b>Contact hours (per semester):</b>	20 á 120 min.
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<b>Semester:</b>	Fall/Winter 2011/12	<b>Frequency of the lecture:</b>	Once a week
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<b>Dates:</b>	September 29, 2011 until April 4, 2012
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<b>Prerequisites:</b>	
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### **Learning objectives** (What are the intended learning outcomes? Which skills will be acquired?):

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.

### **Content** (Which professional competence and which contents will be imparted?):

The course covers the following topics:

- Probability theory
- Expectations
- Random Variables
- Convergence Concepts
- Estimation Theory
- Statistical Testing

### **Teaching approach** (Description of the learning and teaching methods):

The lecture mixes conventional blackboard and PowerPoint presentations in combination with practice sessions, where students get hands on experience.

### **Workload** (Definition of workload (ECTS), divided in pre-modules (e.g. pre-readings), core-modules (contact hours), post-modules (e.g. case studies)):

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<b>Language of instruction</b> (Information on the language of teaching):
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English
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<b>Obligatory literature</b> (E.g. scripts, books, articles, cases, papers):
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Casella, G. and Berger, R.: 2002, <i>Statistical Inference</i> , 2nd edn, Duxbury
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<b>Additional literature</b> (E.g. books, articles, cases, papers):
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Lecture notes from previous year. Other texts and support material introduced as needed.
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<b>Mode of examination</b> (Mode of the examinations and tests (e.g. oral or written examination, lecture, homework, papers, class participation):
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| <input type="checkbox"/> Two written exams for both Fall and Winter terms (midterm and final exam)<br><input type="checkbox"/> practice sessions |
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<b>Grading:</b>
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20% homework (practice sessions), 20% midterm exam, 60% final exam.
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<b>Special features</b> (E.g. excursion, guest speaker):
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<b>Contact information:</b>	<b>Office hours:</b>
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Derya Uysal Institute for Advanced Studies Stumpergasse 56, 1060 Vienna Room N 307 E-mail: uysal@ihs.ac.at Phone: +43 1 59991 156	By appointment
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<b>Course website:</b>
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