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**Пегосударственное образовательное учреждение высшего образования  
«Школа управления СКОЛКОВО»**

Утверждено

Руководитель управления  
по образовательной деятельности

В.К. Прокопеня  
“30” июля 2026 г.

**РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ  
Макроэкономика / Macroeconomics**

**Москва  
2026**

|                                  |                                                      |
|----------------------------------|------------------------------------------------------|
| <b>Направление подготовки</b>    | 38.03.02 Менеджмент                                  |
| <b>Квалификация выпускника</b>   | Бакалавр                                             |
| <b>Образовательная программа</b> | Управление и предпринимательство<br>2024, 2025, 2026 |
| <b>Форма обучения</b>            | Очная                                                |

| Трудоемкость |      | Контактная работа |                     | Самостоятельная работа | Форма контроля |
|--------------|------|-------------------|---------------------|------------------------|----------------|
| з.е.         | часы | лекции            | семинарские занятия |                        |                |
| 4            | 144  | 24                | 24                  | 96                     | Экзамен        |

## 1. АННОТАЦИЯ ДИСЦИПЛИНЫ

This course provides an advanced introduction to the theory and methods of modern Macroeconomics. We survey the canonical models of Macroeconomics, with an emphasis on Dynamic General Equilibrium and application to the economy of the Russian Federation. The course is designed to develop students' ability to apply macroeconomic logic, understand foundational models, and solve well-defined macroeconomic problems using mathematical economics methods.

## 2. ПЛАНИРУЕМЫЕ РЕЗУЛЬТАТЫ ОСВОЕНИЯ ДИСЦИПЛИНЫ

В случае успешного освоения курса студенты будут:

### знать

- the fundamental principles and comparative assumptions of the main macroeconomic schools, including their core models (IS-LM, Solow growth model, DSGE core equations);
- the primary objectives of macroeconomic policy and the tools of fiscal, monetary, and macroprudential authorities, with a focus on the institutional context of the Russian economy;
- the theoretical foundations of modern dynamic analysis, including the logic of intertemporal optimization, the role of expectations, and the microeconomic causes of nominal rigidities.

### уметь

- apply core models (Keynesian Cross, IS-LM, Solow) to conduct comparative static analysis of economic shocks and policy interventions;
- analyze the dynamics of inflation and unemployment, distinguishing between short-run trade-offs and long-run equilibrium;
- interpret and critically assess macroeconomic data and policy decisions using theoretical frameworks, identifying potential conflicts.

### владеть

- skill in mathematical problem-solving in macroeconomic contexts;
- skill in critical evaluation of different macroeconomic paradigms;
- skill in using primary data sources for macroeconomic analysis.

Дисциплина направлена на развитие следующих компетенций и их индикаторов:

| Код компетенции | Формулировка компетенции и/или ее индикатора (ов) |
|-----------------|---------------------------------------------------|
|-----------------|---------------------------------------------------|

|               |                                                                                                                                                                                                                                                                                                                                           |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ОПК-1.</b> | <b>Способен решать профессиональные задачи на основе знаний (на промежуточном уровне) экономической, организационной и управленческой теории</b>                                                                                                                                                                                          |
| ОПК-1-1.      | Знает основы математической, экономической, социальной и управленческой теории и использует знания для решения профессиональных задач                                                                                                                                                                                                     |
| ОПК-1-2.      | Формулирует профессиональные задачи, используя понятийный аппарат математической, экономической, социальной и управленческой наук                                                                                                                                                                                                         |
| ОПК-1-3.      | Применяет инструментарий экономико-математического моделирования для постановки и решения профессиональных задач выявления причинно-следственных связей и оптимизации деятельности объекта управления                                                                                                                                     |
| <b>ОПК-2.</b> | <b>Способен осуществлять сбор, обработку и анализ данных, необходимых для решения поставленных управленческих задач, с использованием современного инструментария и интеллектуальных информационно-аналитических систем</b>                                                                                                               |
| ОПК-2-1.      | Определяет источники данных и выбирает методы и инструменты поиска, корректно осуществляет анализ литературы и документов                                                                                                                                                                                                                 |
| ОПК-2-2.      | Применяет методы сбора, обработки и анализа данных, необходимых для решения управленческих задач, с использованием современных цифровых технологий, воспринимает, анализирует, запоминает и передает информацию с использованием цифровых средств, а также с помощью алгоритмов при работе с полученными из различных источников данными. |

### 3. СОДЕРЖАНИЕ И СТРУКТУРА ДИСЦИПЛИНЫ

| Название раздела/темы                                                            | Всего часов | Трудоемкость (час.) по видам учебных занятий |        |          |                        |
|----------------------------------------------------------------------------------|-------------|----------------------------------------------|--------|----------|------------------------|
|                                                                                  |             | Контактная работа                            |        |          | Самостоятельная работа |
|                                                                                  |             | Всего                                        | Лекции | Семинары |                        |
| Topic 1. Introduction to macroeconomics: goals, schools, and the Keynesian cross | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 2. The IS-LM model: integrating goods and money markets                    | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 3. The Monetarist counter-revolution and expectations                      | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 4. New Keynesian foundations                                               | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 5. Dynamic General Equilibrium in discrete time: consumption and savings   | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 6. Dynamic General Equilibrium in discrete time: firms, labor, and policy  | 12          | 4                                            | 2      | 2        | 8                      |
| Topic 7. Economic growth in continuous time                                      | 12          | 4                                            | 2      | 2        | 8                      |

|                                                                            |     |    |    |    |    |
|----------------------------------------------------------------------------|-----|----|----|----|----|
| Topic 8. Real business-cycle theory and its critics                        | 12  | 4  | 2  | 2  | 8  |
| Topic 9. New Keynesian dynamic macroeconomics                              | 12  | 4  | 2  | 2  | 8  |
| Topic 10. Applied macroeconomics: the Russian economic context             | 12  | 4  | 2  | 2  | 8  |
| Topic 11. Applied macroeconomics: shocks, financial markets, and stability | 12  | 4  | 2  | 2  | 8  |
| Topic 12. Macroeconomic policy coordination and crisis management          | 12  | 4  | 2  | 2  | 8  |
| Итого                                                                      | 144 | 48 | 24 | 24 | 96 |

### **Topic 1. Introduction to macroeconomics: goals, schools, and the Keynesian cross**

This topic establishes the foundational framework of macroeconomics. It defines the discipline's core objectives – sustainable output growth, price stability, full employment, and external balance – and introduces the primary policy instruments of fiscal and monetary authorities. A historical survey of the seven principal schools of macroeconomic thought (Classical, Keynesian, Monetarist, New Classical, New Keynesian, Post-Keynesian, Austrian) is provided to contextualize theoretical evolution. The topic culminates in the development of the static Keynesian Cross model for a closed economy, detailing the components of aggregate demand (consumption, investment, government spending) and the mechanics of the income-expenditure multiplier. The analysis focuses on equilibrium determination in the goods market and the adjustment process to demand shocks.

### **Topic 2. The IS-LM model: integrating goods and money markets**

This topic extends the Keynesian framework by integrating the financial sector. It derives the Investment-Saving (IS) curve from goods market equilibrium, establishing its negative slope based on the interest sensitivity of investment. Simultaneously, it derives the Liquidity-Money (LM) curve from money market equilibrium (Money Supply = Money Demand), establishing its positive slope. The Hicks-Hansen synthesis of the IS-LM model is used to determine the simultaneous equilibrium level of national income and the interest rate. Analytical focus is placed on using the model for comparative statics: analyzing the effects of expansionary/contractionary fiscal policy (shifts in the IS curve) and monetary policy (shifts in the LM curve). The topic also introduces the concept of policy mix and its implications for output and interest rates.

### **Topic 3. The Monetarist counter-revolution and expectations**

This topic presents the fundamental critique of Keynesian fine-tuning posed by Monetarism. It covers the Quantity Theory of Money, the Natural Rate Hypothesis (for unemployment and output), and the long-run neutrality of money. The Expectations-Augmented Phillips Curve is introduced to analyze the short-run trade-off between inflation and unemployment and its breakdown in the long run. The concepts of adaptive versus rational expectations are defined and contrasted. The core monetarist propositions are examined, including the critique of discretionary policy, the advocacy for rules, and the Policy Ineffectiveness Proposition under rational expectations and market clearing.

### **Topic 4. New Keynesian foundations**

This topic explores the microeconomic foundations of modern Keynesian analysis. It examines the causes and macroeconomic consequences of nominal rigidities, specifically menu costs in price setting and efficiency wage theories in the labor market. The topic rebuilds the aggregate supply curve based on these imperfections, leading to a New Keynesian Phillips Curve where current inflation depends on expected future inflation and the output gap. The IS-LM-PC (Phillips Curve)

model is introduced as a core framework for analyzing the dynamic interplay between output, inflation, and monetary policy in the short-to-medium run. The role of central bank credibility and inflation expectations anchoring is emphasized.

#### **Topic 5. Dynamic General Equilibrium in discrete time: consumption and savings**

This topic transitions from static to dynamic analysis by introducing a two-period general equilibrium model for a representative household. The intertemporal choice problem is formalized, with households maximizing lifetime utility subject to an intertemporal budget constraint. The Euler equation for consumption is derived, highlighting the determinants of savings: the interest rate (substitution and income effects) and expectations about future income. The concept of consumption smoothing is established. The topic also introduces the life-cycle and permanent income hypotheses, Ricardian equivalence as a theoretical benchmark, and the implications of borrowing constraints for household behavior and aggregate demand.

#### **Topic 6. Dynamic General Equilibrium in discrete time: firms, labor, and policy**

This topic completes the discrete-time Dynamic General Equilibrium (DGE) model by introducing the production side and policy sectors. A representative firm's profit maximization problem is analyzed, deriving the demand for capital and labor. The labor market is modeled, examining wage-setting mechanisms and equilibrium unemployment. The integrated model of households and firms is used to analyze the general equilibrium effects of technology and preference shocks. The role of monetary policy is introduced via a simple interest rate rule (e.g., a Taylor rule), and the effects of fiscal policy (tax and spending shocks) are analyzed within the intertemporal budget constraint of the government.

#### **Topic 7. Economic growth in continuous time**

This topic addresses the determinants of long-run economic growth. The Solow-Swan neoclassical growth model is developed in continuous time. The aggregate production function with constant returns to scale, capital accumulation equation, and exogenous population growth and technological progress are defined. The model's dynamics are analyzed using the key equation of motion for capital per effective worker. The concepts of the steady state, conditional convergence, and the golden rule level of capital are derived and interpreted. Growth accounting is introduced as an empirical tool to decompose output growth into contributions from capital, labor, and total factor productivity (TFP), with application to historical growth experiences.

#### **Topic 8. Real business-cycle theory and its critics**

This topic presents the Real business-cycle (RBC) theory as the first fully microfounded DGE model of economic fluctuations. It models the economy as being in continuous competitive equilibrium, driven primarily by exogenous shocks to total factor productivity. The solution method (calibration/estimation and impulse response analysis) is outlined. The core RBC mechanism – where positive technology shocks increase output, consumption, investment, and employment – is explained. The topic then systematically reviews the major critiques of the RBC approach, including the debate over the nature and measurement of technology shocks, the inability to explain nominal rigidities and the persistence of involuntary unemployment, and the role of demand-side factors and monetary policy.

#### **Topic 9. New Keynesian dynamic macroeconomics**

This topic synthesizes dynamic optimization, nominal rigidities, and rational expectations into the workhorse framework of modern macroeconomics: the New Keynesian Dynamic Stochastic General Equilibrium (DSGE) model. The core three-equation model is derived: 1) A forward-looking IS curve (from the Euler equation), 2) A New Keynesian Phillips Curve, and 3) A monetary policy rule (Taylor rule). The model's properties are analyzed, demonstrating how various shocks (demand, cost-push, monetary policy) propagate through the economy. The topic discusses optimal monetary policy design within this framework, focusing on the trade-off between stabilizing inflation and the output gap, and the importance of commitment versus discretion (the time-inconsistency problem).

#### **Topic 10. Applied macroeconomics: the Russian economic context**

This topic applies theoretical tools to analyze the Russian economy. It provides an overview of its key structural features: resource dependency, institutional framework, and integration into global markets. Reliable primary sources of macroeconomic data (Rosstat, Bank of Russia, Ministry of Finance) are identified and critically assessed. The static equilibrium and potential conflicts between the objectives of the Central Bank (inflation targeting) and the Government (growth, industrial policy) are examined. The principles of constructing and interpreting shock scenarios using adapted DSGE or Quarterly Projection Models (QPM) for policy analysis are introduced.

#### **Topic 11. Applied macroeconomics: shocks, financial markets, and stability**

This topic focuses on the analysis of specific shocks relevant to the Russian economy, such as terms-of-trade shocks (oil price fluctuations), sanctions, and capital flow volatility. It explores the transmission channels of these shocks through trade, finance, and expectations. The role of the financial sector is analyzed, linking credit cycles, asset prices, and systemic risk to macroeconomic stability. The macroprudential policy toolkit is introduced as a complement to traditional monetary policy for managing financial cycles. The topic concludes with a discussion of current macroeconomic challenges and policy debates in Russia.

#### **Topic 12. Macroeconomic policy coordination and crisis management**

This topic examines the critical need for, and challenges of, coordinating fiscal, monetary, and macroprudential policies to achieve macroeconomic stability, with a focus on crisis prevention and response. It analyzes the theoretical and practical conflicts that can arise between different policy authorities (central bank and ministry of finance). The topic explores frameworks for policy coordination, including institutional design (policy committees, fiscal rules) and communication strategies to manage expectations.

### **4. ОЦЕНОЧНЫЕ СРЕДСТВА И ПРИМЕРЫ ЗАДАНИЙ ДЛЯ ОЦЕНКИ РЕЗУЛЬТАТОВ ОСВОЕНИЯ ДИСЦИПЛИНЫ**

#### **4.1 Текущий контроль**

Оценка за курс складывается из следующих видов заданий текущего контроля, каждый из которых обладает своим весом в общей системе:

| <b>Компоненты</b>           | <b>Процент в итоговой оценке</b> |
|-----------------------------|----------------------------------|
| Individual home assignments | 30%                              |
| Group analytical project    | 40%                              |
| Midterm written test        | 30%                              |

Если по результатам текущего контроля студент получил положительную оценку (не ниже «удовлетворительно»), оценка за промежуточную аттестацию выставляется автоматически.

#### **Individual home assignments**

Two problem sets distributed during the course. The assignments aim to develop independent problem-solving skills and deepen theoretical comprehension. Assignments include analytical exercises (solving optimization problems for a household, deriving steady-state conditions in the Solow model, analyzing shock propagation in a simple DSGE setup) and short essay questions requiring critical reasoning (comparing policy implications of different theories).

#### **Group analytical project**

A semester-long applied project conducted in small groups (3-4 students). The project involves analyzing a current or historical macroeconomic issue relevant to the Russian context (e.g., the impact of an oil price shock, the effectiveness of a recent monetary policy decision). The deliverable is a structured analytical report (approx. 2000 words) and a final presentation. The report must apply relevant models from the course (e.g., AD-AS, Phillips Curve, growth accounting) and utilize data from official sources (Rosstat, Bank of Russia). The project assesses the ability to apply theory to real-world data, work collaboratively, and communicate economic analysis effectively.

### Midterm written test

In-class test covering Topics 1-4. The test consists of theoretical questions and applied problems requiring graphical analysis and mathematical solution. It assesses the understanding of foundational models and comparative analysis of different economic schools.

### 4.2 Промежуточная аттестация

Студентам, набравшим достаточные для удовлетворительной оценки баллы за текущий контроль, оценка за дисциплину выставляется равной оценке за текущий контроль (См. п. 4.1).

Студентам, получившим неудовлетворительную оценку по результатам текущего контроля, необходимо по согласованию с преподавателем сдать один или несколько компонентов текущего контроля. Преподаватель вправе предложить студентам выполнить задание, не повторяющее задание текущего контроля, но проверяющее аналогичные знания, умения и навыки.

### 4.3 Примеры заданий

#### Examples of homework assignments

1. Consider a closed economy where consumption is given by  $C = 60 + 0,8(Y - T) - 2r$ , net taxes  $T = 10 + 0,25Y$ , investment  $I = 50 - 6r$ , and government spending is fixed at  $G=50$ . The money supply is  $M^s=200$ , and money demand is  $(M/P)^D=0.5Y-10i$ . **Inflation expectations are zero ( $\pi^e=0$ )**. Potential output is  $Y^* = 240$ .

The economy is initially at full employment. The interest rate is measured in percentage points.

- Derive the equations for the IS, LM, and AD curves.
- Determine the initial equilibrium values for the interest rate, output, and price level.
- Illustrate the initial equilibrium using related diagrams: the Keynesian Cross, the money market, the IS-LM model, and the AD-AS model.
- Due to new business regulations, firms' expectations worsen, leading to a decrease in autonomous investment by 20. Determine the short-run equilibrium after this shock. Derive the new IS, LM, and AD curves.
- Illustrate all changes on the diagrams from part (c) and explain the intuitive transition to the new equilibrium.

2. Assume a Keynesian model holds:

$$C = 300 + 0.8Y_d$$

$$I = 300,$$

$$G = 200$$

$$T = 0.2Y$$

$$NX = 100 - 0.4Y$$

- Calculate the multiplier.
- What is the equilibrium output?
- How will equilibrium output change if government spending increases by 10%?
- How will the change in part (c) affect the trade balance?

3. Expected inflation is 8%. The natural rate of unemployment is 5%, the coefficient  $\gamma=0.6$ , and there are no supply shocks. To reduce inflation, the central bank decreases the money supply, raising the actual unemployment rate to 8%. If inflation expectations remain unchanged, what will be the actual inflation rate?

4. An economy has the following data: real interest rate = 3%, real GDP growth rate = 7%, debt-to-GDP ratio = 50%, primary budget deficit = 5% of GDP. Calculate whether the debt-to-GDP ratio will increase or decrease.

#### Examples of test's assignments

1. Compare and contrast the Keynesian and Monetarist schools of macroeconomic thought. Specifically, explain their differing views on:

- The primary cause of business cycles.

- b) The effectiveness of fiscal policy.
- c) The role of monetary policy in stabilizing the economy.
- 2. Define the IS curve and the LM curve. Explain why the IS curve has a negative slope and the LM curve has a positive slope in the interest rate–output space. Use economic intuition, not just mathematical derivation.
- 3. Explain the difference between adaptive expectations and rational expectations. How does the assumption about expectations formation influence the predicted outcome of an expansionary monetary policy according to the Monetarist and New Classical viewpoints?
- 4. What are nominal rigidities? Provide two examples and explain how their existence justifies active stabilization policy in the New Keynesian framework, in contrast to the New Classical view.
- 5. In a closed economy, the consumption function is  $C = 50 + 0.8Y_d$ , investment is  $I=30$ , government spending is  $G=20$ , and taxes are  $T=10$ .
  - a) Calculate the equilibrium level of income ( $Y^*$ ).
  - b) Calculate the government spending multiplier.
  - c) If government spending increases by 10, what is the new equilibrium income?
- 6. Suppose the goods market is described by:
 
$$C=100+0.75(Y-T)$$

$$I=50-5r$$

$$G=40, T=40$$
 Derive the algebraic equation for the IS curve (express  $Y$  as a function of  $r$ ).
- 7. The money market is described by:
 

Money supply:  $M^s=200$

Price level:  $P=2$

Money demand:  $M^d=0.5Y-10r$

 Derive the algebraic equation for the LM curve (express  $Y$  as a function of  $r$ ).
- 8. Using the IS-LM model, analyze the effectiveness of monetary policy when:
  - a) The LM curve is horizontal (liquidity trap).
  - b) The IS curve is vertical (investment is interest-insensitive).
 Provide a brief graphical sketch for each case and explain the economic intuition.
- 9. Draw the Expectations-Augmented Phillips Curve.
  - a) Label the short-run and long-run curves.
  - b) Starting from point A (long-run equilibrium), show what happens if the central bank permanently increases the money supply growth rate. Indicate the transition from the short run (point B) to the new long run (point C).
  - c) Explain the role of expected inflation in this adjustment.
- 10. A negative demand shock (e.g., a fall in consumer confidence) hits the economy. Compare the predicted short-run effects on output and the price level according to:
  - a) The basic Keynesian Cross model (with fixed prices).
  - b) The IS-LM model (with variable interest rates but fixed price level).
  - c) The AD-AS model with a New Keynesian upward-sloping SRAS.
 Use brief words and/or simple sketches to illustrate the differences.

## **5. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ**

### **5.1 Литература**

#### **Основная**

1. Макроэкономика : учебник для вузов / под общей редакцией В. Ф. Максимовой. — 2-е изд. — Москва : Издательство Юрайт, 2025.
2. Макроэкономика для управленческих специальностей : учебник и практикум для вузов / Г. А. Родина [и др.] ; под редакцией Г. А. Родиной. — 3-е изд., перераб. и доп. — Москва : Издательство Юрайт, 2025.



3. Макроэкономика : учебник для вузов / С. Ф. Серегина [и др.] ; под редакцией С. Ф. Серegiной. — 4-е изд., испр. и доп. — Москва : Издательство Юрайт, 2025.

### **5.2 Электронные образовательные ресурсы**

Материалы дисциплины размещены в LMS: <https://l.skolkovo.ru/login/index.php>.

### **5.3 Профессиональные базы данных и информационные справочные системы**

1. Федеральная служба государственной статистики <https://rosstat.gov.ru/>.
2. Образовательно-справочный сайт по экономике «Economicus.ru» <https://economicus.ru/>.

## **6. ЛИЦЕНЗИОННОЕ И СВОБОДНО РАСПРОСТРАНЯЕМОЕ ПРОГРАММНОЕ ОБЕСПЕЧЕНИЕ**

Операционная система Simple Linux, браузер Yandex браузер, антивирусное ПО Calmantisvirus.

Свободно распространяемое ПО, в том числе отечественного производства:

Офисный пакет Libre Office, Okular PDF Reader, 7-Zip Архиватор, GIMP Редактирования фотографий, Inkscape Векторная графика, Blender 3D графика, Kdenlive Видеоредактор, Audacity Аудиоредактор, VLC Медиаплеер, Thunderbird Почтовый клиент, Flameshot Создание скриншотов.

## **7. МАТЕРИАЛЬНО-ТЕХНИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ**

Учебная аудитория для проведения занятий лекционного типа, оснащенная мультимедийным оборудованием, учебной мебелью, доской или со стенами с маркерным покрытием.

Учебная аудитория для проведения занятий семинарского типа, оснащенная мультимедийным оборудованием, учебной мебелью, доской или со стенами с маркерным покрытием.

Аудитория (коворкинг) для самостоятельной работы, оснащенная учебной мебелью, ноутбуками.

Материально-техническое обеспечение аудиторий представлено на официальном сайте <https://bbask.ru/sveden/objects/>.