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Master of Science in Applied Economics studies for the academic year 2012/2013

Program description

The MSc in Applied Economics offers rigorous training in economics, along a unique combination with research methods and econometrics. It aims to endow students with a deep understanding of how the macro-economy works and to enrich them with powerful set of techniques for research and analysis. However, policymakers are often focused to make decisions under conditions of uncertainty that have a direct impact on a country's overall performance. Hence, knowing the aggregate economic conditions is not sufficient and one must know the sources of risk and uncertainty, and the analytical tools to study those. Hence, the course will provide the relevant knowledge of the central issues in macroeconomics, but will enable student to choose their narrow focus – to study bank risks and stress testing, to study the stock exchange and other financial institutions, or to further explore quantitative techniques for analysis.

Assessment and Program structure 3+2

Two-year, English taught program. One part of the program provides theoretical background where mainstream theories in the respective domain are presented. Another part is empirical and/or aimed at policymaking, whereby empirical applications are presented, replicated and discussed. These can be prominent research articles, models or case studies. The third part focuses on analytical tools and heavily relies on software applications, like Excel, SPSS, E-views and Stata.

Assessment

Each module comprises of 50% application/coursework and 50% formal examination. Some of the applicative courses will be based on 100% coursework.

First year

The first year provides students with the necessary theoretical background, but also opts to incorporate applicative component in each course. Electives enable specialization in analysis of bank balance sheet or other finances, but are mainly based on applications in the respective areas.

Second year

The second year is geared toward empirics and is highly relevant for policymaking. Electives provide further specialization in quantitative econometric techniques or quantitative techniques for analysis in banks and are also focused on applications.

Applied Economics

First Year

Nr.	Course title	ECTS	Lecturer
1.	Advanced Macroeconomics	8	Dr El-hadj Bah, Arizona State University Graduate Professor at University of Auckland, New Zealand
2.	Advanced Microeconomics	8	Dr Metodij Hadzi Vaskov, Utrecht Business School Graduate Advisor to the IMF Executive Director, Washington
3.	Econometric Analysis	8	Dr Mehtap Hisarcikilar, Nottingham University Graduate Professor at Staffordshire University, UK
4.	Monetary Policy and Analysis	8	Dr Igor Velickovski, Staffordshire University Graduate Deputy Director at NBRM
5.	Research Methods in Economics and Finance	8	Dr Nikica Mojsoska Blazevski Dr Marjan Petreski Staffordshire University Graduates Professors at UACS
6.	Macroeconomy and Financial Stability	8	Mr Dimitar Bogov, University of Sheffield Graduate Governor of NBRM
7.	<i>Elective course</i>	8	
8.	<i>Elective course</i>	8	
Total ECTS IV		64	
Elective courses:			
	Financial Products and Pricing	8	Not chosen
	Bank Risk Management and Stress Testing	8	Mr Sofoklis Vogiazas, Lancaster University Graduate Manager of Risk Division, First Business Bank
	Data Analysis	8	Mr Branimir Jovanovic, Staffordshire University Graduate University of Rome Tor Vergata Research Associate
	Brokerage and Portfolio Management	8	Mr Simon Miloseski, Nyenrode University Graduate Lecturer at UACS

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Second Year

Nr.	Course title	ECTS	Lecturer
1.	Macro-Management of Open Economy	8	Dr Marjan Petreski, Staffordshire University Graduate Professors and Vice-Dean for Research at UACS
2.	Macroeconomic Modeling and Forecasting	8	Dr Mehtap Hisarcikilar, Nottingham University Graduate Professor at Staffordshire University, UK
3.	<i>Elective course (group I)</i>	8	
4.	<i>Elective course (group II)</i>	8	
5.	Master Thesis	24	
Group I elective courses			
1.	Labor Market and Active Policies	8	Dr Nikica Mojsoska-Blazevski, Staffordshire University Graduate Professor and Dean UACS
2.	Panel Econometrics	8	Dr Mehtap Hisarcikilar, Nottingham University Graduate Professor at Staffordshire University, UK
Group II elective courses			
1.	Cases in Financial Engineering in Banks	8	Modules led by project teams of professors
2.	Economic Transition in South-East Europe	8	
3.	Economics of BRIC Countries	8	
4.	Growth Policies in Emerging Economies	8	
Total ECTS V		56	
Total ECTS IV+V		120	

Learning outcomes

A: Knowledge and Understanding

- Knowledge of advanced principles at the forefront of contemporary applied economics
- Knowledge of a range of applications at the forefront of contemporary economics
- Understanding of the key strategies of economic research
- Understanding of the relationships between theory and empirical research in economics
- Awareness of the significance of alternative theoretical and methodological approaches to economic analysis
- Knowledge of the core methods used to analyse economic data.

B: Communicate effectively

- Formulate a coherent economic argument
- Construct reasoned, informed and concise descriptions and assessments of ideas at the forefront of contemporary applied economics
- Present and critically assess advanced economic ideas and arguments coherently in writing
- Critically analyse, evaluate and interpret empirical evidence
- Production of a word-processed research dissertation. Development of web-skills

C: Develop quantitative literacy

- Use and interpret information represented as data, graphs, tables, and schematics
- Use of econometric methods to analyse economic data.
- Acquiring capability to build a story that describes certain data, their interrelationships and econometric evidence

D: Think creatively

- Logically analyse a specified problem in economics and choose the most appropriate methods for its solution
- Exercise critical judgement in assessing the weights of competing theories and appraising their merits
- Organise ideas in a systematic and critical fashion

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E: Develop knowledge and skills to be civically engaged

- Develop the awareness and skills to take leadership roles in classrooms, the broader college, and the community.
 - Engage in principled, vigorous, and respectful dialogue.
- Understand the economic underpinnings of the local, national, and global community to which they belong.

Where can you pursue a professional career after the course? The course offers strong theoretical and empirical foundations to pursue research and professional career in central banks, international financial institutions, international banks, economic ministries, banks, pension funds, brokerage firms and stock exchanges, research centers and so on.

Degree. The program leads to a Master of Science in Applied Economics.

Modules description

Advanced macroeconomics. The module provides a rigorous introduction to the determination of aggregate output, employment, the price level and income. It includes effects of inflation, causes of business cycles determination of economic growth, impacts of monetary policy and effects of government taxation, spending and the national debt. Special attention is given to empirical importance of the different growth theories.

Advanced microeconomics. Microeconomics is the study of efficient allocation of scarce resources by consumers and firms. The purpose of this course is to investigate this decision making process of consumers and firms. As such, we shall be covering three broad topics - consumer theory, producer theory and market structure.

Bank risk management and stress-testing. The module builds on Macro-economy and financial stability and considers all aspects of risk management, including: credit risk, market risk, interest rate risk, liquidity risk. The module introduces the fundamentals of microeconomic and macroeconomic stress-testing and presents important statistical and econometric techniques that can be used for stress-testing and measuring risks.

Brokerage and portfolio management. This module covers basic techniques of valuation and management of securities in a portfolio context. For valuation of stocks, models such as: discounted cash flow models, P/E multiples, and alternative-pricing models will be covered. Concepts of risk and return are analysed in the context of formal pricing models such as the Capital Asset Pricing Model and the Arbitrage Pricing Theory.

Data analysis. The module builds on Econometric analysis and introduces students to the models including binary dependent variable (logit, probit and tobit models). To deepen students understanding, the whole course is based on the lab, where students perform supervised practical analyses of binary outcomes regressions. E-views is used.

Econometric analysis. The module builds on Research methodology, continuing the stuff in the area of quantitative techniques. After developing the theoretical constructs of classical least squares, common problems encountered when applying this approach: serial correlation, hetero-skedasticity, and multi-collinearity, are discussed. Techniques for dealing with these problems are then examined. E-views is used.

Economic transition in South-East Europe. The module gives a critical overview of the different phases of economic transition in South-East Europe. It is fully case-based. The module is based on a review of 10-12 prominent articles, which are then put forward by asking the student to prepare a paper on a relevant topic.

Economics of BRIC countries. This case-based module reviews the economic structure and policies of Brazil, Russia, India and China as the fastest growing emerging economies. The module is based on a review of 10-12 prominent articles, which are then put forward by asking the student to prepare a paper on a relevant topic.

Cases in Financial Engineering in Banks. The module enhances examples for understanding about how financial markets can be used to share and mitigate risks by constructing and valuing new instruments, paying particular attention to forwards, swaps, futures and options. The module is based on a review of 10-12 prominent articles, which are then put forward by asking the student to prepare a paper on a relevant topic.

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Modules description

Financial products and pricing. The module reviews the variety of financial products available to economic agents for their financial decision-making. In particular, the module starts with the more classic banking products, both on the asset and liability side, and then extends this discussion to the products immanent for the capital and foreign exchange markets. Special consideration is given to the quantitative aspects of pricing of those products. Excel is used.

Growth policies in emerging economies. This is a module which is fully case based. Several cases of the growth policies undertaken in emerging economies are considered, with special focus on small and open economies. The module is based on a review of 10-12 prominent articles, which are then put forward by asking the student to prepare a paper on a relevant topic.

Labour market and active policies. The course is aimed at presenting main theoretical concepts and areas in labour economics, combined with examination of empirical work and policy implications. We would cover basic concepts such as labour supply and demand, equilibrium wage differentials, distribution of income, discrimination in the labour market, bargaining between workers and employers and labour contracts, and unemployment. Special consideration is then given to the active labour market policies.

Macroeconomic management of open economy. The module builds on Advanced macroeconomics, by elevating the issues at the international level. The focal point of the course is exchange rates, balance of payments and the sustainability of the current account deficit. The course prepares the student for taking part in professional discussions about the design of monetary and fiscal policy in an open-economy context.

Macroeconomic modelling and forecasting. The module builds on Econometric analysis and starts by univariate time-series analysis, including unit root tests and AR representations. Then, the focus is on the multivariate analysis of macroeconomic time series. The main tool of the course is the Vector Auto-regression (VAR), which is used for forecasting. Finally, the concept of cointegration will be introduced with real-life applications.

Macro-economy and financial stability. The module builds on Advanced macroeconomics and Monetary policy and analysis and explains the linkages between the stability of the financial system and the conditions of the macro-economy. It offers a highly informed account of contemporary policy issues: financial crises, the role of bank capital, regulatory and supervisory regimes, crisis management and the role of the central bank as a lender of last resort.

Monetary policy and analysis. The module provides a comprehensive treatment of the most important topics in monetary economics: targets, institutions, strategies, and instruments. It combines a theoretical with a policy-oriented approach to train the students for investigation of important monetary policy issues by relying on different econometric techniques and software packages.

Panel econometrics. The module builds on Econometric analysis and Macroeconomic modelling and forecasting, putting the issues in panel context. The module deals with the issues and opportunities which arise with panel data and the main econometric techniques for the analysis of them, including recent advances like modelling of dynamic, non-linear and non-stationary panels. STATA will be used.

Research methodology. The objective of this module is to introduce students to academic writing, referencing using the Harvard referencing style, preparation of a research proposal and the regulations surrounding it at UACS. In the second part, particular attention will be devoted to the basics of methodologies and methods and their application in the area of qualitative research – questionnaire, interview, focus groups.