

Ministry of Education and Science of the Russian Federation

Plekhanov Russian University of Economics

**Faculty of Distance Learning**

**Department of Mathematical Methods in Economics**

**ANNOTATION OF THE WORKING PROGRAM OF THE  
EDUCATIONAL DISCIPLINE**

**B1.V.03 ECONOMETRICS (ADVANCED LEVEL)**

**Direction of studies 38.04.01 "Economics"**

**Program focus Equity Management**

**Level of higher education Master**

**Program of studies Academic Master Program**

Moscow, 2019

## 1. The purpose of the discipline:

The purpose of the discipline “Econometrics (advanced level)” is an in-depth study of theoretical principles of econometric modelling, the formation of skills of using econometric models in economic analysis, forecasting and substantiation of managerial decisions, taking into account specific quantitative relationships between the studied phenomena.

The tasks of Econometrics are determined by the content and specific features of its subject and method. In a more detailed form, the tasks of the discipline are as follows:

1. Expansion and deepening of the knowledge of the theory of quantitative economic measurements;
2. Mastering methods of checking the conformity of deductive models with the results of empirical research;
3. Mastering the apparatus and technique of econometric modelling of socioeconomic processes;
4. Forming the skills of using information technologies in the construction of econometric models;
5. Training professionals with research potential.

## 2. Requirements for the results of mastering the discipline

*(planned learning outcome)*

As a result of mastering the discipline, the following competences should be formed:

**OC- 1** – Ability of abstract thinking, analysis and synthesis.

As a result of mastering the **OC-1** competence, a student must

1. **Know** the principles of constructing econometric models, their use in analysis and synthesis,
2. **Be able to** correctly identify indicators characterizing the subject of study,
3. **Master** methods of analysis of evaluated econometric models.

**OC- 3** – Readiness for self-development, self-realization and using creative potential.

As a result of mastering the **OC-3** competence, a student must:

1. **Know** the methods of selecting factors that make it possible to distinguish among them the essential ones determining the development of the economic process,
2. **Be able to** assess the degree of influence of the studied factors on the resulting indicator,
3. **Master** skills in economic interpretation of the results of modelling.

## The type of activities - research

**PC- 1** – Ability to generalize and critically assess results obtained by Russian and foreign researchers, identify promising trends and draw up a research program.

As a result of mastering the **PC-1** competence, a student must

1. **Know** the algorithm for constructing and analyzing an econometric model,
2. **Be able to** find effective levers affecting socio-economic indicators,
3. **Master** skills in economic interpretation of the results of modelling.

**PC- 2** – Ability to substantiate the relevance, theoretical and practical significance of the chosen research theme.

As a result of mastering the **PC-2** competence, the student must

1. **Know** the most important areas of econometric research,
2. **Be able to** identify quantitative indicators that adequately reflect the development of socio-economic processes,
3. **Master skills** of theoretical substantiation of the results of an econometric study.

**PC- 3** – Ability to conduct independent research in accordance with the developed program. As a result of mastering the **PC- 3** competence, the student must:

1. **Know** the basic steps of econometric modelling,
2. **Be able to** determine the output and input indicators of the econometric model,
3. **Master** skills in evaluating and testing an econometric model.

### **The type of activities - analytical**

**PC- 8** - Ability to prepare analytical materials for evaluating measures in the area of economic policy and making strategic decisions at the micro and macro levels.

As a result of mastering the **PC-8** competence, the student must

1. **Know** the principles of analysis and testing of the constructed econometric model,
2. **Be able to** use econometric modelling methods for assessing the impact of specific activities in the area of economic policy and strategic decision-making,
3. **Master** information technologies that support the evaluation of measures in the area of economic policy and strategic decision-making at the micro and macro levels.

**PC- 10** - Ability to make a forecast of the main socioeconomic indicators of the activities of an enterprise, industry, region and economy as a whole.

As a result of mastering the competency of **PC-10**, the student must

1. **Know** the methods of forecasting socio-economic indicators,
2. **Be able to** apply modern information technologies for forecasting,
3. **Master** skills in assessing the adequacy of the forecasts made.

### **The type of activity - organizational and managerial**

**PK- 11** - Ability to manage economic services and units at enterprises and organizations of various forms of ownership, in state and municipal authorities.

As a result of mastering the **PK-11** competence, a student must:

1. **Know** the principles and approaches to the justification of management decisions based on the constructed econometric models,
2. **Be able to** substantiate specific management decisions based on the use of econometric modeling methods,
3. **Master** skills of formulating practical recommendations for economic services and divisions at enterprises and organizations of various ownership forms, in state and municipal authorities.

#### **4. The content of the discipline**

Classical and generalized econometric models are characterized in an overview. The problem of multicollinearity of factors is described. Systems of interdependent equations and variable-structure models are studied. The application of econometric models in forecasting social and economic processes is considered.

### **The form of control – exam (*zachot*)**

#### **Developer:**

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