

**Ministry of Education and Science of the Russian Federation
Federal State Autonomous Educational Institution of Higher Education**

National Research University
Lobachevsky State University of Nizhny Novgorod

Institute of Economics and Entrepreneurship

APPROVED
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Study Program of the Course

MACROECONOMICS

(name of the subject (course))

Level of Higher Education
Bachelor/Master

Area of Study
38.03.01 «Economics»

Program
World Economy

Form of Training
Full - Time

Форма обучения
очная, очно-заочная, заочная

Nizhny Novgorod

2023

1. The Place of the Course in the Structure of the Main Education (Degree) Program

The course Б1.О.19 «Macroeconomics» is a part of core courses. Area of Study 38.03.01 Economics.

The goal of the discipline is to study the basic principles and regularities of the functioning and development of national economies and their impact on the activities of business entities.

In this course, students will study: macroeconomic notions and concepts; rules for the calculating the basic macroeconomic indicators; macroeconomic models that designed to describe the interaction of main macroeconomic variables; purposes and effects of the state economic policy, and especially the effects of various types of economic policy on key macroeconomic indicators; national economic systems in statics and dynamics and in their interaction with foreign economics.

2. The planned learning outcomes, correlated with the planned learning outcomes of the educational program (competencies and indicators of competencies achievement)

Competencies	The planned learning outcomes, in accordance with the indicator of achievement of competence		Assessment tools
	Indicator of competence achievement *	Learning outcomes **	
UC-10. Is able to make sound economic decisions in different areas of life	UC-10.1 Is able to apply knowledge of the basic laws and regularities of the economy's functioning; basics of economic theory required to solve professional and social tasks	<i>To know:</i> basic concepts of macroeconomics, methods and tools of macroeconomic analysis, patterns of functioning and regulation of economic systems. <i>To be able to:</i> analyze the causes and consequences of various macroeconomic phenomena and processes, as well as ways of their state regulation. <i>To have the skills:</i> methods of calculating the main macroeconomic indicators and give them a meaningful assessment.	Task (practical task) Test Course paper
	UC-10.2 Is able to apply economic knowledge when solving practical tasks; make reasonable economic decisions in different spheres of life.	<i>To know:</i> the relationship of various macroeconomic indicators, alternative approaches to explaining the effects and consequences of macroeconomic regulation. <i>To be able to:</i> determine the influence of various factors on the main macroeconomic variables. <i>To have the skills:</i> ways of assessing the effectiveness of using various tools of state regulation of the economy.	Task (practical task) Test Case study
	UC-10.3 Is able to use the main principles and methods of economic sciences when solving social and professional tasks.	<i>To know:</i> the main provisions of neoclassical and Keynesian macroeconomic theory. <i>To be able to:</i> use knowledge of alternative theories and concepts in the analysis of the macroeconomic environment in the process of making professional economic decisions. <i>To have the skills:</i> methods of making forecasts for business development, taking into account the impact of	Task (practical task) Test Course paper

		macroeconomic processes.	
GPC-1. Is able to apply knowledge (at an intermediate level) of economic theory in solving applied problems	<i>GPC 1.1.</i> Is able to use the conceptual framework of economic science to describe macroeconomic, microeconomic and financial processes.	<i>To know:</i> the basics of building, calculating and analyzing the main macroeconomic indicators. <i>To be able to:</i> select and process information in the construction of theoretical macroeconomic models and analyze the effects within them. <i>To have the skills:</i> of developing effective measures of state regulation of the national economy.	Task (practical task) Test Case study Course paper
	<i>GPC 1.2.</i> Is able to use the principles, methods and tools of economic theory in solving fundamental and applied economic problems	<i>To know:</i> principles, methods and tools of modern macroeconomics. <i>To be able to:</i> evaluate the effectiveness of various methods and tools of macroeconomic regulation. <i>To have the skills:</i> effective ways of solving basic macroeconomic problems, taking into account the interests of a particular business.	Task (practical task) Test Case study Course paper
GPC-3. Is able to analyse and explain in a meaningful way the nature of economic processes at the micro and macro level	<i>GPC 3.1.</i> Is able to analyse social and economic processes at micro, macro and global levels	<i>To know:</i> factors and features of the country's economic development. <i>To be able to:</i> analyze the dynamics of socio-economic processes. <i>To have the skills:</i> методиками расчета показателей экономического роста и цикличности.	Task (practical task) Test Dispute Course paper
	<i>GPC 3.2.</i> Knows how to assess trends in socio-economic processes at the micro, macro and global levels	<i>To know:</i> peculiarities of the impact of the world economy on the functioning of the national economy. <i>To be able to:</i> identify trends in socio-economic development. <i>To have the skills:</i> in assessing the impact of global processes on the functioning of national economic systems.	Task (practical task) Test Course paper

3. The Structure and Content of the Course

3.1 Workload of the Course

	Full - Time
Total number of credits	5 Credits
Hours according to the curriculum	180
including	
Contact work with the teacher:	
- Lectures	48
- Seminars (practical classes / laboratory work)	32
Student's independent work	61
Control	36
Midterm Assessment - Exam or Test	3

3.2. Content of the Course

Modules or topics	Workload (hours)	Including				
		Contact Work				Independent work
		Lectures	Seminars	Lab classes	Total	
Topic 1. Main Macroeconomic Variables and Identities	18	6	4		10	8
Topic 2. Aggregate Market of Goods and Services	18	6	4		10	8
Topic 3. Money Market	18	6	4		10	8
Topic 4. Co-equilibrium of Aggregate Commodity Market and Money Market	18	6	4		10	8
Topic 5. Labor market, unemployment, social policy	18	6	4		10	8
Topic 6. Inflation, its mechanisms and effects	17	6	4		10	7
Topic 7. Macroeconomic Dynamics. Fluctuations and Growth	17	6	4		10	7
Topic 8. Macroeconomic Equilibrium in Open Economy	17	6	4		10	7
Including. current control	36					
Exam	3					
Total	180	48	32		80	61

Content of the course

1. Main Macroeconomic Variables and Identities

Four aggregate sectors of the national economy: Householders, Firms, Government, and Foreign Sector. Main regulative policies: Fiscal, Monetary, Exchange Rate, and Foreign Trade Policy. Their goals and instruments. Short-run and long-run periods of economic performance. Macroeconomic variables and their types (nominal and real, stock and flow). “The rule of 72”.

System of National Accounts. Gross Domestic Product: its notion, types (nominal, real, actual, potential) and methods of calculation. Consumption, investment, government purchases and net export. Economic growth rate and output gap. Gross National Income, Net National Income, Personal Income, Personal Disposable Income. Price Indices: GDP deflator, consumer price index and producer price index.

Formation and distribution of gross national income and disposable income. General rule for savings and investment.

2. Aggregate Market of Goods and Services

Keynesian vs. Neoclassical Approaches in Macroeconomics.

The basic Keynesian model of macroeconomic equilibrium on the aggregate goods market.

Keynesian functions of consumption, savings and investment. The “fundamental psychological law” by Keynes. Marginal and average propensity to consume. Marginal and average propensity to save. Equilibrium of planned savings and autonomous investment in Keynesian model. Investment multiplier. The accelerator effect. The paradox of thrift. Recessionary and Inflationary gap. Effective demand management.

Neo-Keynesian approach to the equilibrium on the aggregate goods market: the AD-AS model. Aggregate demand as the inverse dependence of the real expenditures from general price level. Three effects of aggregate demand: Pigou’s Wealth Effect; Keynes’s Interest-Rate Effect; Mundell-Fleming’s Exchange-Rate Effect. Aggregate demand determinants. Influence of monetary, fiscal, exchange-rate policies and expectations on aggregate demand and the AD curve shifts. Aggregate supply as the direct dependence of the domestic output from general price level. Keynesian vs Neoclassical approaches to aggregate supply. Short-run and long-run AS curve. Aggregate supply determinants. Three types of equilibrium in the AD-AS model. The “ratchet effect” (inertial effect). Different explanations of prices rigidity in short-run.

The critique of the Keynesian Absolute Income Hypothesis and consumption function. The Kuznets Paradox. Short-run and long-run consumption function. The intertemporal choice model by Irving Fisher. Life-cycle hypothesis by Franco Modigliani. Permanent income hypothesis by Milton Friedman.

3. Money Market

Money functions: unit of account (measure of value); medium of exchange; store of value. Demand for money: Neoclassical vs Keynesian approaches. Equation of exchange by I. Fisher. Cambridge equation of money demand by A. Marshall and A.C. Pigou. Three motives of liquidity preference according to J. Keynes. Transactions demand for money. Precautionary demand for money. Speculative demand (assets demand) for money. Equilibrium on money market and its changes: Neoclassical and Keynesian approaches.

Money supply. Money aggregates and money supply structure. The coefficient of economy monetization and its determinants. The role of central bank in creation money and the process of banking multiplication with fractional reserve. The required reserves ratio and its relation to bank multiplier. The “currency ratio” and the excessive reserves ratio. Calculating money, deposit and credit multipliers.

The role and functions of Central Bank. The foundations and instruments of monetary policy. The official discount rate and its influence on money supply. Open market operations and operations of “sterilization the money supply”. Passive monetary policy and “the monetary rule” by M. Friedman. Active monetary policy: expansionary vs restrictive. Monetary regimes: monetary aggregates targeting; exchange rate targeting; inflation targeting; interest rate targeting and the Taylor rule; nominal GDP targeting.

4. Co-equilibrium of Aggregate Commodity Market and Money Market

The equality of investments and savings, derivation of IS curve in two-sector economy. The extended IS curve in an economy with the public sector. The IS function arithmetic. The position and slope of the IS curve and the factors affecting it. Influence of fiscal policy on IS curve shifts. Multipliers of fiscal policy (of autonomous expenditures, government purchases, transfers, autonomous and income taxes) in a closed and an open economy. The Haavelmo theorem and the balanced budget multiplier. Alternative views on results of tax cuts.

The equality of money supply and liquidity preference, derivation of LM curve. The LM function arithmetic. The position and slope of the LM curve and the factors affecting it. Influence of monetary policy on LM curve shifts.

The co-equilibrium in IS-LM model in short-run. Influence of fiscal and monetary policy on economic performance: real interest rate and output. Aggregate demand formation. The extreme cases of equilibrium in the IS-LM model: full employment, “liquidity trap”, “investment trap”. Long-run equilibrium in the IS-LM model: neoclassical view.

5. Labor market, unemployment, social policy

Economically active population (labor force) and economically inactive population. The level of economic activity. Employed and unemployed. The unemployment rate. The types of unemployment: frictional, structural and cyclical. Natural unemployment and its level. The Okun's law. Voluntary and involuntary unemployment. Labor demand and labor supply. Labor market equilibrium and its change: Keynesian vs Neoclassical approach.

Inequality in personal income distribution and its measurement (the Lorenz curve, the Gini coefficient, the coefficient of funds). The relationship between inequality and economic development: the Kuznets hypothesis. Methods for reducing inequality. Social policy, its goals and instruments. Social transfers.

6. Inflation, its mechanisms and effects

The notion of inflation. Its forms: opened and repressed (suppressed). Measuring inflation. Types of inflation distinguished by different criteria. Creeping inflation, galloping inflation and hyperinflation. Balanced vs unbalanced inflation. Expected vs unexpected inflation. Mechanisms of inflation: demand-pull inflation vs cost-push inflation. The mechanism of an inflationary spiral. Imported inflation.

The causes of inflation. Social costs of inflation: "shoe leather cost", "menu cost", "relative-price variability and the misallocation of resources", "inflation-induced tax distortions" and "confusions and inconvenience". Distributive effects of inflation. Positive effects of inflation. Inflation impacts on state budget: Olivera-Tanzi and Patinkin effects. Nominal and real interest rates, the Fisher hypothesis. The theories of inflation: Keynesian, monetarist, fiscal, structuralist.

Trade-off between inflation and unemployment: the Phillips curve and its interpretation in Keynesian approach, theories of adaptive and rational expectations. Derivation the aggregate-supply (AS) curve based on the labor market equilibrium and the Phillips curve.

7. Macroeconomic Dynamics. Fluctuations and Growth

Business (economic) cycle and its stages. Recovery, expansion and boom (peak). Recession, depression and bottom. Trend, amplitude and duration of economic cycle. The variables (parameters) of the cycle: procyclical, countercyclical and acyclical; leading, lagging and coincident. Main types of cycles: the Kitchin inventory cycle, the Juglar fixed investment cycle, the Kuznets infrastructural investment cycle, the Kondratiev waves or long technological cycle etc. The theories of macroeconomic cyclicity: endogenous vs. exogenous.

The P. Samuelson and J. Hicks model of economic fluctuations. The role of marginal propensity to consume and investment accelerator in this model. Determining the zones of convergence and divergence, oscillatory and monotonic changes by calculating the discriminant of the main model equation.

Economic Growth: definition and its factors, ways of representation. Measuring economic growth rates. Types of economic growth in open economy. The Keynesian models of economic growth (the E. Domar and R. Harrod models).

The neoclassical model of economic growth by R. Solow and T. Swan. The balanced growth path. The steady and the gold levels of capital stock per unit of labor. Short-term and long-term factors of economic growth in the Solow–Swan model. Convergence in economic development.

8. Macroeconomic Equilibrium in Open Economy

The balance of payments and its parts: the current account and the capital account. The role of exchange rate in balance of payments equilibrium. Nominal and real exchange rate, parity of purchasing power. "The terms of trade" and "the law of one price". Three regimes of exchange rate: fixed, managed and floating. Tradable and non-tradable goods. Influence of mobility of capital on balance of payments equilibrium.

The model of balance of payments in a small open economy with perfect capital mobility. Consequences of fiscal, monetary and trade policies in this model.

R. Mundell and M. Fleming model for a small open economy (the IS-LM-BP model). The derivation of BP (balance of payments) curve as relationship between real income and real interest rate. The factors influencing the position and the slope of the BP curve. The consequences of monetary and fiscal policies under floating and fixed exchange rate regimes in the IS-LM-BP model.

Practical classes (seminars /laboratory work) are organized with elements of practical training, that provides the implementation of certain activities related to future profession.

Practical training includes: solving practical problems and tests, conducting seminars-disputes and round tables on current problems of the Russian and foreign economy, writing and defending a course paper.

Six hours of seminars are conducted in the form of practical training.

Practical training is aimed at the formation and development of:

- *practical skills in accordance with the profile of the program:*

1) solving analytical tasks of professional activity:

- search for information on the received task, collect, analyse and evaluate data for economic calculations;
- process and interpret economic information characterizing socio-economic processes and phenomena in Russia and other countries at macro level;
- analysis and interpretation of indicators characterizing socio-economic processes and phenomena at the macro level both in Russia and abroad;

2) fulfillment of computational and economic tasks:

- carrying out calculations of economic and socio-economic indicators based on standard methods, taking into account the current regulatory framework;

3) performance of research works:

- construction of standard theoretical and econometric models of the studied processes, phenomena and objects related to the field of professional activity, analysis and interpretation of the results;

- *competencies:*

- UC-10. Is able to make sound economic decisions in different areas of life.
- GPC-1. Is able to apply knowledge (at an intermediate level) of economic theory in solving applied problems.
- GPC-3. Is able to analyse and explain in a meaningful way the nature of economic processes at the micro and macro level.

Ongoing monitoring of academic performance is carried out within the framework of seminar-type classes, group and individual consultations.

4. Methodological support for students' independent work

Questions for final control, tasks for current control and Midterm Assessment based on the learning outcomes of the discipline are given in 5.2.

An online course «Macroeconomics / Макроэкономика» created in the UNN e-learning system is used to ensure the independent work of students - <https://e-learning.unn.ru/course/view.php?id=3074>.

The course consists of lectures, seminars, independent work of students and the comprehensive final test.

A significant role in the study of the discipline is given to independent work of students; its scope is defined by the curriculum. Independent work is a form of out-of-classroom activities mandatory for each student.

In the course of their independent work, students familiarize themselves with theoretical material from textbooks and monographs given in the list of recommended literature, solve practical problems, prepare for seminars, write papers, essays, take electronic tests in the learning mode, answer self-test questions. Independent work can be done in the reading halls of the library or at home. Self-checks in the course of independent work may be in the form of electronic tests or credit tasks. At the end of studies, there is a regular test.

Independent work is intended to familiarize the student with certain sections of the course and additional materials, it gives the opportunity to study the main topics in-depth, to acquire new knowledge, skills, abilities. Independent work is based on the use of recommended materials and envisages tasks of various types.

Students' independent work includes:

- the collection and study of materials necessary for participation in interactive games, and other forms of interactive work;
- preparation of the tasks most relevant to discipline topics;
- preparation for current assignments and testing;
- preparation for the final test.

The main organizational principle of students' independent work is an integrated approach aimed at developing critical thinking of students and promoting diversified activities.

Control of students' knowledge includes:

- Monitoring the work on practical tasks, taking into consideration the degree of activity of each student and timely performance of assignments.
- Preparation of detailed answers on topical issues.
- Monitoring the progress of testing based on the study of selected topics and modules of the discipline.

- The final assessment in the form of the final written test or oral answer.
- The final grade is based on the results of the student's work within practical classes, reports, results of ongoing work and final testing.

Independent work is an out-of-class type of activities designed to familiarize the student with certain parts or topics of the course with the recommended materials and to prepare individual assignments for the course.

The main principle of organization of students' independent work is an integrated approach aimed at developing critical thinking of students and promoting diverse activities.

Monitoring students' current progress is envisaged after studying each module. The students will be evaluated by conducting tests, writing essays and tests on the subjects they have studied. Oral answers during seminars and practical classes will also be assessed. The results of current work and tests will be taken into account to determine the final grade.

INSTRUCTIONS FOR STUDENTS

The study of the theoretical material is determined by the curriculum of the discipline which is included into the plan of study and the list of recommended literature. It is necessary to recapitulate the material of previous topics, as well as the material of the preceding academic disciplines that serves as the base of the topic being studied. When preparing for the practical lesson, you must study the lecture materials and read the recommended literature. The material studied should be analyzed in accordance with the lesson plan, and then the degree of assimilation of the material should be verified.

Practical classes are inseparably connected with homework as the main part of independent work. They are part of a systematic study in combination with the theoretical material. The knowledge and skills acquired are assessed within the framework of interim and final attestation (tests and exams) .

Independent work is carried out with the purpose of deepening of knowledge and includes:

- recapitulation of the material studied in class, reading the recommended literature;
- preparation for practical classes;
- implementation of group and individual assignments;
- work with electronic sources;
- preparation for the final test.

Students' independent work consists of the study of literature complementing the material presented in the lectures.

It is assumed that, having listened to the lecture, students should refer to the literature from the main bibliographical lists of books, then search for the necessary additional information and critically evaluate the material from the Internet sites.

Students should master the skills of bibliographic search, including search in the Internet resources, they should learn how to compare different points of view and determine research methods.

It is important to plan time for independent work for the entire semester and it is necessary to set aside some time for recapitulation of the material.

In their preparation for the final exams, students should be guided by the list of questions for the final control on the course. They must understand the basic concepts of the discipline.

5. Evaluation tools for Midterm Assessment based on the learning of the course material,
includes:

5.1. Criteria for assessing learning outcomes

Learning outcomes	Assessment criteria						
	«Poor»	«Unsatisfactory»	«Satisfactory»	«Good»	«Very good»	«Excellent»	«Perfect»
	FAIL		PASS				
<u>Knowledge</u>	Lack of theoretical knowledge. Inability to assess the completeness of knowledge due to the student's refusal to answer	The level of knowledge is below minimum requirements. There has been serious errors.	Minimum acceptable level of knowledge. A lot of errors were made.	The level of knowledge corresponds to the program. A few errors were made	The level of knowledge corresponds to the program. A few minor flaws were made	The level of knowledge corresponds to the program. There are no flaws.	The level of knowledge exceeds the level required in the training program.
<u>Abilities</u>	Lack of minimal abilities and skills. Inability to assess the completeness of knowledge due to the student's refusal to answer	Basic abilities and skills in solving standard tasks are not demonstrated. There has been serious errors.	Basic abilities and skills are demonstrated. Typical tasks with non-serious errors were solved. All tasks are completed, but not in full.	All basic abilities and skills are demonstrated. All the main tasks with non-serious errors have been solved. All the tasks were completed, in full, but some of them were incomplete.	All basic abilities and skills are demonstrated. All the main tasks have been solved. All tasks are completed, in full, but some with shortcomings.	All the basic abilities and skills are demonstrated. All the main tasks are solved with some minor shortcomings, all the tasks are completed in full	All the basic abilities and skills are demonstrated. All the main tasks have been solved. All tasks are completed, in full, without any shortcomings
<u>Skills</u>	Lack of skills of the material.	Basic skills in solving standard tasks are not	There is a minimal set of skills in solving	Basic skills in solving standard tasks are	Basic skills in solving standard tasks are demonstrated	Skills in solving non-standard tasks are	A creative approach to solving non-standard tasks

	Inability to assess the completeness of knowledge due to the student's refusal to answer	demonstrated There has been serious errors.	standard tasks with some shortcomings	demonstrated with some shortcomings	without errors and shortcomings	demonstrated without errors and shortcomings.	is demonstrated
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The final control of the quality of mastering by students of the discipline content is carried out in the form of an exam, which determines:

- the level of mastering by students of the main educational material in the discipline;
- the level of students' understanding of the studied material;
- the ability of students to use the knowledge gained to solve specific problems.

The exam is conducted orally (or includes oral and written parts). The exam consists in the student's answer to the theoretical questions of the course (with preliminary preparation) and the subsequent interview within the scope of the course. The interview is conducted in the form of questions to which the student must give a short answer. The practical part of the exam involves analyzing a practical situation (solving a problem).

Scale for the assessment of the learning outcomes:

Assessment		Training level
	Perfect	All competencies (parts of competencies) are formed at a level not lower than "Perfect". Knowledge, skills, and proficiency in the relevant competencies are demonstrated at a level higher than the program provides
PASS	Excellent	All the competencies (parts of competencies) are formed at a level not lower than "excellent", at least one competence is formed at the "Excellent" level.
	Very good	All the competencies (parts of competencies) are formed at a level not lower than "Very good", at least one competence is formed at the "Very good" level.
	Good	All the competencies (parts of competencies) are formed at a level not lower than "Good", at least one competence is formed at the level of "Good".
	Satisfactory	All the competencies (parts of competencies) are formed at a level not lower than " Satisfactory ", at least one competence is formed at the level of " Satisfactory ".
FAIL	Unsatisfactory	All the competencies (parts of competencies) are formed at a level not lower than " Unsatisfactory ", no one competence is formed at the level of " Poor ".
	Poor	At least one competence is formed at the " Poor " level

5.2. Typical assignments or other materials necessary for the assessment of learning outcomes.

5.2.1 Questions for pass/fail final control

<i>Questions</i>	<i>Code of competence</i>
1. National production. Gross domestic product, its peculiarities, and the methods of calculation.	UC-10
2. Nominal and real GDP. GDP deflator and the rate of economic growth. Actual and potential GDP. "The GDP gap".	UC-10
3. Other indicators of the System of National Accounts: Gross National Income (GNI), net national income (NNI), personal income (PI), disposable personal income (DPI).	UC-10
4. Indicators of the general price level (consumer price index, producer price index, the GDP deflator). Methods for calculating the price indices: Laspeyres, Paasche, Fisher indices.	UC-10
5. "Withdrawals" and "injections" in the national income. Main macroeconomic identities.	UC-10
6. Comparison of the two main approaches in macroeconomics: the neoclassical and Keynesian.	UC-10
7. Keynesian model of macroeconomic equilibrium. Consumption function in the Keynesian model.	UC-10
8. Functions of planned savings and investment in the Keynesian model. Balance of planned investments and savings. Multiplier effect.	UC-10
9. The effect of the accelerator and induced investments. "The paradox of thrift."	UC-10
10. Inflationary and deflationary gaps. Management of effective demand in the Keynesian model.	UC-10
11. Critique of the Keynesian consumption function. The Kuznets paradox.	UC-10
12. Hypothesis of lifecycle by F. Modigliani.	UC-10
13. The theory of permanent income by M. Friedman.	UC-10
14. Aggregate Demand on the goods market – AD, its components. Non-price factors affecting the position of the AD curve.	UC-10
15. The aggregate supply on the goods market - AS. Non-price factors affecting the position of the AS curve.	UC-10
16. Macroeconomic equilibrium on the goods market: the AD-AS model. "Ratchet effect". The reasons for price inelasticity to decrease.	UC-10
17. The money origin and development of their forms.	GPC-1
18. Functions of money. The notion of liquidity.	GPC-1
19. The demand for money: Neoclassical approach (the equation of exchange, the Cambridge equation). Equilibrium in the money market in the Neoclassical approach.	GPC-1
20. The Demand for Money: Keynesian approach (three components). Money Market Equilibrium in the Keynesian approach.	GPC-1
21. The model of transactions demand for money by W. Baumol and J. Tobin.	GPC-1
22. Monetary Aggregates. Indicators of the structure of the money supply and the level of monetization of the economy.	GPC-1
23. The process of banking multiplication with fractional reserve. Money, deposit and credit multipliers. Factors that affect them.	GPC-1

24. The structure of the banking system. Functions of a central bank. Monetary policy and its tools.	GPC-1
25. Taxes, their functions, and the role in a market economy.	GPC-1
26. State Budget, the budget surplus and deficit. The theories of budget.	GPC-1
27. Fiscal policy: definition, objectives and types.	GPC-1
28. The taxes, transfers and government purchases multipliers. Balanced budget multiplier. The Haavelmo theorem.	GPC-1
29. Derivation and economic meaning of the curve of investment and savings equality - IS. Factors affecting the position of the IS curve.	GPC-1
30. Derivation and economic meaning of the curve of money supply and liquidity preference equality - LM. Factors affecting the position of the curve LM.	GPC-1
31. The joint equilibrium of goods, capital and money markets in the model IS-LM («J. Hicks-E. Hansen cross analysis»). Consequences of monetary and fiscal policy (short-run, the neo-Keynesian approach).	GPC-1
32. Particular cases of equilibrium in the IS-LM model ("liquidity trap", full employment, "investment trap").	GPC-1
33. Economically active population, employed and unemployed. Level of economic activity and rate of unemployment.	GPC-3
34. Types of unemployment. A. Okun's law. Ways of regulating unemployment.	GPC-3
35. Personal incomes. Indicators of inequality in income distribution.	GPC-3
36. Social policy of the state and its tools. Ways to reduce inequality.	GPC-3
37. Inflation, its definition, measurement, forms and types.	GPC-3
38. Mechanisms and causes of inflation.	GPC-3
39. Wage-price inflationary spiral.	GPC-3
40. Costs of expected inflation.	GPC-3
41. The effects of unpredictable inflation.	GPC-3
42. Theories of inflation. Anti-inflationary policy of the state.	GPC-3
43. The trade-off between inflation and unemployment. The O. Phillips curve and its economic meaning.	GPC-3
44. The Phillips curve in short-run and in long-run: three approaches. The stagflation curve. Social choice between inflation and unemployment.	GPC-3
45. Derivation of the aggregate supply curve AS on the basis of labor market equilibrium and the O. Phillips curve.	GPC-3
46. Cyclicalities as a regularity of economic development. The concept of the business cycle, its phases, and the main characteristics (parameters) of the business cycle.	GPC-3
47. Theories of macroeconomic cyclicalities.	GPC-3
48. Types of cycles and crises. Counter-cyclical policy of the state.	GPC-3
49. Model of macroeconomic cycle by P. Samuelson and J. Hicks.	GPC-3
50. Economic Growth: notion, types, factors, ways of presenting.	GPC-3
51. Keynesian models of economic growth by R. Harrod and E. Domar.	GPC-3
52. The neoclassical model of economic growth by R. Solow.	GPC-3
53. Equilibrium in the balance of payments. Nominal and real exchange rates. "The terms of trade". "The law of one price". Tradable and non-tradable goods. Mechanisms of the exchange rate.	GPC-3
54. Derivation and economic meaning of the balance of payments equality curve BP in the R. Mundell - M. Fleming model. Factors affecting the position of the BP curve.	GPC-3

55. The effects of fiscal and monetary policy in the IS-LM-BP model under a floating exchange rate.	GPC-3
56. The effects of fiscal and monetary policy in the IS-LM-BP model under a fixed exchange rate.	GPC-3

5.2.2. Standard tests for assessing the competence formation

UC-10. *Is able to make sound economic decisions in different areas of life*

Question 1 (*choose 1 answer*) (1 point).

When calculating GDP, its value does not include:

- a) services provided by a paid domestic worker,
- b) the services of a lawyer working in a private firm,
- c) an increase in the company's inventory,
- d) house cleaning and household equipment repair services rendered by household members to each other.

Question 2 (*choose 1 answer*) (2 points).

Which statement about the aggregate demand curve is FALSE?

- a) The aggregate demand curve has a negative slope.
- b) The value of aggregate demand increases with a decrease in the price level in the economy.
- c) A decrease in the supply of money in the economy will be reflected by the movement of the demand curve to the left.
- d) An increase in the national currency rate leads to a shift in the aggregate demand curve to the right / up.

GPC-1

Is able to apply knowledge (at an intermediate level) of economic theory in solving applied problems

Question 1 (*choose 1 answer*) (1 point).

The I. Fisher's exchange equation allows to determine...

- a) speculative demand for money,
- b) the demand for money for a precautionary motive,
- c) transactions demand for money,
- d) the aggregate demand for money for all reasons.

Question 2 (*choose 1 answer*) (2 points).

When the Central Bank reduces the money supply at the same time as the government increases taxes:

- a) the interest rate will undoubtedly rise;
- b) the interest rate will definitely decrease;
- c) the equilibrium level of income will surely increase;
- d) the equilibrium level of income will undoubtedly decrease;
- e) there is insufficient information to predict the dynamics of the level of income and interest rates.

GPC-3

Is able to analyse and explain in a meaningful way the nature of economic processes at the micro and macro level

Question 1 (choose 1 answer) (1 point).

A rise in the price level and a simultaneous rise in the unemployment rate in some country...

- a) are impossible,
- b) are possible only in a centralized system,
- c) can occur when the amount of available resources decreases,
- d) are a consequence of the growth of aggregate supply.

Question 2 (choose 1 answer) (1 point).

Which theory considered the changing expectations of market players and investors to be the main cause of the overproduction crisis?

- a) The theory of overinvestment.
- b) The theory of underconsumption,
- c) Psychological theory of the cycle.
- d) The "sunspots theory".

5.2.3. Standard tasks for assessing the competence formation

UC-10. *Is able to make sound economic decisions in different areas of life*

Practical task 1 (3 points)

What will be the volume of consumption if the marginal propensity to save with respect to disposable income is equal to 0.4; $Y = 2500$ monetary units, taxes are 30% of total income; the value of autonomous consumption is 500 m.u.?

Practical task 2 (5 points)

A certain country produces two types of goods: grain and cars.

Year	Production		Price	
	Grain (tons)	Cars (units)	Grain (thousand monetary units for 1 ton)	Cars (thousand monetary units for 1 unit)
1st	600	800	12	500
2nd	800	1000	15	600

Determine: a) GDP deflator in the 2nd year, if the 1st year is the base; b) the rate of economic growth in the 2nd year.

GPC-1

Is able to apply knowledge (at an intermediate level) of economic theory in solving applied problems

Practical task 1 (3 points)

Let the required reserve ratio for commercial banks be 10%, the ratio of excess reserves to deposits is 15%, the population prefers to keep 1/3 of money in cash. Determine the size of the deposit multiplier.

Practical task 2 (5 points)

The economy is characterized by the following data: $C = 100 + 0,8 \times Y_d$; $I = 200 - 1000 \times r$; $G = 300 - 0,1 \times Y$, $t = 0,2$ $NX = 400 - 0,04 \times Y - 2000 \times r$; $(M/P)_d = (0,4 \times Y - 800 \times r)$; $M_s = 400$; $P = 1$. Determine the equilibrium level of income and the equilibrium interest rate.

GPC-3

Is able to analyse and explain in a meaningful way the nature of economic processes at the micro and macro level

Practical task 1 (3 points)

The Phillips curve equation is: $\pi = \pi^e - 0,3 \times (u - u_n) + \eta$. The expected inflation rate is 12%, and the natural unemployment rate is 5%, there are no supply shocks. In order to reduce inflation, the central bank decreased the money supply in the economy, which led to an increase in actual unemployment to 10%. What will the real inflation rate be if inflation expectations have not changed?

Practical task 2 (5 points)

There are only 30 households in the country whose incomes are 1, 2, 3, 4, ..., 28, 29, 30, respectively. Calculate: a) decile coefficient; b) quantile coefficient; c) Gini coefficient. Plot the Lorentz curve.

Criteria for Evaluating Tests and Practical Tasks

% completion	Mark	
95-100	«Perfect»	Pass
85-94	«Excellent»	
70-84	«Very Good»	
55-69	«Good»	
40-54	«Satisfactory»	
20-39	«Unsatisfactory»	Fail
0-19	«Poorly»	

5.2.3. Standard case-studies for assessing the competence formation

UC-10. *Is able to make sound economic decisions in different areas of life*

Case study. *Calculation of the GDP deflator, the growth rate of prices for domestic goods and services, and the rate of economic growth in national economy. (10 points)*

Read the material on the types of GDP in the textbook.

Using official national statistics on GDP at current and constant prices, complete columns (1) and (2) of the table.

Based on the data obtained for each year, calculate the GDP deflator, economic growth rate and inflation rate for domestically produced goods and services (fill in columns (3), (4) and (5)).

Explain the dynamics of production volumes and prices in the domestic economy.

Table

Calculation of macroeconomic indicators in the economy of _____ in 2016-2020

Year	Nominal GDP, m.u. (Y_n)	Real GDP in 2016 prices, m.u. (Y_r)	GDP deflator, index, $def = \frac{Y_{nt}}{Y_{rt}}$	Economic growth rate, %, $g_t = \left(\frac{Y_{rt}}{Y_{rt-1}} - 1 \right) \times 100\%$	Inflation rate (according to GDP deflator), %, $\pi_t = \left(\frac{def_t}{def_{t-1}} - 1 \right) \times 100\%$
A	1	2	3	4	5
2016					
2017					
2018					
2019					
2020					

GPC-1

Is able to apply knowledge (at an intermediate level) of economic theory in solving applied problems

Case study. *Indicators of the monetary sphere of the national economy. (10 points)*

Read the material on monetary indicators in the textbook.

Based on your country's official central bank data, complete lines (1) - (3) in the table.

Calculate the indicators of the share of cash and money multiplier at the beginning of each specified year (lines (4) - (5) of Table 1).

Explain their dynamics based on information about the economic development of the country in the period under review. Make a comparison of the indicators obtained with those of other countries and draw a conclusion about the state of the monetary sphere of your country.

Determine the average annual money supply based on the data in Table 1, enter the results obtained in line (1) of Table 2. Find the data on the GDP of your country for a number of years, fill in line (2) of Table 2.

Calculate the level of monetization of the economy, fill in line (3) of Table 2. Draw a conclusion regarding the dynamics of the level of monetization in the economy, explain it on the basis of information about the economic development of the country in the period under review. Make cross-country comparisons.

Table 1

Indicators of the money supply in the economy of _____ at the beginning of year

No.	Indicators	2016	2017	2018	2019	2020	2021
1.	M2, m.u.						
2.	M0, m.u.						
3.	MB, m.u.						
4.	Share of cash in circulation (M0/M2)*100%						
5.	Money Multiplier (M2/MB)						

Table 2

Calculation of the level of monetization of the _____ economy

No.	Indicators	2016	2017	2018	2019	2020
1.	M2, annual average, m.u.					
2.	Nominal GDP, m.u.					
3.	Monetization level					

Completing tasks in the form of cases includes: studying theoretical material, problem conditions, searching for the necessary statistical information, performing calculations according to a given algorithm, understanding the results obtained.

5.2.3. Dispute topics for assessing the formation of competence

GPC-3 *Is able to analyse and explain in a meaningful way the nature of economic processes at the micro and macro level*

1. Keynesianism versus neoclassicism: different approaches to government regulation of the economy.
2. Factors of economic growth in the national economy.
3. Foreign investment: pros and cons.
4. Import dependence and ways to overcome it.
5. Does the “Dutch disease” threaten the mining countries? Resource Curse Factors.
6. Ways to improve the competitiveness of the national economy.
7. How to overcome inequality and poverty in the national economy?
8. The impact of the pandemic on the development of various markets (commodity, labor markets).

The topic of the dispute is given to students in advance. Students should study the theoretical literature on the analyzed problem, find discussion material on the Internet (using the recommended official sources), develop their own position.

During the dispute, students are divided into two teams and group of experts. Each of the teams prepares a presentation and argues for their own point of view. The other team asks provocative questions and offers counter-arguments. Experts evaluate the performance of each team according to different criteria (quality of presentation, persuasiveness, presentation of material,

answers to questions, non-standard thinking). After the dispute, experts give points to each team and mark individual participants.

The teacher evaluates the performance of both teams and the expert group, setting points for the degree of participation from 0 to 10. Points are added to the total points for other activities.

Evaluation criteria for case studies and disputes

Mark	% completion	General Characteristics
5,5 «Perfect»	95-100	<ul style="list-style-type: none"> - a full comprehensive answer is given; - deep knowledge of theoretical material is demonstrated; - remarkable ability to develop own arguments, make conclusions based on adequate evidence
5 «Excellent»	85-94	
4,5 «Very Good»	70-84	<ul style="list-style-type: none"> - an incomplete answer is given; - deep knowledge of theoretical material is demonstrated; - some mistakes are allowed if the student corrects mistakes by himself; - ability to develop own arguments, make conclusions based on adequate evidence with insignificant mistakes
4 «Good»	55-69	
3 «Satisfactory» (Pass)	40-54	<ul style="list-style-type: none"> - difficulty in presenting the answer; - incomplete theoretical justification; - difficulties in formulating conclusions.
2 «Unsatisfactory» (Fail)	20-39	<ul style="list-style-type: none"> - no answer or a wrong answer; - lack of theoretical knowledge.
2 «Poorly» (Fail)	0-19	

5.2.4. Topics of course papers

1. Types of economic systems and models of economic development.
2. Taxes. Their functions and role in the market economy.
3. The tax system of the Russian Federation and ways to improve it.
4. Securities market: problems and development prospects.
5. Inflation in developed countries and its factors.
6. Specific causes of inflation in developing countries.
7. Development of forms and functions of money at the present stage.
8. Banks and their role in a market economy.
9. The labor market and its development in modern conditions.
10. Unemployment in various countries: causes, consequences, ways to overcome.
11. Indicators of income inequality and their relationship to economic development.
12. The role of social policy in a market economy.
13. Indicators of the level of well-being of the population and quality of life.
14. Official minimum wage: pro et contra.
15. The cyclical nature of economic development.
16. Financial market: its place, functions and features of development in modern conditions.

17. The role of foreign investment in the development of the national economy.
18. Ways to increase investment activity in the national economy.
19. Analysis of structural changes in the national economy.
20. State budget and the problem of its balance.
21. The role of foreign investment in the development of the national economy.
22. Ways to increase investment activity in the national economy.
23. Economic growth: models, factors and methods of regulation.
24. Economic growth in developed and developing countries and its factors.
25. The impact of globalization on the development of the national economy.
26. Monetary policy, its goals, instruments, impact on economic development.
27. Fiscal policy, its goals, tools, impact on economic development.
28. Impact of floating and fixed exchange rates on macroeconomic stability.
29. Formation and use of state stabilization funds: problems and prospects.
30. Problems of public debt management.
31. Shadow economy: its origins, types, consequences, ways of overcoming.

When writing a course paper, students are guided by the methodological manual: Malkina M.Yu., Vinogradova A.V., Pykhtev Yu.N. Methodical recommendations for the implementation of course papers in the disciplines "Economic theory" and "Macroeconomics": Study guide. - Nizhny Novgorod: Nizhny Novgorod State University, 2021 .- 21 p. (In Russian)

6. Methodological and information support for the course

a) Main literature:

1. Mankiw N.G. (2016). Macroeconomics. The 9th Edition. Worth Publishers. 642 p.
2. Krugman P., Wells R. (2018). Macroeconomics. 5th ed. Worth Publishers. 656 p.
3. Malkina M. Yu. Macroeconomics: Tutorial. – Nizhni Novgorod: Lobachevsky State University of Nizhni Novgorod (UNN), 2017. – 69 p. URL: <http://www.lib.unn.ru/students/src/Macroeconomics.pdf>.

6) Additional literature:

4. Abel Andrew B., Bernanke Ben S., Croushore Dean (2020). Macroeconomics. 10th ed. (Addison-Wesley series in economics). Pearson Education, Inc. 688 p.
5. Blanchard, O. (2021). Macroeconomics. 8th ed. Pearson Education, Inc. 576 p.
6. Burda, M. and Wyplosz, C. (2017). Macroeconomics – A European Text. 7th ed. Oxford University Press. 573 p.

b) Internet Resources and Software:

Name	Official site
International Monetary Fund	https://www.imf.org/en/home
The World Bank	https://www.worldbank.org/en/home
International Labor Organization (ILO)	https://www.ilo.org/global/lang--en/index.htm

United Nations Organization (UN)	https://www.un.org/en
European Bank for Reconstruction and Development	https://www.ebrd.com/home
European Central Bank	https://www.ecb.europa.eu/home/html/index.en.html
Statistical Agency of the European Union Eurostat	https://ec.europa.eu/eurostat

7. Logistical support for the course

Special classrooms are used for conducting lectures and seminars, group and individual consultations, ongoing monitoring and intermediate certification, as well as for students' independent work. These rooms are equipped with specialized furniture and technical teaching aids for presenting educational information to a large audience: personal computer, LCD monitor and / or projection screen, projector, whiteboard. The minimum software must be installed on the computer: MS Windows, Microsoft Office, Kaspersky Endpoint Security, Consultant Plus.

For lecture-type classes, sets of demonstration equipment and educational visual aids are offered to provide thematic illustrations that correspond to the program of a given subject.

Premises for students' independent work are equipped with computers that provide connection to the Internet and access to Lobachevsky University's electronic information and educational environment.

The program was compiled in accordance with the requirements of the UNN's own educational standard and the Educational Program in the field of "Economics", the profile is "World Economy".

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The program was approved at a meeting of the Methodological Commission of the Institute of Economics and Entrepreneurship

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