

**STATE EDUCATIONAL INSTITUTION OF HIGHER
PROFESSIONAL EDUCATION «RUSSIAN-ARMENIAN
(SLAVONIC) UNIVERSITY»**

Complied in accordance to state requirements for minimum content and level of graduates' training of the given directions and Regulations on Curriculum in RAU.

CONFIRMED:

Director Aramyan J.B



INSTITUTE OF ECONOMICS AND BUSINESS

Chair: Economic Theory and the Issues of Transition Period Economies

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CURRICULUM

Discipline: Macroeconomic Forecasting and Planning. Advanced Course

For Masters Programs

Specialization: Political Economics

Direction: Economics

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1.1. Abstract

The program of «Macroeconomic Planning and Forecasting» study covers the analysis of the operation of the national economy, with emphasis on the causes and consequences of recessions and booms, inflation and unemployment including possible policy responses to each. Attention is also paid to the theory, and some of the evidence, of how and why national economies fluctuate, with periods of boom and bust, and periods of high and low inflation. Substantial emphasis is given to fiscal policy and monetary policy including the novel policy responses to financial crisis and recessions. Attention is also paid to international economic issues and to problems of economic growth. The course is designed for 144 academic hours, 36 hours are provided for the auditory work, and also 108 hours are provided for the individual work of the students.

During the lectures it is supposed to present the theoretical basics of Macroeconomic equilibrium, Economic growth and macroeconomic Policies including Fiscal, Monetary and Trade Policies. In addition, it is planned to carry out discussions, case-studies and the individual and group presentations for the particular topics. In the process of preparation for practical classes students learn and reinforce basic concepts on the base of the core literature, as well as on topics of their interest on the base of extra literature provided by the lecturer. The course is planned for the 1 semester. The course is designed for the 4 academic credits. The course ends by the exam (A to FX grades).

The students will be supported in their self-study, a further explanation of the most difficult issues on an individual basis is also supposed.

The students' individual work (self-study) includes the work on the materials, obligatory readings for each topic, preparing homework for the seminars.

During the semester students will be assessed for their presentations and homework and by the end of the course, as it was mentioned above, the exam will be conducted where the students have to demonstrate their knowledge of theoretical basics.

The final grade for the whole course will be calculated as the weighted average of the grade of current assessment and the grade for the exam.

1.2. Requirements for the initial level of students' knowledge and abilities

The prerequisite for the course is the basic knowledge of microeconomics, macroeconomics and the mathematics.

2.1. Aim and objectives of the discipline

Macroeconomics describes and explains economic processes that concern aggregates. An aggregate is a multitude of economic subjects that share some common features. By contrast, microeconomics treats economic processes that concern individuals. Macroeconomics investigates aggregate behavior by imposing simplifying assumptions (“assume there are many identical firms that produce the same good”) but without abstracting from the essential features. These assumptions are used in order to build macroeconomic models. Typically, such models have three aspects: the ‘story’, the mathematical model, and a graphical representation.

Macroeconomics is a study of the economy as a whole, which addresses many important issues including the followings:

- What causes recessions? What is “government stimulus” and why might it help?
- What is the government budget? How does it affect workers, consumers, businesses, and taxpayers?
- Can an increase in the monetary supply by the central bank cause real effects?
- Why are so many countries poor? What policies might help them grow out of poverty?
- What is the trade deficit? How does it affect a country’s well-being?

The aim of macroeconomics is meeting several targets simultaneously, those like stable economic growth, stable prices, full employment, external equilibrium, fair distribution of income. Most of these targets are conflicting, which means that while putting effort to reach one of them one may lose the other one. That’s why it is very important to understand the definitions of macroeconomic variables as well as be able to analyze existing interrelations between them. Thus macroeconomics provides tools and methods that are needed to advice policymakers on how to deal with different trade-offs.

Taking into account all the above mentioned, this part of module is aimed to form a theoretical and practical knowledge of basics of macroeconomics, which will be helpful for implementing macroeconomic analysis, designing fiscal and monetary policies and assessing the effects of various policy measures on the macroeconomic variables.

2.2. Requirements for the level of learning the discipline content (learning outcomes)

After taking this course, students should:

- 1) Know the definitions of main macroeconomic variables and how to analyze each of them,

- 2) Be able to describe the dynamic relationships between macroeconomic indicators and phenomena,
- 3) Learn modern Macroeconomic theories on fiscal and monetary policies,
- 4) Be able to produce forecasts of macroeconomic variables and policy reactions.

We suggest that after studying this part of introductory module students **have to be able** to analyze and describe macroeconomic process and carry out research on related topics.

2.3. The complexity of the discipline and types of educational work (in academic hours and credits)

2.3. 1. Discipline volume and types of training activities in accordance with the working study plan

Types of educational work	Total hours	Hours in semester	
		I semester	II semester
1	2	3	4
1. Total complexity of discipline by semesters, including	144	0	144
1.1. Auditorium learning, including	36	0	36
1.1.1. Lectures	36	0	36
2. Independent work	108	0	108
3. Form of the final control: Exam/Credit		-	Exam

2.3.2. Content of the discipline and weights for the forms of control

Discipline volume distribution on the topics and types of training activities

Sections and topics of discipline	Total hours	Lectures, hours
Part 1. Introduction to Macroeconomics	6	6
Topic 1. The methods of Macroeconomic planning and Macroeconomic Models	2	2
Topic 2. The production, use and distribution of Domestic Output	2	2
Topic 3. Introduction to the main macroeconomic accounts: National Accounts, Balance of Payment, International Investment Position, Government Finances	2	2
Part 2. Economic Growth	8	8
Topic 1. Neoclassical theories of Economic Growth: The Solow Growth Model	2	2
Topic 2. Infinite-Horizon and Overlapping-Generations Models	2	2
Topic 3. Endogenous Growth models	4	4

Part 3. The Short Run	12	12
Topic 1. The New Keynesian Demand Side: IS-LM-AD	4	4
Topic 2. The New Keynesian Supply Side	2	2
Topic 3. Monetary Policy in the New Keynesian Model and the Zero Lower Bound	2	2
Topic 4. Open Economy Version of the New Keynesian Model	2	2
Topic 5. The Coordination of Macroeconomic Policies	2	2
Part 4. Labor Market Analysis and Forecasting	4	4
Topic 1. Types and reasons of unemployment	2	2
Topic 2. Introduction to the concept of NAIRU	2	2
Part 5. Modern Macroeconomic Modeling	6	6
Topic 1. Models used for forecasting	2	2
Topic 2. Models used for Policy Analysis	4	4
TOTAL	36	36

Academic credits

4

Weights and forms of control	Weights of forms of current controls in the resulting mark of the current control			Weights of forms of intermediate control, and the resulting mark of the current control in the final mark of the intermediate control		
	M1	M2	M3	M1	M2	M3
Type of training activities/control						
Presentation				0	0,6	0,6
Recitation/Group presentation/Discussions	0	1	1			
Weight of the resulting marks of current controls in the final marks of appropriate intermediate control				0	0,4	0,4
Weight of the final mark of the 1 st intermediate control in the resulting mark of intermediate controls						
Weight of the final mark of the 2 nd intermediate control in the resulting mark of intermediate controls						0,5

Weight of the final mark of the 3 rd intermediate control in the resulting mark of intermediate controls						0,5
Weight of the resulting mark of intermediate controls in the resulting mark of final control						0,5
Exam/Credit (Mark of final control)						0,5
	$\Sigma=1$	$\Sigma=1$	$\Sigma=1$	$\Sigma=1$	$\Sigma=1$	$\Sigma=1$

2.4. Content of sections and topics of the discipline

Part 1. Introduction to Macroeconomics

Topic 1. The methods of Macroeconomic planning and Macroeconomic Models. Macroeconomic regulation principles. Directions of Macroeconomic Analysis. Economic models, stocks and flows. Macroeconomic aggregates and their system of indicators. Value and volume indicators. Indicators characterizing the level of employment. Price level indicators. Indicators characterizing external economic relations.

Topic 2. The production, use and distribution of Domestic Output. Turnover of goods and money in the economy. Production of goods and services. Production function and aggregate supply. Factors of production. Aggregate income distribution by factors of production. Economic content of Cob-Douglas production function. Consumption function. Investment function. Government purchases (expenses) and state revenues (taxes). The balance in the commodity market. Balance in the financial market. Balance and interest rate. Impact of fiscal policy and investment demand changes on economic equilibrium. Savings (public, private, national) and investments.

Topic 3. Introduction to the main macroeconomic accounts: National Accounts, Balance of Payment, International Investment Position, Government Finances. Growth Domestic Product (nominal, real, potential, gap), Gross Value Added, Income side of GDP, Current account balance, capital and financial accounts of BOP, relations between International investment position and BOP, government budget, public debt statistics.

Literature for students:

1. **E. Sims, J. Garin, R. Lester**, “Intermediate Macroeconomics”, 2018, 1018 p. (Chapter 1-2, 23-48 pages)
2. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 1 and 2, 3-40 pages)
3. **O. Blanchard, D. R. Johnson**, “Macroeconomics”, Sixth Edition, 2012, 622 p. (Chapter 2 and 3, 20-62 pages)
4. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 11, 312-335 pages, Chapter 16, 468-490 pages)
5. **R. J. Barro**, “Macroeconomics: A Modern Approach”, 2005, 863 p. (Chapter 1 and 2)
6. **R. Dornbusch, S. Fischer, and R. Startz**, “Macroeconomics” 12th Edition, 2013, McGraw Hill, 657 p. (Chapter 1 and 2)

Part 2. Economic Growth

Topic 1. Neoclassical theories of Economic Growth: The Solow Growth Model. Problems of interpreting economic growth. The simple models of economic growth. The accumulation of capital and its reflection in the production function. Product offer and production function. Product demand and consumption function. Ways to approach a stable stock of capital. Reflection of the saving norm change in production function. Assumptions and dynamics of the Solow Growth model. The Impact of a Change in the Saving Rate in the Solow Growth model. Empirical Applications.

Topic 2. Infinite-Horizon and Overlapping-Generations Models. Introduction to the concept of Overlapping-Generations (OLG). Application of OLG in macroeconomics. The Ramsey–Cass–Koopmans Model, The Behavior of OLG Households and Firms. The Balanced Growth Path, The Effects of a Fall in the Discount Rate. Population growth and its impact on economic growth. Impact of technological progress and its assessment on production function. Savings and economic policies. Impact of government purchases and change in discount rate on economic growth. Assessing production efficiency through economic growth models.

Topic 3. Endogenous Growth models. The growth models with endogenous investment. The growth models without capital. The Romer Growth model.

Literature for students:

1. **D. Romer**, “Advanced Macroeconomics”, Fourth Edition, University of California, Berkeley, 2012, 738p. (Chapter 1-3, 6-149 pages)
2. **E. Sims, J. Garin, R. Lester**, “Intermediate Macroeconomics”, 2018, 1018 p. (Chapter 4-8, 58-178 pages)
3. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 7 and 8, 192-252 pages)
4. **O. Blanchard, D. R. Johnson**, “Macroeconomics”, Sixth Edition, 2012, 622 p. (Chapter 10 – 13, 208-281 pages)
5. **R. J. Barro**, “Macroeconomics: A Modern Approach”, 2005, 863 p. (Chapter 3-5)
6. **R. Dornbusch, S. Fischer, and R. Startz**, “Macroeconomics” 12th Edition, 2013, McGraw Hill, 657 p. (Chapter 3 and 4)

Part 3. The Short Run

Topic 1. The New Keynesian Demand Side: IS-LM-AD. The concept of what we call the “short run”. IS Curve Interpretation. The LM curve, the AD curve. Algebraic equation of IS curve, curve displacements, curve position determination. LM curve interpretation. LM Curve Algebraic Equation, Curve Movements, Curve Position Determination. Short- and medium-term balancing mechanism. Economic shocks, monetary and fiscal policy outcomes in the IS-LM-AD model. Reconciliation of monetary and fiscal policies.

Topic 2. The New Keynesian Supply Side. Simple sticky price model. Partial sticky price model. The Neoclassical model. The production function and the AS curve. Derivation of the AS Curve. Effects of the increase in productivity on AS curve.

Topic 3. Monetary Policy in the New Keynesian Model and the Zero Lower Bound. Monetary policy tools, transmission mechanism, monetary policy reaction function, Taylor rule. Monetary policy in different frameworks (fixed and floating exchange rates, open and closed capital account). Monetary policy in the Partial Stick Price model. The case of price stability. The Natural rate of Interest and Monetary Policy. The IS-LM-AD Curves with zero-lower bound.

Topic 4. Open Economy Version of the New Keynesian Model. Deriving the AD Curve in the Open Economy. The AD Curve: Open vs. Closed Economy. Equilibrium in the Open Economy Model. The

effects of monetary policy in the open economy model. Equilibrium in the Small Open Economy Sticky Price Model. Effects of Foreign Shocks in the Open Economy New Keynesian Model.

Topic 5. The Coordination of Macroeconomic Policies. Use of the IS-LM model for short, medium and long term analyzes. Spending and money versions of the explanation of the Great Crisis. Accommodative monetary policy, fiscal dominance.

Literature for students:

1. **E. Sims, J. Garin, R. Lester**, “Intermediate Macroeconomics”, 2018, 1018 p. (Chapter 23-29, 485-661pages)
2. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 4-5, 80-161 pages, Chapter 9-14, 257-440 pages)
3. **O. Blanchard, D. R. Johnson**, “Macroeconomics”, Sixth Edition, 2012, 622 p. (Chapter 5, 85-110 pages, Chapter 8, 161-182 pages, Chapter 18-21, 397-470 pages, Chapter 23, 24 - 493-538 pages)
4. **R. J. Barro**, “Macroeconomics: A Modern Approach”, 2005, 863 p. (Chapter 11-18)
5. **R. Dornbusch, S. Fischer, and R. Startz**, “Macroeconomics” 12th Edition, 2013, McGraw Hill, 657 p. (Chapter 8 and 11)

Part 4. Labor Market Analysis and Forecasting

Topic 1. Types and reasons of unemployment. Calculation of indicators characterizing the level of employment. Methodology of calculating the natural level of unemployment. Stable real wages and waiting unemployment. State employment policy. State regulation of the labor market. The main ways of raising the level of population employment in the Republic of Armenia.

Topic 2. Introduction to the concept of NAIRU. Non-accelerating inflation rate of unemployment, theoretical background, technical methods to calculate NARIU, implications in economic policy.

Literature for students:

1. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 6 and 5, 164-186 pages, Chapter 15, 446-460 pages)
2. **O. Blanchard, D. R. Johnson**, “Macroeconomics”, Sixth Edition, 2012, 622 p. (Chapter 5 - 85-110 pages, Chapter 8 - 161-182 pages)
3. **E. Sims, J. Garin, R. Lester**, “Intermediate Macroeconomics”, 2018, 1018 p. (Chapter 16, 347-365 pages, Chapter 23, 481-495 pages)

4. **R. J. Barro**, “Macroeconomics: A Modern Approach”, 2005, 863 p. (Chapter 8-9)

Part 5. Modern Macroeconomic Modeling

Topic 1. Models used for forecasting. Introduction to types of econometric model used in policymaking process. Description of used data and sources, interpretation of the results. Introduction to types of Structural models.

Topic 2. Models used for Policy Analysis. Introduction to types of Structural models for policy analysis. Analyzing policy transmission mechanisms using models. Combination of complex policy measures.

Literature for students:

1. **N. Gregory Mankiw**, “Macroeconomics”, Seventh Edition, Harvard University, Worth Publishers, NY, 2009; 641 p. (Chapter 14, 410-439 pages),
2. **R. Dornbusch, S. Fischer, and R. Startz**, “Macroeconomics” 12th Edition, 2013, McGraw Hill, 657 p. (Chapter 9, 10 and 21)