

## Master of Economics

Lecture Title:	Dynamic Optimization II		
Lecturer:	Michael Reiter		
Lecture Code:	017 905	ECTS:	3
Term:	Fall Term 2013	Contact hours:	20
Lecture Dates:	Oct. 1 <sup>st</sup> – Dec 10 <sup>th</sup> , 2013		
Final Exam:	December 20 <sup>th</sup> , 2013	Frequency of lecture:	once a week
Prerequisites:	Dynamic Optimization I		
Language of instruction:	English		
Contact information	Dr. Michael Reiter Institute for Advanced Studies Stumpergasse 56, 1060 Vienna Office A 305		
	Telephone: 0159991 154	Email: reiter@ihs.ac.at	
Office hours	By appointment		
Course website	<a href="https://cecnet.tuwien.ac.at/">https://cecnet.tuwien.ac.at/</a>		
Learning Objectives: (What are the intended learning outcomes? Which skills will be acquired?)	The course will cover both the theory and the practical implementation of the computational methods that are used in economics, especially in macroeconomics.  This includes both dynamic programming and solution techniques for dynamic stochastic general equilibrium models.  At the end of the course, the student should be able to solve the standard dynamic stochastic models numerically		
Content: (Which professional competence and which contents will be imparted?)	<b>1. Solving DSGE models by linearization</b> Lit.: Sims (2001); class handout  <b>2. Dynamic programming: some theorems</b> Lit.: Acemoglu (2009, Chapter 6); class handout  <b>3. Dynamic programming: numerical implementation</b> Lit.: Judd (1998, Chapter 12); class handout  <b>4. Perturbation methods</b> Lit.: Judd (1998, Chapter 13)		

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	<b>5. Projection methods</b> Lit.: Judd (1992); Miranda and Fackler (2002, Chapter 6)
<b>Teaching Approach:</b> (Description of the learning and teaching methods)	Lecture and group work.
<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)):	---
<b>Required literature:</b> (scripts, books, articles, cases, papers)	Acemoglu, D. (2009). Introduction to Modern Economic Growth. Princeton University Press.  Judd, K. L. (1992). Projection methods for solving aggregate growth models. Journal of Economic Theory 58 (2), 410-52.  Judd, K. L. (1998). Numerical Methods in Economics. Cambridge and London: MIT Press.  Miranda, M. J. and P. L. Fackler (2002). Applied Computational Economics and Finance. MIT Press.  Sims, C. A. (2001). Solving linear rational expectations models. Computational Economics 20 (1-2), 1-20.
<b>Recommended literature:</b> (books, articles, cases, papers)	---
<b>Special features:</b> (e.g. excursion, guest speaker):	---
<b>Mode of examination:</b> (Mode of examinations and tests (e.g. oral or written examination, lecture,	The grade will be based on a combination of homework and individualized programming project and a written final exam.  <b>Students are reminded that the use of somebody else's computer code</b>

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homework, papers, class participation)):	<b>without proper referencing is considered plagiarism and can lead to expulsion from the program.</b>
<b>Grading:</b>	<ul style="list-style-type: none"> <li>• Homework (20%)</li> <li>• Programming project (30%)</li> <li>• Final examination (50%)</li> </ul>