

Ministry of Science and Higher Education of the Russian Federation



Federal State Budgetary Educational Institution of Higher Education
Perm National Research Polytechnic University



APPROVED BY

Pro-rector for Academic Affairs

N.V. Lobov

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ACADEMIC COURSE WORKING PROGRAM

Academic course: Macroeconomics (advanced level)
(Name)

Form of education: Full-time
(Full-time /full-time - correspondence/correspondence)

Level of higher education: Master's program
(Bachelor's program/specialist program/Master's program)

Workload in hours (in credits): 144(4)
(Hours (CU))

Training program (degree): 38.04.01 Economics
(Code and denomination of degree)

Direction: Oil and Gas Enterprise Economics and Management
(Title of curriculum)

1. General Provisions

1.1. Goals and Objectives of the Course

The goal of the course is to study modern macroeconomic models, the knowledge of which is necessary for the development of skills in the analysis of macroeconomic processes, as well as in the development of the ability to solve macroeconomic practical and/or research problems.

The objectives of the course are:

- to develop knowledge of peculiarities and the place of macroeconomics in the system of economic sciences, the essence of the national economy and the possibilities of measuring its development, the theory of economic growth, macroeconomic equilibrium, and macroeconomic instability;
- to develop knowledge about the dynamics of the interaction between macroeconomic agents and the patterns of open economic system development, the principles of the world economy and international trade functioning, the nature, and principles of the world monetary system functioning;
- to develop skills that make it possible to examine the structure of the national economy of the Russian Federation, identify features of economic growth in the modern Russian Federation and identify features of cyclical processes in the Russian economy;
- to develop skills to make empirical and statistical analysis of the state's monetary and fiscal policy effectiveness in the modern Russian Federation;
- to develop the skills of macroeconomic modelling by independently forming statistical data sets on a specific research problem; to carry out a comparative analysis of the dynamics of statistical indicators; to calculate the necessary analytical factors (indices, indicators, etc.) to identify basic trends and trends in macroeconomic development.

1.2. Prescribed Objects of the Course

Aggregate macroeconomic subjects and their interactions in aggregate markets

1.3. Starting Conditions

Unstipulated

2. Planned Results of the Course Training

Competence	Indicator's	Planned Results of the	Indicator of Attaining	Means of
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2

Branding	Reference to information resource
Scopus Database	https://www.scopus.com/
Web of Science Database	http://www.webofscience.com/
Database of Scientific Electronic Library (eLIBRARY.RU)	https://elibrary.ru/
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	Index	Course Training (to know, to be able, to master)	Competence which the planned results of training are correlated with	Assessment
GPC-1	AI-1. _{GPC-1}	To know the characteristics and place of macroeconomics in the system of economic sciences; the essence of the national economy and the possibility of its development measuring; the theory of economic growth, macroeconomic equilibrium, and macroeconomic instability; the dynamics of macroeconomic agents interaction and the pattern of open economic system development; principles of the world economy functioning; principles of international trade and the world monetary system functioning;	Knows microeconomic theory: consumer's behaviour (consumer's choice); producer's behaviour (producer's choice); the behaviour of the firm in perfect and imperfect competition conditions (monopolies, monopolistic competition and oligopolies) in product and resource markets (production units); strategic behaviour of firms under oligopoly conditions; the concept of economic equilibrium and economic efficiency; causes of market failure (monopoly power, neighborhood effects, public goods, information asymmetry); theoretical aspects of taxation; macroeconomic theory: economic growth; short-term economic fluctuations (a cycle); principles of monetary and budgetary (fiscal) policies; causes of unemployment; monetary and financial market behaviour; international trade and capital flows; exchange rate formation in	

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			the foreign exchange market.	
GPC-1	AI-2.GPC-1	To be able to study the structure of the national economy of the Russian Federation; to identify the peculiarities of economic development; to identify the characteristics of cyclical processes in the Russian economy; to analyse the effectiveness of the state's monetary and fiscal policies.	Is able to use a mathematical apparatus using an algebraic method of determining a local extremum to solve typical problems of conditional optimization within the framework of consumer or producer choice theory; to plan and carry out theoretical research on the real economic situation applying the studied methods.	
GPC-1	AI-3.GPC-1	To master the skills of economic modeling based on self-compilation of statistical data sets on a certain research problem; the skills for comparative analysis of statistical dynamics; the skills to calculate the necessary analytical factors (indices, indicators, etc.) to identify basic trends and trends in macro-economic development; the skills to make up a forecast of macro-economic development.	Masters the skills to choose the most suitable theoretical model for solving a practical or research problem and to justify the choice.	Individual task

3. Full time and forms of academic work

Form of academic work	Hours in all	Distribution in hours according to semesters
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4

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		Number of semester		
		2		
1. Holding classes (including results monitoring) in the form:	54	54		
1.1. Contact classwork, including:				
- lectures (L)	24	24		
- laboratory work (LW)				
- practice, seminars and/or other seminar-type work (PW)	26	26		
- control of self-work (CSW)	4	4		
- test				
1.2. Students' self-work (SSW)	54	54		
2. Interim/midterm assessment				
Exam	36	36		
Grading test				
Test (Credit)				
Course Project (CP)				
Course Work (CW)				
Workload in hours	144	144		

4. Course contents

Course units with brief contents	Full time of classroom activity in hours according to the forms			Full time of extracurricular work in hours according to the forms
	L	LW	PW	SSW
2nd semester				
Introduction	1	0	0	0
Basic concepts and terms of discipline. The place of discipline in the structure of training. The subject, goal, and objectives of the discipline.				
Section 1. Basic macroeconomic equilibrium models.	9	0	9	17

5

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Topic 1. The neoclassical model of general economic equilibrium. Classic and Keynesian approaches to the analysis of macroeconomic processes. Background to the neoclassical model. Production function. Maximization of profits. Marginal utility and marginal return of production factors.				
Topic 2. Keynesian macroeconomic equilibrium model. History of the Great Depression. Background to the Keynesian model. Fluctuations in the level of output and employment in the economy as a result of the different motivations of the savers and the subjects of investment expenditure. Keynesian cross model. Keynesian multiplier. Traditional Keynesian demand model - IS-LM model. Goods and services market and IS curve. The savings paradox. The money market and the LM curve. Joint equilibrium of commodity and money markets. Analysis of macroeconomic policies within the IS-LM model.				
Topic 3. General Economic Equilibrium Model: Aggregate supply and demand model (AD-AS). Aggregate demand, components, price and non-price drivers of change. Aggregate supply and drivers of change. Representation of the aggregate proposal curve by representatives of different macroeconomic schools. A long and short-term aggregate supply curve. Wages and prices rigidity. Factors determining aggregate supply in the short and long term. Equilibrium in AD-SRAS-LRAS. Aggregate supply and demand shocks. The effectiveness of monetary and fiscal policies in the short and long term.				
Section 2. Open economy.				
Topic 4. Trade and financial linkages in open economy. International trade in goods and services. Integration of financial markets. Types of interaction among countries. Open economy model (interaction of macroeconomic actors in aggregated markets). Aggregate demand for domestic goods. Domestic expenditures by residents (absorption). Topic 5. Balance of payments. The history of the balance of payments creation. Dual aspect				

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<p>convention. Balance of payments structure: current account; capital account; financial account. Reserve assets.</p> <p>Topic 6. Currency market.</p> <p>National currency. Foreign currency. Nominal exchange rate. Real exchange rate. Purchasing power parity. Single price law. McDonalds parity (Big Mac Index). Direct and return currency quotes. Demand and supply for the national currency. Foreign exchange market. Foreign exchange market participants. Foreign exchange market equilibrium. Exchange rate systems. Currency conversion mechanisms: fixed and floating exchange rates. Currency crises. Speculative attacks. Devaluation. Transactions with official reserves under a fixed exchange rate system.</p> <p>Topic 7. Model IS-LM-BP.</p> <p>Balance of payments BP curve. Factors affecting balance of payments account balances. Real exchange rate and terms of trade. Factors affecting capital flows. The Feldstein-Horjoki puzzle. Interest rate differentials. Small open economy. Large open economy. Types of capital mobility. A small open economy with perfect capital mobility (Mandel-Fleming model). Currency wars. The effect of «neighbor's robbing». Trilemma of the Central Bank.</p>				
Section 3. Economic growth theory.	7	0	7	17
<p>Topic 8. Introduction to economic growth theory. Definition of economic growth. GDP and economic development. Alternative markers of economic development. Rates of economic growth and increase. Rule 70. Income disparities between countries. Patterns of economic growth in the world. Productivity and types of economic growth.</p> <p>Topic 9. Exogenous growth theory.</p> <p>Exogenous growth models. Solow's neoclassical growth model. Assumptions about the production function in the Solow model. The link between extensive and intensive form of production function recording. Production, consumption and investment in Solow model. The trajectory of balanced growth. Solow model with technological progress and population growth. Basic dynamics equation.</p>				

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<p>Growth rates of various indicators on a balanced growth trajectory. Impact of changes in savings rates on capital, output and consumption on a balanced growth trajectory. Golden rule.</p> <p>Solow model and economic miracle. Convergence is a key feature of the neoclassical model of economic growth. Findings of the Solow model on the causes of differences in countries' rates of economic growth and predictions of future welfare levels. The effect of conditional convergence in the Solow model and «advantages» of catching development. Convergence to the trajectory of balanced state.</p> <p>Topic 10. Endogenous growth theory</p> <p>Endogenous growth models. The externality of physical capital accumulation: learning by experience (learning by doing) and the AK model. Human capital accumulation: the Lucas model. Public procurement: the Barro model. The role of innovation and R&D: the Romer model.</p>				
Total with regard to semester	24	0	26	54
Total with regard to the course	24	0	26	54

Topics of exemplary practicals

Sl. №	Topic of practicals (seminars)
1.	Marginal utility and marginal income of production factors.
2.	Analysis of macroeconomic policies within the IS-LM model.
3.	The effectiveness of monetary and fiscal policies in the AD-SRAS-LRAS model in the short and long term.
4.	Cumulative demand for domestically produced goods. Domestic expenditures by residents (removals).
5.	Structure of the Russian Federation balance of payments: current account; capital account; financial account.
6.	Single price law. McDonalds Parity (Big Mac Index).
7.	Currency wars. The effect of a «neighbor's robbery». Trilemma of the Central Bank.

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8.	Alternative markers of economic development.
9.	Growth rates of various indicators on a balanced growth trajectory.
10.	. The role of innovation and R&D: the Romer model.

5. Organizational and Pedagogical Conditions

5.1. Educational Technologies Used for Competences Formation

Holding lectures in the discipline is based on the active method of training in the process of which students are not passive but active participants of the lesson answering questions of the teacher. Teacher's questions are aimed at activating the process of learning material as well as at the development of logical thinking. The questions stimulating associative thinking and connecting new material with the previous one are formulated by the teacher in advance.

Practicals are held by realization of the method based on active training: problem areas are determined, groups are formed. The following aims are pursued in the process of practical education: use of definite disciplines knowledge and creative methods in solving problems and decision-making; students' skill-building of teamwork, interpersonal communication and development of leadership skills; consolidation of the basic theoretical knowledge.

Interactive lectures, group discussions, role-playing games, training sessions, and analysis of situations and simulation models are used in academic studies.

5.2. Students' Manual for the Course Study

Learning the course, it is advisable for students to implement the following recommendations:

1. Learning of the discipline should be done systematically.
2. After learning one of the course units with the help of the text-book or lecture notes it is recommended to reproduce the basic terms, definitions, notions of the unit from memory.
3. Special attention should be paid to the reports on practical studies and individual complex tasks for self-work.
4. The topics list for individual study is given by the teacher at the lectures. The teacher also provides students with literary sources (first of all, new ones in the periodical scientific literature) for a more detailed understanding of the issues presented at the lectures.

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6. List of Teaching Materials and Information Supply for Students' Self work in the Discipline

6.1. Paper-based courseware

№	Bibliographic entry (author, title, mode of publication, place, publishing house, year of publication, number of pages)	Number of copies in the library
1. Basic literature		
1.	English for Economics Basic Points of Economic English. Macroeconomics: Language and Landscape, Moscow, 2009	11
2.	Khalilova, L.A. English for Students of Economics, Moscow, 2008	2
3.	Sheveleva, S.A. English on Economics. Special English for Universities, Colleges, Moscow, 2009	5
2. Additional literature		
2.1. Educational and scientific literature		
2.2. Standardized and Technical literature		

10

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3. Students' manual in mastering discipline		
4. Teaching and learning materials for students' self-work		

6.2. Electronic Courseware

Kind of literature	Name of training tool	Reference to information resource	Accessibility of EBN (Internet/local net; authorized free access)

6.3. License and Free Distributed Software used in the Course Educational Process

Type of Software	Software branding
Operating systems	MS Windows XP (Azure Dev Tools for Teaching till 27.02.2022)
Office applications	Microsoft Office Professional 2007. lic. 42661567
Office applications	My Office Standard, a registry of domestic software, license is required to be purchased.
General purpose application software	Dr.Web Enterprise Security Suite, 3000 licence, PNRPU RCI 2017

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6.4. Modern Professional Databases and Inquiry Systems Used in the Course Educational Process

7. Logistics of the Course Educational Process

Type of classes	Name of the necessary basic equipment	Number of units
Lecture	Computer equipment, projector and interactive whiteboard	1
Practicals	Computer, projector and interactive white-board	1

8. Fund of the Course Evaluating Tools

Described in a separate document

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