Course descriptions

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COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/2-UE-010/15	Applied Econometrics

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Course requirements:
A semestral project is worth of 30 % and the final exam is worth of 70% of the final grade. The evaluation scale is as follows: A 100 – 91; B 90 – 81; C 80 – 73; D 72 – 66; E 65 – 60; FX less than 60.

Learning outcomes:
Student extends her/his knowledge about modern econometric methods with a special focus on univariate, multivariate, linear and non-linear time series models.

Class syllabus:
1. Nonlinear modes.
2. Models with qualitative dependent variables.
3. Models with discrete
dependent variables.
4. System methods of simultaneous models parameters estimation.
5. Application of the simultaneous models: analysis of the structure, prognostic application, evaluation about the policy makers decisions.
6. Univariate ARMA time series models and their application
7. Conditional volatility GARCH models and their application
8. Multivariate time series models
9. Unit root tests, Causality, Co-integration
10 Forecasting and forecast evaluation

Recommended literature:
Hatrák (2007): Ekonometria.
Wooldridge (2010): Econometric Analysis of Cross Section and Panel Data.
Hill, Griffithss and Judge (2001): Undergraduate Econometrics.
Verbeek (2017): A Guide to Modern Econometrics.
Ruud (2000): Classical Econometric Theory.

Languages necessary to complete the course:

Slovak and English language

Notes:

Past grade distribution
Total number of evaluated students: 175

A	B	C	D	E	FX
10,29	16,57	12,57	17,71	18,29	24,57

Lecturers: Elham Kamal, PhD., Ing. Veronika Miťková, PhD.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-130/16/15	Diploma Seminar 1

Educational activities:
Type of activities: seminar
Number of hours:
per week: 4 **per level/semester:** 52
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 117

A	B	C	D	E	FX
41,88	24,79	17,95	2,56	10,26	2,56

Lecturers: doc. RNDr. Eduard Hozlár, CSc., Ing. Veronika Miťková, PhD., doc. Ing. Vladimír Mlynarovič, CSc., doc. Ing. Tomáš Domonkos, PhD., Ing. Miroslava Jánošová, PhD., Elham Kamal, PhD.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-170/16/15	Diploma Seminar 2

Educational activities:
Type of activities: seminar
Number of hours:
per week: 4 **per level/semester:** 52
Form of the course: combined

Number of credits: 6

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 114

A	B	C	D	E	FX
38,6	36,84	11,4	0,88	8,77	3,51

Lecturers: doc. Ing. Tomáš Domonkos, PhD., doc. RNDr. Eduard Hozlár, CSc., Ing. Veronika Miťková, PhD., doc. Ing. Vladimír Mlynarovič, CSc., Ing. Miroslava Jánošová, PhD.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

STATE EXAM DESCRIPTION

Academic year: 2024/2025	
University: Comenius University Bratislava	
Faculty: Faculty of Social and Economic Sciences	
Course ID: FSEV.ÚE/FSEV/mgAE/ SP3/15	**Course title:** Diploma Thesis and Defence
Number of credits: 6	
Recommended semester: 3., 4..	
Educational level: II.	
Learning outcomes: After competing, students will be able to process the results of their own conceptual economic-mathematical analysis in a comprehensive and systematic written form, prepare a systematic electronic presentation (in power-point) and lead a qualified discussion about it.	
Class syllabus: The syllabus is given by the diploma supervisor at the beginning of the semester according to the specifications of the assignment.	
State exam syllabus:	
Recommended literature: Internal regulation no. 12/2013 Directive of the rector of the Comenius University in Bratislava, avout the basic requirements of final theses, rigorous theses and habilitation theses, their originality controll, preservation and access at the Comenius University in Bratislava. STN ISO 690:2010(E) Information and documentation Guidelines for bibliographic references and citations to information resources. Economic and mathematical literature according to the recommendation of the supervisor of the thesis	
Languages necessary to complete the course: Slovak language and English language	
Last change: 09.10.2023	
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.	

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/2-UE-440/22	Econometric Modeling

Educational activities:
Type of activities: lecture + seminar / lecture
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Analytical paper presented by the student is worth 50% of the final grade and the final exam is worth 50% of the final grade.
grade A B C D E Fx
points 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
After successful completion of the course, the participant will be able to apply resampling methods, nonparametric methods, and multivariate statistical methods when analyzing economic and financial data.

Class syllabus:
1. Monte Carlo and bootstrap methods.
2. Nonparametric techniques.
3. Multivariate statistics.
4. Machine learning.

Recommended literature:
Rizzo (2019): Statistical Computing with R.
Dikta and Scheer (2021): Bootstrap Methods: With Applications in R.
Zwanzig and Mahjani (2020): Computer Intensive Methods in Statistics.
Pena and Tsay (2021): Statistical Learning for Big Dependent Data.
James, Witten, Hastie and Tibshirani (2017): An Introduction to Statistical Learning.
Flury (1997): A First Course in Multivariate Statistics.
Cho and Martinez (2018): Statistics in Matlab.

Languages necessary to complete the course:
Slovak language and English language

Notes:
Knowledge of the MATLAB programming language is required.

Past grade distribution Total number of evaluated students: 35					
A	B	C	D	E	FX
20,0	25,71	17,14	5,71	28,57	2,86
Lecturers: Ing. Ján Haluška, PhD., Elham Kamal, PhD.					
Last change: 09.10.2023					
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.					

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/2-ÚE-400/22	Economic Models of Politics

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
A term paper submitted by the student whose grade is 25% of the final grade, a midterm test which is 25% of the final grade, and a final exam which is 50% of the final grade.
Rating: A: 91-100 points; B: 81-90 points; C: 73-80 points; D: 66-72 points; E: 60-65 points; Fx: 0-59 points

Learning outcomes:
Upon successful completion of the course, the student will understand the theoretical as well as empirical applications of political economy models. Students will develop an understanding of the many complex ways in which politics and economics interact and vice versa.

Class syllabus:
1. Theoretical Foundations - Public Choice Theory, Social Welfare Function
2. Voting rules - Lindahl model
3. Voting rules - Majority voting, Median voter theory, Multidimensional models and preference distributions
4. Voting Rules - Logrolling, Arrow's Impossibility Theorem
5. Public Policy Design - Plurality and Proportional Voting
6. Public Policy Design - Models of Bureaucracy (Niskanen)
7. Public Policy Design - Interest Groups (Rent-seeking, Iron Triangle, Revolving Door, Lobbying)
8. Political-Economic Cycle (PEC)
9. Time inconsistency in macroeconomic policy (CI)
10. Applications of PEC and QI in monetary and fiscal policy
11. Immigration preferences
12. Policy making and intergenerational accounting
13. Current issues in economic policymaking

Recommended literature:
· Branko Milanovic, The median-voter hypothesis, income inequality, and income redistribution: an empirical test with the required data, European Journal of Political Economy, 2000, 16, 367-410

· Michal Sedlačko & Katarína Staroňová, Internal ministerial advisory bodies: An attempt to transform governing in the Slovak Republic, Central European Journal of Public Policy, 2018, 7, 28
· Wiliam D. Nordhaus, The Political Business Cycle, The Review of Economic Studies, 1975, 42/2, 169-190
· Finn E. Kydland & Edward C. Prescott, Rules rather than discretion: The inconsistency of optimal plans, Journal of Political Economy, 1977, 85/3, 473-492
· Robert J. Barro & David B.Gordon, A positive theory of monetary policy in a natural rate model, Journal of Political Economy, 1983, 91/4, 589-610
· Alberto Alesina & Roberto Perotti, The political economy of budget deficits, International Monetary Fund Staff Papers, 1995, 42/1, 1-31
· Harvey S. Rosen, Public Finance, 1992, McGraw-Hill/Irwin , Chapter 7,
· Randall G. Holcombe, Advanced Introduction to Public Choice, 2016, Edward Elgar Publishing
· Denis C. Mueller, Public Choice III, 2003, Cambridge University Press

Languages necessary to complete the course:
Slovak, English

Notes:
Course evaluation
A total number of evaluated students: the real number of evaluated students from the course's introduction to its last update.
A B C D E FX
a b c d e f
The table includes the percentage of evaluated students who obtained an A, B, … FX grade after enrolling in the course. The total sum of a, b, c, d, e, f is 100. If a student obtained FX in one year and after further enrollment in the course, evaluation D, both of his evaluations will be taken into account.

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
44,44	22,22	11,11	0,0	0,0	22,22

Lecturers: Ing. Mária Širaňová, PhD.

Last change: 05.04.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

STATE EXAM DESCRIPTION

Academic year: 2024/2025	
University: Comenius University Bratislava	
Faculty: Faculty of Social and Economic Sciences	
Course ID: FSEV.ÚE/2-UE-SP4/22	**Course title:** Economic Theory
Number of credits: 9	
Educational level: II.	
Recommended prerequisites: Prerequisites: All compulsory, optional and selection courses according to the study plan.	
Course requirements: The grade is awarded by the state examination committee. Rating A B C D E FX points 91-100 81-90 73-80 66-72 60-65 <59	
Learning outcomes: Student is able to demonstrate mastery of the requirements of the two-years master's study in quantitative methods in economics. Student is able to integrate theoretical and practical knowledge and master the principles of construction and economic interpretation of theoretical models.	
Class syllabus: State exam syllabus: 1. Risk management in banking. 2. Monetary policy (operations on free market, mandatory minimum reserves, automatic operations, monetary policy of the European Central Bank and non-standard operations of the European Central Bank). 3. Pillars and principles of banking union functioning. 4. Interbank payment, settlement, and communication systems. Interbank operations and interest measure. 5. Transmission mechanism and its types. 6. Issue activity of banks. 7. Consumer theory - budget constraint, types of preferences, utility function, optimal strategy, revealed preferences, Slutsky equation. Decision making in time. 8. Theory of the firm – production function, profit maximization, cost minimization, aggregated supply. Equilibrium in perfect and imperfect markets. 9. Types of decision environments, conditional consumption, utility function and probability. Theory of expected utility. Risk and risk aversion, risk distribution and the role of the stock market. 10. Externalities, quasi-linear preferences, and the Coase theorem. Production externalities, social and private costs. Market signals and the tragedy of the commons. 11. Public assets, private securing of trust assets, parasitism, different levels of public goods, quasi-linear preferences, and public goods. Electoral systems and their evaluation. 12. Welfare, aggregation of preferences, social welfare function, welfare maximization and types of wealth allocation. 13. Solow's model of economic growth. 14. Basic Ramsey's dynamic macroeconomic model. 15. Diamond's model of overlapping generations. 16. Theory of endogenous growth (Romer's model).	

17. The theory of the real economic cycle and the basic canonically dynamic stochastic model general economic equilibrium (DSGE).
18. Modeling of consumption, investment and accumulation of capital and government interventions in dynamic stochastic models of general economic equilibrium (DSGE).

State exam syllabus:

Recommended literature:

Branson, W.H. – Litvack, J.M.(1981) : Macroeconomics. Hasper and Row publishers. New York.
Felderer, B. – Homburg, S.(1995): Makroekonomika a nová makroekonomika. Elita, Bratislava .
Kreps, David M.(1990): A Course in Microeconomic Theory. Princeton, Princeton University Press..
Mlynarovič, V. (1988): Kvantitatívna makroekonómia, Ekonóm, Bratislava.
Mlynarovič, V – V. Miťková.(2010): Makroekonomická anaýza, IURA Edition, Bratislava.
Pentecost, E.J. (2000): Macroeconomics, MacMillan Press, Ltd., London.
Romer. D.(1996): Advanced Macroeconomics, New York, McGraw – Hill.
Varian, Hal R. (1992): Microeconomic Analysis. New York, W.W. Norton & Company.

Last change: 09.10.2023

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-120/16/15	Financial Investing

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:
To present modern knowledge of finantiel investing theory in a formal manner to create assumptions for model approaches applications in solving finantial practice problems. The subject is oriented to explanations of finantial decisuion making problems

Class syllabus:
1. Principles of finantial evaluations of investment. 2. Outranking of finantial projects on the base of such characteristics as net presebt value, internal rate of return, profit index and others. 3. Methods for outranking of invesstment projects. 4. Portfolio choice and its analysis - Markowitz model. 5. Basic methods of investnent and fianntial palnning. 6. Software products with fiantial functions, optimization methods and outarnking methodsd are being used in solving problems.

Recommended literature:
BREALY R.A. – MYERS S.C.: Principles of Corporate Finance. New York, McGraw-Hill Inc., 1991
TEPPER T. – KÁPL M.: Peníze a vy. Prospektrum-Econtax, Praha, 1991
MLYNAROVIČ V. – HOZLÁR E.: Viackriteriálne rozhodovanie. ES EU Bratislava, 1993
MLYNAROVIČ V.: Finančné modelovanie. ES EU Bratislava, 1995
MLYNAROVIČ, V.: Finančné investovanie. Teória a aplikácie. IURA Edition, 2001

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 128

A	B	C	D	E	FX
23,44	11,72	22,66	15,63	25,78	0,78

Lecturers: doc. Ing. Vladimír Mlynarovič, CSc.

Last change: 13.03.2022
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-390/21	Financial and capital markets

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Course requirements:
Semester work submitted by the student, whose evaluation is 30% of the final grade, mid term test, which represents 20% of the final grade and 50% of the final grade is the final exam. The evaluation scale is as follows: A 100 – 91; B 90 – 81; C 80 – 73; D 72 – 66; E 65 – 60; FX less than 60.

Learning outcomes:
Learning outcomes:
The student will gain an overview of the functioning of financial and capital markets (FaCM), their laws, position, and role of firms in them, as well as the tools used. It also will gain an overview of the financial ratios of firms used in capital markets, as well as the different levels of risk. They will acquire the ability to distinguish and evaluate the usefulness and suitability of the use of financial instruments for specific objectives. The participant will learn how to compile a firm's cash flow and its practical use. At the same time, the student will get an overview of information technologies in financial markets and ways of their use in firms, as well as the pitfalls of these technologies.

Class syllabus:
Class syllabus:
1. Financial and capital markets - institutions, tools, functioning, position of companies on FaCM
2. Firms as a subject of the capital market - stocks, performance indicators, risks on FaCM, and their economic functioning
3. Price of money - interest, exchange rates, forward prices and risks of money and foreign exchange markets
4. Debt instruments - basic parameters, yield to maturity, creditworthiness, loan comparison
5. Cash flow of the company, financial planning, use
6. Technologies in FaCM and in corporate finance

Recommended literature:
John Calverley – „Pocket Guide to Economics for the Global Investor", American Express Bank
N. Gregory Mankiw – Principles of Economics
S. C. Myers – Teorie a praxe firemních financí, Victoria Publishing

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
43,48	52,17	4,35	0,0	0,0	0,0

Lecturers: RNDr. Vladimír Kukliš

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-090/16/15	Game Theory

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
During the semester there will be two midterm tests, each for 20 points, during the semester each student will present a project for 10 points, the exam will be a written test with a maximum of 50 points. Credits will not be awarded to a student who obtains a total of less than 25 points in the continuous assessment during the semester.
grade A B C D E Fx
points 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
After successful completion of the course the student will be able to analyze strategic situations with non-cooperative games in strategic and extended form. They will be able to modeling the different situations of the interaction decision and using the stochastic elements in decision making. He will be able to calculate the different types of equilibrium in non-cooperative games in strategic and extended form and to know the sufficient conditions for their existence. Enable successful study of economic disciplines in which interactive decision making plays an important role, in particular sectoral organization, strategic international trade theory, and public procurement theories

Class syllabus:
1. Evolutionary games
2. Static evolution game
3. Evolutionarily stable strategie
4. Negotiation Games - Nash negotiation solution
5. Games with incomplete information
6. Nash equilibrium solution in a 2x2 game
7. Nash equilibrium solution in a game with a matrix of dimensions more than 2x2
8. Repeated games
9. The ultimate games
10. Decision-making with certainty, risk and uncertainty

Recommended literature:
Recommended literature:

Osborne, Martin J. – Rubinstein, Ariel: A Course in Game Theory. Cambridge, MA, MIT Press 1995.

Languages necessary to complete the course:
Slovak language and English language

Notes:

Past grade distribution
Total number of evaluated students: 139

A	B	C	D	E	FX
14,39	12,95	25,18	16,55	25,18	5,76

Lecturers: Ing. Miroslava Jánošová, PhD.

Last change: 09.10.2023

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-070/16/15	Macroeconomic Analysis

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Analytical paper presented by the student is worth 30% of the final grade, mid-term exam is worth 20% of the final grade and the final exam is worth 50% of the final grade. The evaluation scale is as follows: A 100 – 91; B 90 – 81; C 80 – 73; D 72 – 66; E 65 – 60; FX less than 60.

Learning outcomes:
After successful completion of the course, the participant will be able to formulate and solve models from the field of general economic theory. Participant should be able to understand and present the results of macroeconomic analysis by applying mathematical techniques.

Class syllabus:
1. System of national accounts. 2. Models of economic growth. 3. Models of the economic cycle. 4. Multipliers. 5. Static equilibrium model: demand and supply. 6. Static Models and Introduction to Monetary and Fiscal Policy. 7. Long-term equilibrium models. 8. Economic fluctuations. 9.Rational expectations in macroeconomics.

Recommended literature:
Branson, W.H. – Litvack, J.M.(1981) : Macroeconomics. Hasper and Row publishers. New York.
Felderer, B. – Homburg, S.(1995): Makroekonomika a nová makroekonomika. Elita, Bratislava .
Mlynarovič, V. (1988): Kvantitatívna makroekonómia, Ekonóm, Bratislava.
Mlynarovič, V – V. Miťková.(2010): Makroekonomická anaýza, IURA Edition, Bratislava.
Pentecost, E.J. (2000): Macroeconomics, MacMillan Press, Ltd., London.
Romer. D.(1996): Advanced Macroeconomics, New York, McGraw – Hill.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution Total number of evaluated students: 157					
A	B	C	D	E	FX
4,46	8,92	17,83	12,1	41,4	15,29
Lecturers: doc. Ing. Tomáš Domonkos, PhD.					
Last change: 13.03.2022					
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.					

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/2-UE-430/22	Macroeconomic Modeling

Educational activities:
Type of activities: lecture + seminar / lecture
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
1. Analytical paper presented by the student is worth 30% of the final grade
2. mid-term exam is worth 20% of the final grade
3. final exam is worth 50% of the final grade.
The evaluation scale is as follows: A 100 – 91; B 90 – 81; C 80 – 73; D 72 – 66; E 65 – 60; FX less than 60.

Learning outcomes:
After successful completion of the course, the participant will be able to formulate and solve models from the field of general economic theory. Participant should be able to understand and present the results of macroeconomic analysis by applying mathematical techniques

Class syllabus:
Class syllabus:
1. Theory of real business cycles
2. Models with nominal rigidity
3. DSGE models of economic fluctuations - New Keynesian model
4. Application of RBC and DSGE models in MATLAB

Recommended literature:
Costa Junior, C.J. (2016) Understanding DSGE. Vernon Press.
Mlynarovič, V – V. Miťková.(2010): Makroekonomická anaýza, IURA Edition.
Romer. D.(2019): Advanced Macroeconomics, McGraw – Hill.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
39,13	21,74	13,04	13,04	13,04	0,0

Lecturers: doc. Ing. Tomáš Domonkos, PhD.
Last change: 09.10.2023
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/2-UE-420/22	Master's Practice

Educational activities:
Type of activities: lecture + seminar / lecture
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 36

A	B	C	D	E	FX
88,89	5,56	0,0	0,0	0,0	5,56

Lecturers: doc. RNDr. Eduard Hozlár, CSc.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-020/16/15	Microeconomic Analysis

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
During the semester, it is possible to obtain 10 points for activity in lectures and seminars. There will be two continuous written tests during the semester, each for 20 points. The exam will take place orally. Credits will not be awarded to a student who obtains a total of less than 25 points during the semester.
grade A B C D E Fx
points 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
The course will provide students with upgraded knowledge on the subject of microeconomic theory and practical part; knowledge of companies operating in conditions of perfect competition, monopolistic companies and companies operating under oligopoly conditions and proces searching of equilibrium these companies.

Class syllabus:
• Consumer behavior and utility
• Production functions, cost theory
• Profit maximization
• Asset markets
• Uncertainty
• Risk assets
• Welfare
• Externality
• Public goods

Recommended literature:
Kreps, David M.: A Course in Microeconomic Theory. Princeton, Princeton University Press 1990. Varian, Hal R.: Microeconomic Analysis. New York, W.W. Norton & Company 1992

Languages necessary to complete the course:
Slovak language and English language

Notes:

Past grade distribution
Total number of evaluated students: 156

A	B	C	D	E	FX
13,46	13,46	13,46	18,59	25,64	15,38

Lecturers: Ing. Miroslava Jánošová, PhD.

Last change: 09.10.2023

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-080/16/22	Modelling of Economic Processes

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
During the semester, it is possible to obtain 10 points for activity in lectures and seminars. There will be two midterm tests during the semester, each for 20 points. The exam will take place orally. Credits will not be awarded to a student who obtains a total of less than 25 points during the semester.
grade A B C D E Fx
points 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
After successful completion of the course the student will be able to apply the knowledge of modeling economic processes to solving various economic problems using different types of models based on mathematical modeling

Class syllabus:
• General issues of mathematical modeling and modeling approaches
• Problems of aggregation and aggregation in models
• Modeling of investment processes
• Stochastic models
• Markov chains
• Recovery models
• Inventory modeling
• Modeling of service processes

Recommended literature:
Fábry, J.: Matematické modelování. Nakladatelství Oeconomica, Praha 2007
Chin, Wai-Ki – Huang, Ximin – Ng, Michael K. – Sin, Tok-Kuen: Markov Chains. Models, Algorithms, and Applications. Second Edition. New York, Springer 2013.
Mark A. Pinsky, Samuel Karlin. An Introduction to Stochastic Modeling Fourth Edition. 2011, Academic Press is an imprint of Elsevier

Languages necessary to complete the course:
Slovak language and English language

Notes:

Past grade distribution
Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Ing. Miroslava Jánošová, PhD.

Last change: 09.10.2023

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-060/16/15	Models of Banking Operations

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
During the term there will be two control written works (together 20 points), two presentations on actual banking topics (each 5 points), the first topic to be presented till the 6th week of the term, the second topic within 7-11th week. Other activities: 10 points.
Final written exam (60 points).
Hodnotenie A B C D E FX
body 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
To get the knowledge on banking operations towards banking and non-banking clients; interbank market; methods for risk management and calculation of bank capital requirements; Basel accords; Banking union.

Class syllabus:
• Bank Capital.
• Interbank Operations.
• Global Banking Activities.
• Basel Accords.
• Market Risk and Capital Adequacy.
• Interest Rate Risk and Capital Adequacy.
• Credit Risk and Capital Adequacy.
• Operational Risk and Capital Adequacy.
• Managing Liquidity.
• Banking Union.
• Payment and Communication Interbank Systems.

Recommended literature:
MISHKIN, S. F.: The Economics of Money, Banking and Financial Markets. PEARSON, 11th Edition. ISBN: 978-1-292-09418-2.
KOCH, T.W., MACDONALD, S. S.: Bank Management. South-Western College Pub, 8th Edition. ISBN: 978-1133494683.

SIVÁK, R., GERTLER, Ľ., KOVÁČ, U.: Teória a politika rizika vo financiách a v bankovníctve. Bratislava: Sprint, 2015. ISBN: 9788089710195.
KOČIŠOVÁ, K.: Manažment bankových operácií. Košice: Elfa, 2016. ISBN: 978-80-8086-260-2.
Journals: BIATEC (NBS in Bratislava); Bankovnictví (ECONOMIA in Prague).
Laws, Measures, Regulations.
www.nbs.sk; www.ecb.europa.eu

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 130

A	B	C	D	E	FX
19,23	18,46	14,62	19,23	26,92	1,54

Lecturers: Ing. Mária Širaňová, PhD.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025	
University: Comenius University Bratislava	
Faculty: Faculty of Social and Economic Sciences	
Course ID: FSEV.ÚE/UE-050/16/15	**Course title:** Models of General Economic Equilibrium
Educational activities: **Type of activities:** lecture / seminar **Number of hours:** **per week:** 2 / 2 **per level/semester:** 26 / 26 **Form of the course:** combined	
Number of credits: 6	
Recommended semester: 3.	
Educational level: II.	
Prerequisites:	
Course requirements: midterm exam for 20 points semestral project for 30 points final exam for 50 points hodnotenie A B C D E Fx body 91-100 81-90 73-80 66-72 60-65 <59	
Learning outcomes: Student will master the problems of computable general equilibrium models, their place among economic models, their specifics and properties. Upon completion of the course the student will be able to compile and apply the applied model of general equilibrium model.	
Class syllabus: 1. General equilibrium. 2. Theoretical background. 3. Cycles in the economy. 4. Types of production functions. 5. Elasticities. 6. Formulation of the model. 7. Modeling. 8. Solving different types of tasks on the model.	
Recommended literature: Burfisher, M. (2012) Introduction to Computable General Equilibrium Models. Cambridge University Press. Lofgren, H. (2003) Exercises in General Equilibrium Modeling Using GAMS. Microcomputers in Policy Research 4a. IFPRI, Washington DC. Lofgren, H., Harris, R. L., Robinson, S. (2002) A Standard Computable General Equilibrium Model in GAMS. Microcomputers in Policy Research 5. IFPRI, Washington DC.	
Languages necessary to complete the course:	
Notes:	

Past grade distribution Total number of evaluated students: 137					
A	B	C	D	E	FX
29,2	15,33	14,6	15,33	19,71	5,84
Lecturers: Ing. Veronika Miťková, PhD.					
Last change: 13.03.2022					
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.					

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-410/21	Monetary Policy

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
During the term there will be two control written works (together 20 points), two presentations of actual banking topics on monetary policy (each 5 points), the first topic to be presented till the 6th week of the
term, the second topic within 7-11th week. Other activities: 10 points.
Final written exam (60 points).
Hodnotenie A B C D E FX
body 91-100 81-90 73-80 66-72 60-65 <59

Learning outcomes:
To get knowledge on how central banks operate in economy; price stability; transmission mechanism; standard and nonstandard Eurosystem measures.

Class syllabus:
• Central Banking.
• Price Stability.
• Transmission Mechanism.
• Counterparties for the ECB Monetary Policy.
• Eurosystem Monetary Policy Instruments.
• Open Market Operations.
• Tender Procedures.
• Eligible Assets.
• Standing Facilities.
• Minimum Reserves.
• Nonstandard Eurosystem Measures

Recommended literature:
ECB: The Implementation of Monetary Policy in the Euro area. ECB, 2012. (Electronic version).
MISHKIN, S. F.: The Economics of Money, Banking and Financial Markets. PEARSON, 11th Edition. ISBN: 978-1-292-09418-2.

MISHKIN, S. F., EAKINS, S. G.: Financial Markets and Institutions. PEARSON, 8th Edition. ISBN: 978-0133423624.
REVENDA, Z.: Centrálni bankovnictví. MANAGEMENT PRESS, Praha, 2001. ISBN: 80-7261-051-1.
Journals: BIATEC (NBS in Bratislava); Bankovnictví (ECONOMIA in Prague).
Laws, Measures, Regulations.
www.nbs.sk; www.ecb.europa.eu

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 32

A	B	C	D	E	FX
37,5	31,25	15,63	12,5	3,13	0,0

Lecturers: Ing. Mária Širaňová, PhD.

Last change: 13.03.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-195-15/16/22	Multi-criteria Decision-making

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:
To provide students basic methodology of decision making problem modelling under multiple criteria and its applications

Class syllabus:
Basic concepts of decision making. Concepts of intrapersonal, interpersonal and systemic conflicts. Taxonomy of MCDM techniques. Optimality and efficiency. Operational model of ideal alternative. Compromise programming and goal prgramming. Modelling of decision maker preferences and outranking methods. Interactive procedures. Group decision making under multiple criteria

Recommended literature:
Mlynarovič, V.(1998): Modely a metódy viackriteriálneho rozhodovania, Ekonóm, Bratislava
Zelený. M. (1982): Multiple Criteria Decision Making. McGraw Hill, New York.
Steuer, R. E. (1986): Multiple Criteria Optimzation.John Wiley and Sons New York

Languages necessary to complete the course:
slovenský a anglický jazyk

Notes:

Past grade distribution
Total number of evaluated students: 13

A	B	C	D	E	FX
30,77	38,46	30,77	0,0	0,0	0,0

Lecturers: doc. Ing. Vladimír Mlynarovič, CSc.

Last change: 30.06.2022

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.

COURSE DESCRIPTION

Academic year: 2024/2025

University: Comenius University Bratislava

Faculty: Faculty of Social and Economic Sciences

Course ID:	**Course title:**
FSEV.ÚE/UE-030/16/15	Optimal Programming

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: combined

Number of credits: 6

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
ongoing test during the semester 2 times for 30 points, methods of presentation solutions during the semester for 10 points, the final test for 30 points

Learning outcomes:
Learning outcomes of the course unit The student obtains knowledge of the construction of mathematical models of economic phenomena and processes at different levels of the economy, which are searching for some of the best solutions. It is able to identify the decision variables of the model, model their interrelationships so that these links display the most realistic real economic world and can also formulate criteria for assessing the quality of individual solutions. The student will have knowledge of solution methods as well as software background for solving different types of optimization tasks.

Class syllabus:
Classification of mathematical programming models and methods. 2. Linear programming (LP) models. 3. Methods of solving LP tasks. 4. Theory of duality. 5. Models and methods of discrete programming. 6. Non-linear programming (NP) models. 7. Basic methods for solving NP problems. 8. Introduction to stochastic programming. 9. Network analysis tasks. 10. Software to solve mathematical programming tasks.

Recommended literature:
.. Laščiak, A. a kol.: Optimálne programovanie. Alfa, Bratislava 1991.
2. Williams, H.P.: Model Solving in Mathematical Programming. John Wiley & Sons, New York 1992.
3. Hamala, M., Trnovská, M.: Nelineárne programovanie. Epos, Bratislava 2012.

Languages necessary to complete the course:
slovenský a anglický jazyk

Notes:

Past grade distribution Total number of evaluated students: 145					
A	B	C	D	E	FX
12,41	15,17	14,48	15,17	33,1	9,66
Lecturers: doc. Ing. Vladimír Mlynarovič, CSc.					
Last change: 13.03.2022					
Approved by: doc. Ing. Vladimír Mlynarovič, CSc.					

STATE EXAM DESCRIPTION

Academic year: 2024/2025	
University: Comenius University Bratislava	
Faculty: Faculty of Social and Economic Sciences	
Course ID: FSEV.ÚE/2-UE-SP5/22	**Course title:** Quantitative Methods in Economics
Number of credits: 9	
Educational level: II.	
Recommended prerequisites: Prerequisites: All compulsory, optional and selection courses according to the study plan.	
Course requirements: Course requirements: The grade is awarded by the state examination committee. Rating A B C D E FX points 91-100 81-90 73-80 66-72 60-65 <59	
Learning outcomes: Student is able to demonstrate mastery of the requirements of the two-years master's study in quantitative methods in economics. Student is able to integrate theoretical and practical knowledge and master the principles of construction and economic interpretation of theoretical models.	
Class syllabus: 1. Optimization problems and tasks of mathematical programming. General task of mathematical programming. Types of tasks and principles of their solution. The use of non-linear principles optimization in microeconomic analysis. 2. Linear programming tasks and their properties. Duality theory in linear programming. 3. Simplex method and its primary and dual algorithm. Analysis of sensitivity in tasks of linear programming and parametric programming. 4. Optimization problems with integer conditions and methods of their solution. 5. Tasks with a block-diagonal structure. Decomposition algorithm of solutions and economic interpretations. 6. Nonlinear programming - convexity and Karush - Khun - Tucker conditions of optimality. 7. Linear one-equation econometric model. Estimating the parameters of a linear model using methods of least squares (OLS). Statistical properties of estimated parameters. 8. Characteristics of random disturbances in the model. Estimating the variance of a random disturbance. Quality measurement settlements. 9. Diagnostic control of the econometric model (autocorrelation, heteroskedasticity, normality, multicollinearity, structural changes, functional form of the model, etc.). 10. Econometric models with dummy variables (dependent variables, explanatory variable). 11. One-equation linear models of time series (ARMA). Testing for unit roots. One-equation models of volatility (GARCH). 12. Multi-equation linear models of time series (VAR, VECM). Models of simultaneous equations. 13. Static games with full information in normal form. Solution methods, mixed strategies and linear optimization. 14. Games in extensive form, games with imperfect and incomplete information, equilibria in games in extensive form, games with repetition. 15. Static games with incomplete information (Bayesian games); Bayesian Nash equilibrium,	

equilibrium in combined strategies, Auctions.
16. Evolutionary games, basic concepts, evolutionary model, solving evolutionary games, evolutionarily stable strategies.
17. Quadratic programming task and its algorithmic solution. The task of selecting a portfolio from risky assets and methods of its solution.
18. Algebra of portfolio of risky assets in the space of past and future returns. Risk measures.
19. Capital asset valuation model and portfolio selection tasks with additional risk factor.
20. Replication models – analysis and exposure of the fund's investment style. Models of choosing the best compromise portfolio.

State exam syllabus:

Recommended literature:

Hatrák, M. (2007) Ekonometria. IURA Edition, Bratislava.
Hill, R.C., Griffithss, W.E. and Judge, G.G. (2001) Undergraduate Econometrics. Wiley.
Chin, Wai-Ki – Huang, Ximin – Ng, Michael K. – Sin, Tok-Kuen (2013): Markov Chains. Models, Algorithms, and Applications. Second Edition. New York, Springer.
Sojka, Jozef – Šimkovic, Ján – Hatrák, Michal (1981): Modelovanie národohospodárskych procesov. Bratislava, Alfa.
Varian, Hal R. (1992): Microeconomic Analysis. New York, W.W. Norton.
Wooldridge, J. M. (2001) Econometric Analysis of Cross Section and Panel Data. Cambridge, MA: MIT Press

Languages necessary to complete the course:
Slovak language and English language

Last change: 09.10.2023

Approved by: doc. Ing. Vladimír Mlynarovič, CSc.