

38.06.01 Economics

Mathematical and Instrumental Methods in Economics

Program objectives

Digital economy imposes the creation of digital goods and services and requires design and development of e-business and e-commerce tools.

The aim of the program is to facilitate developing the mathematical apparatus of economic research, methods of its application and integration into tools to improve the validity of management decisions at all levels of the economy, as well as to improve information technologies for solving economic problems and their effective expansion into new economic applications.

Key research areas

I. Mathematical methods.

- mathematical apparatus for the analysis of economic systems
- theory and methodology of economic and mathematical modeling
- macromodels of economic dynamics in conditions of equilibrium and disequilibrium
- models and mathematical methods for analyzing micro- and macroeconomic processes and systems
- mathematical modeling of economic conditions, business activity, definition of trends, cycles and development trends
- mathematical methods and models for analysis and forecasting of the development of socio-economic processes of public life and information risk management

II. Instrumental methods.

- theory, methodology and practice of computer experiment in socio-economic research and management tasks
- simulation models of experimental economics
- decision support systems to rationalize organizational structures and optimize economic management at all levels
- standardization and certification of information services and products for economic applications
- artificial intelligence in the development of economic managerial decisions
- simulators for pedagogical activities of teaching economics and training management personnel.
- instrumental methods for analyzing the mechanisms of functioning of markets for goods and services in the context of globalization of the world economy and free trade