

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Makroekonomija
Course title:	Macroeconomics

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Doktorski program ekonomskih in poslovnih ved, tretjestopenjski program	Usmeritev Ekonomija	2.	2.
Doctoral Program in Economics and Business	Economics track	2.	2.

Vrsta predmeta / Course type Smerni seminar / Major seminar

Univerzitetna koda predmeta / University course code:

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje Laboratory work	Druge oblike dela	Samost. delo Individ. work	ECTS
25				65	90	6

Nosilec predmeta / Lecturer: Prof.dr. Igor Masten, prof.dr. Sašo Polanec

Jeziki / Languages:	Predavanja / Lectures:	Angleški/English; Slovenski/Slovenian
	Vaje / Tutorial:	Angleški/English; Slovenski/Slovenian

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Pogoj za vključitev v delo pri predmetu je opravljen izpit iz predmeta Advanced Macroeconomics, ki se izvaja v okviru magistrskih programov Denar in finance, Ekonomija in Finančna matematika, ali predmet, ki je na primerljivi ravni. Študenti morajo znati uporabljati optimizacijske metode za reševanje problemov dinamične optimizacije.

Prerequisites:

It is assumed that the students have passed the exam in Advanced Macroeconomics (MSc Programme in Money and Finance, Economics and Financial Mathematics) or equivalent. Students should be able to apply optimization methods for solving dynamic optimization problems.

Vsebina:

Predmet slušateljem podaja standardna orodja za analiziranje dinamičnih stohastičnih modelskih gospodarstev. Teme vključujejo teorijo dinamične stohastične rasti, investicij, modelov iskanja, frikcij na finančnih trgih, cenovne rigidnosti, vprašanja povezana z odprtimi gospodarstvi, monetarno in fiskalno politiko.

Dinamični sistemi

1. Reševanje determinističnih diferenčnih enačb

Content (Syllabus outline):

This course gives standard tools for analyzing dynamic stochastic economies. It covers topics from theory of stochastic economic growth, investments, search models to analyze search theories, frictions in financial markets, price stickiness, open-economy issues, monetary and fiscal policy.

- Dynamic systems

1. Deterministic difference equations and systems

<ul style="list-style-type: none"> 1.a. Linearne diferenčne enačbe 1.b. Sistemi linearnih enačb 1.c. Fazni diagrami 1.d. Numerične rešitve z uporabo programskega paketa Dynare 2. Stohastične diferenčne enačbe <ul style="list-style-type: none"> 2.a. Univariatni in multivariatni linearni modeli z racionalnimi pričakovanji 2.b. Nelinearni modeli z racionalnimi pričakovanji 2.c. Numerične rešitve z uporabo paketa Dynare 3. Markovski procesi <ul style="list-style-type: none"> 3.a. Markovske verige 3.b. Konvergenca <p>Dinamična optimizacija</p> <ul style="list-style-type: none"> 1. Dinamično programiranje v končnem horizontu <ul style="list-style-type: none"> 1.a. Princip optimalnosti 1.b. Optimalna kontrola 1.c. Načelo maksimuma 2. Dinamično programiranje v neskončnem horizontu <ul style="list-style-type: none"> 2.a. Princip optimalnosti 2.b. Optimalna kontrola 2.c. Načelo maksimuma 3. Aplikacije <ul style="list-style-type: none"> 2.a. Potrošnja in varčevanje 2.b. Izbira portfelja 2.c. Investicijski problemi <p>Ravnotežna analiza</p> <ul style="list-style-type: none"> 1. Modeli s čisto menjavo in popolnimi trdi <ul style="list-style-type: none"> 1.a. Trgovanje v trenutku 0 in zaporedno trgovanje 1.b. Baloni cen naložb 1.c. Določanje cen 2. Neoklasični model rasti <ul style="list-style-type: none"> 2.a. Deterministični modeli 2.b. Osnovni model realnih poslovnih ciklov 3. Modeli z nepopolnimi trgi <ul style="list-style-type: none"> 3.a. Čista menjalna gospodarstva 3.b. Gospodarstva s proizvodnjo 3.c. Agregatni šoki 4. Iskanje in brezposelnost <ul style="list-style-type: none"> 4.a. Osnovni model 4.b. Endogeno uničevanje zaposlitev 4.c. Brezposelnost in poslovni cikli <p>Modeli z nominalnimi rigidnostmi</p> <ul style="list-style-type: none"> 1. Osnovni model z lepljivimi cenami 2. Dinamika inflacije ob lepljivih cenah 	<ul style="list-style-type: none"> 1.a. Linear difference equations 1.b. System of linear equations 1.c. Phase diagrams 1.d. Numerical solutions using Dynare 2. Stochastic difference equations <ul style="list-style-type: none"> 2.a. Univariate and multivariate linear rational expectations models 2.b. Nonlinear rational expectations models 2.c. Numerical solutions using Dynare 3. Markov processes <ul style="list-style-type: none"> 3.a. Markov chains 3.b. Convergence <p>- Dynamic optimization</p> <ul style="list-style-type: none"> 1. Finite horizon dynamic programming <ul style="list-style-type: none"> 1.a. Principle of optimality 1.b. Optimal control 1.c. Maximum principle 2. Infinite horizon dynamic programming <ul style="list-style-type: none"> 2.a. Principle of optimality 2.b. Optimal control 2.c. Maximum principle and transversality condition 3. Applications <ul style="list-style-type: none"> 3.a. Consumption and Savings 3.b. Portfolio choice 3.c. Investment problems <p>- Equilibrium analysis</p> <ul style="list-style-type: none"> 1. Complete markets exchange economies <ul style="list-style-type: none"> 1.a. Time 0 trading vs. sequential trading 1.b. Asset price bubbles 1.c. Asset pricing 2. Neoclassical growth model <ul style="list-style-type: none"> 2.a. Deterministic models 2.b. Basic RBC model 2.c. Extensions 3. Incomplete markets models <ul style="list-style-type: none"> 3.a. Production economies 3.b. Endowment economies 3.c. Aggregate shocks 4. Search and Unemployment <ul style="list-style-type: none"> 4.a. Basic model 4.b. Endogenous job destruction 4.c. Unemployment and business cycles
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<p>Novo-Wicksellianski okvir za analizo denarne politike</p> <ol style="list-style-type: none"> 1. Pravila določanja obrestnih mer in cenovna stabilnost 2. Pogoji za določljivost ravnovesij 3. Primeri obrestnih pravil 4. Reševanje modelov z racionalnimi pričakovanji <p>Stabilizacija inflacije in družbena blaginja</p> <ol style="list-style-type: none"> 1. Aproksimacija funkcije družbene izgube in optimalna politika 2. Kriterij družbene blaginje na osnovi koristnosti 3. Zakaj cenovna stabilnost? 4. Odloženi učinki denarne politike 5. Optimalna politika in koristi zaveze k ciljem <p>Denarna politikika in ničelna spodnja meja obrestnih mer</p> <ol style="list-style-type: none"> 1. Likvidnostna past 2. Taylorjev princip in ničelna spodnja meja 3. Denarna politika in ničelna spodnja meja <p>Ocenjevanje DSGE modelov</p> <ol style="list-style-type: none"> 1. Uvod v ocenjevanje z Bayesijskimi metodami 2. Bayesijski DSGE modeli 3. Empirična aplikacija 	<p>Optimizing Models with Nominal Rigidities</p> <ol style="list-style-type: none"> 1. A Basic Model of Sticky Prices 2. Inflation Dynamics with Staggered Pricesetting <p>- A Neo-Wicksellian Framework for the Analysis of Monetary Policy</p> <ol style="list-style-type: none"> 1. Interest-Rate Rules and Price Stability 2. Conditions for Determinacy of Equilibria 3. Examples of Interest-Rate Rules 4. Solving RE models 5. Delayed Effects of Monetary Policy <p>- Inflation Stabilization and Welfare</p> <ol style="list-style-type: none"> 1. Approximation of Loss Functions and Optimal Policies 2. A Utility-Based Welfare Criterion 3. The Case for Price Stability 4. Delayed Effects of Monetary Policy 5. Optimal Policy and Gains from Commitment <p>- Monetary Policy at the Zero-Lower Bound</p> <ol style="list-style-type: none"> 1. Liquidity Trap 2. Taylor Principle and ZLB 3. Monetary Policy and ZLB <p>- Estimating DSGE models</p> <ol style="list-style-type: none"> 1. Introduction to Bayesian Estimation 2. Bayesian DSGE models 3. Empirical application
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Temeljni literatura in viri / Readings:

<p>Required Texts</p> <ul style="list-style-type: none"> • Miao, J. Economic Dynamics in Discrete Time, MIT Press, 2014. • Woodford, M. Interest and Prices, Princeton University Press, 2003. • Lim, G.C. and McNelis, P.D. Computational Macroeconomics for the Open Economy, MIT Press, 2008. • Ljungqvist, L. and Sargent, T.J. Recursive Macroeconomic Theory (second edition), MIT Press, 2004. • McCandless, G. The ABCs or RBCs, Harvard University Press, 2008. • Heer, B. and Mausnner, A. Dynamic General Equilibrium Modeling: Computational Methods and Applications (2nd Edition), Springer, 2009. • D.N. DeJong with Dave C. Structural Macroeconomics, Princeton University Press, 2007. • Autor D. and Acemoglu D. Lectures in Labor Economics, mimeo MIT. Available at http://economics.mit.edu/_les/4689. • den Haan, W. Solving DSGE Models with Heterogenous Agents, 2010. • Canova, Fabio: Methods for Applied Macroeconomic Research, Princeton University Press, 2007 <p>Reading list</p> <ul style="list-style-type: none"> • McCandless, G. The ABCs or RBCs, Harvard University Press, 2008. (Chapters 4 and 5) • Heer, B. and Mausnner, A. Dynamic General Equilibrium Modeling: Computational Methods and Applications (2nd Edition), Springer, 2009. (Chapter 1) • Acemoglu D. MIT Course 14.461 Technological Change, Lecture 10: Missallocation and

- Productivity.
- D.N. DeJong with Dave C. Structural Macroeconomics, Princeton University Press, 2007. (Chapters 1, 2, 5 and 6)
- Cama, R.F., Satoglu, E.B. and Kim, Hyun Gon, Structural Macroeconomics, December 18th 2010.
- Lim G.C. and McNelis P.D. Computational Macroeconomics for the Open Economy, 2008.
- Pissarides C. Equilibrium Unemployment Theory, MIT Press, 2000.
- Mortensen D. Wage Dispersion, MIT Press, 2003.
- Guerrieri V. Labor Market Search and Efficiency
- Autor D. and Acemoglu D. Lectures in Labor Economics, mimeo MIT.
- den Haan, W. Solving DSGE Models with Heterogenous Agents, 2010.
- Woodford, M. Interest and Prices, Princeton University Press, 2003.
- Canova, Fabio: Methods for Applied Macroeconomic Research (Chapters 2 and 11)
- Dynare manual

Cilji in kompetence:

Spoznavanje sodobnih makroekonomskih modelov in orodij za analizo ekonomskih politik.

Modeliranje in reševanje makroekonomskih modelov. Aplikacija makroekonomskih modelov na problem ekonomske politike.

Objectives and competences:

Learn modern macroeconomic models and tools for economic policy analysis.

Modelling and solving macroeconomic models. Application of models to policy problems.

Predvideni študijski rezultati:

Cilj predmeta je pripraviti študente za samostojno raziskovano delo na področju makroekonomije.

Intended learning outcomes:

The aim of this course is to prepare a student for independent research in Macroeconomics.

Metode poučevanja in učenja:

Predavanja, samostojno delo na podlago rednih domačih nalog, seminarska naloga

Learning and teaching methods:

Lectures, independent work based on regular assignments, empirical applications

Načini ocenjevanja:

Način (pisni izpit, ustno izpraševanje, naloge, projekt)
50 % pisni izpit,
50% seminarska naloga

Delež (v %) /

Weight (in %)

Assessment:

Type (examination, oral, coursework, project):
50 % written exam, 50% term paper

Reference nosilca / Lecturer's references:

Prof.dr. Sašo Polanec

Melitz, Marc, Polanec, Sašo. Dynamic Olley-Pakes Decomposition with Entry and Exit, Conditionally Accepted, *RAND Journal of Economics*, 2015(2).

Damijan, Jože, Kostevc, Črt, Polanec, Sašo. Access to finance, exporting and a non-monotonic firm expansion. *Empirica*, 2014, (SSCI).

Damijan, Jože, Konings, Jozef, Polanec, Sašo. Import churning and export performance of multi-product firms. *World economy*, 2014, (SSCI).

Nishida, Mitsukuni, Petrin, Amil, Polanec, Sašo. Exploring reallocations apparent weak contribution to growth. *Journal of productivity analysis*, 2014, (SSCI).

Polanec, Sašo, Ahčan, Aleš, Verbič, Miroslav. Retirement decisions in transition : microeconomic evidence from Slovenia. *Post-communist economies*, 2013, vol. 25, no. 1, pp. 99-118, (SSCI).

Bartolj, Tjaša, Ahčan, Aleš, Feldin, Aljoša, Polanec, Sašo. Evolution of private returns to tertiary education during transition : evidence from Slovenia. *Post-communist economies*, 2013, vol. 25, no. 3, pp. 407-424, (SSCI).

Damijan, Jože, Konings, Jozef, Polanec, Sašo. Pass-on trade : why do firms simultaneously engage in two way trade in the same varieties?. *Review of World Economics*, Mar. 2013, vol. 149, iss. 1, pp. 85-111, (SSCI).

Bartolj, Tjaša, Polanec, Sašo. College major choice and ability : why is general ability not enough? *Economics of Education Review*, Dec. 2012, let. 31, iss. 6, pp. 998-1016, (SSCI).

Burger, Anže, Kostevc, Črt, Polanec, Sašo. Productivity measurement for international firms. *Economic and business review*, 2011, vol. 13, no. 1/2, str. 51-75.

Ahčan, Aleš, Masten, Igor, Polanec, Sašo, Perman, Mihael. Quantile approximations in auto-regressive portfolio models. *Journal of Computational and Applied Mathematics*, Feb 2011, vol. 235, iss. 8, pp. 1976-1983, (SCI).

Gregorič, Aleksandra, Polanec, Sašo, Slapničar, Sergeja. Pay me right : reference values and executive compensation. *European financial management*, Nov. 2010, vol. 16, no. 5, pp. 778-804, (SSCI).

Damijan, Jože, Kostevc, Črt, Polanec, Sašo. From innovation to exporting or vice versa?. *World economy*, Mar. 2010, vol. 33, no. 3, pp. 374-398, (SSCI).

Damijan, Jože, Kostevc, Črt, Polanec, Sašo, et al. Understanding cross-country differences in exporter premia: comparable evidence for 14 countries. *Review of World Economics*, 2008, vol. 144, no. 4, pp. 596-635, (SSCI).

Damijan, Jože, Polanec, Sašo, Prašnikar, Janez. Outward FDI and productivity : micro-evidence from Slovenia. *World economy*, 2007, vol. 30, no. 1, str. 135-155, (SSCI).

Damijan, Jože, Polanec, Sašo. Prestrukturiranje in rast produktivnosti slovenskih podjetij. *Bančni vestnik*, ISSN 0005-4631, 2004, vol. 53, no. 5, pp. 51-59.

Polanec, Sašo. Convergence at last?. *Eastern European economics*, 2004, vol. 42, no. 4, pp. 55-80, (SSCI).

Fries, Steven, Lysenko, Tatiana, Polanec, Sašo. Environnement des affaires et performance de l'entreprise dans les économies en transition : enseignements tirés d'une enquête représentative. *Revue d'économie du développement*, 2004, vol. 18, no. 3/4, pp. 155-195.

Polanec, Sašo. Is neoclassical growth theory relevant to the transition experience?. *Economic and business review*, June 2001, vol. 3, no.2, pp. 89-112.

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BANERJEE, Anindya, MARCELLINO, Massimiliano, MASTEN, Igor. Forecasting with factor-augmented error correction models. *International journal of forecasting*, ISSN 0169-2070. [Print ed.], Jul./Sep. 2014, vol. 30, iss. 3, str. 589-612.

BREZIGAR MASTEN, Arjana, MASTEN, Igor. Predicting bankruptcy with semi-parametric single-index model. *Ekonomski istraživanja*, ISSN 1331-677X, 2012, vol. 25, no. 1, str. 121-133.

BREZIGAR MASTEN, Arjana, MASTEN, Igor. CART-based selection of bankruptcy predictors for the logit model. *Expert systems with applications*, ISSN 0957-4174. [Print ed.], Sep. 2012, vol. 39, iss. 11, str. 10153-10159.

AHČAN, Aleš, MASTEN, Igor, POLANEC, Sašo, PERMAN, Mihael. Quantile approximations in auto-regressive portfolio models. *Journal of Computational and Applied Mathematics*, ISSN 0377-0427.

BANERJEE, Anindya, MARCELLINO, Massimiliano, MASTEN, Igor. Leading indicators for Euro-area inflation

and GDP growth. *Oxf. bull. econ. stat.*, Oct. 2005, vol. 67, supp. 1, str. 785-813. ISSN 0305-9049

CORICELLI, Fabrizio, JAZBEC, Boštjan, MASTEN, Igor. Exchange rate pass-through in EMU acceding countries : empirical analysis and policy implications. *Journal of Banking & Finance*. [Print ed.], May 2006, vol. 30, no. 5, str. 1375-1391. ISSN 0378-4266

AHČAN, Aleš, MASTEN, Igor, PERMAN, Mihael, POLANEC, Sašo. Comonotonic approximations for VAR(p) process. *Insur., Math. econ.*, 2006, vol. 39, iss. 3, str. 410. ISSN 0167-6687

MASTEN, Igor. Optimal monetary policy with Balassa-Samuelsion-type productivity shocks. *J. comp. econ.*, Mar. 2008, vol. 36, no. 1, str. 120-141. ISSN 0147-5967

BREZIGAR MASTEN, Arjana, CORICELLI, Fabrizio, MASTEN, Igor. Non-linear growth effects of financial development : does financial integration matter?. *J. int. money financ.*. [Print ed.], Mar. 2008, vol. 27, no. 2, str. 295-313. ISSN 0261-5606

MASTEN, Igor. *Discussion of Social spending and automatic stabilizers in the OECD. Econ. policy*, October 2008, no. 56, str. 746-750. ISSN 0266-4658

BREZIGAR MASTEN, Arjana, MASTEN, Igor. Control of inflation on the road to the European Monetary Union : the case of Slovenia. *East. Europ. econ.*, Nov./Dec. 2009, vol. 47, no. 6, str. 5-21. ISSN 0012-8775

PAVLIČ DAMIJAN, Jože, MASTEN, Igor. Time dependent efficiency of free trade agreements : the case of Slovenia and the CEFTA agreement. *Econ. soc. rev.*, 2002, vol. 33, no. 1, str. 147-160. ISSN 0012-9984