

# TEACHING SUBJECTS AT THE DEPARTMENT

Subjects taught	Brief information about science
1. Mathematical methods and models	<p>The following requirements apply to the knowledge, skills and abilities of students in the subject. Student:</p> <p>Must be able to use</p> <ul style="list-style-type: none"> <li>- have an idea of the object, modeling, modeling, algorithms, programming methods;</li> <li>- Applications, software and programming technologies;</li> <li>- know and be able to use models to solve functional and computational problems;</li> <li>- programming capabilities and computer hardware and software.</li> </ul>
2. Mathematical modeling of information technologies and processes	<p>The subject “Mathematical modeling of information technologies and processes” teaches students a methodological approach to information processes and their mathematical modeling, serves to form a scientific worldview, helps to acquire theoretical knowledge and practical skills. The following requirements apply to the knowledge, skills and abilities of students in the subject. Student:</p> <p>Must be able to use</p> <ul style="list-style-type: none"> <li>- have an idea about information, its storage, processing and transmission;</li> <li>- databases, software and programming technologies;</li> <li>- know and be able to use models to solve functional and computational problems;</li> <li>- have programming skills and capabilities of computer hardware and software;</li> <li>- Must have higher education in mathematics and physics.</li> </ul>
3. Econometrics	<p>The main goal of the subject is to develop students' knowledge, skills and abilities to model the quantitative representation of connections in complex economic events and processes using the example of economic objects, their computer solution and economic analysis of results. To achieve this goal, science teaches students to analyze quantitative relationships between economic indicators using traditional mathematical statistics and specially developed methods of complex economic systems such as the economy and its sectors.</p>

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4. Application of econometric models in economics
- The following requirements apply to the knowledge, skills and abilities of students in the subject. Student:
- Must be able to use
- have an idea of econometric and mathematical models, their differences, the importance of using econometric models in economics, quantitative analysis of economic processes, methods and stages of creating econometric models, methods of solving models;
  - Mathematical statistical methods, rules for calculating covariance and correlation, one-dimensional linear regression, determination of unknown parameters in multivariate linear regression, problems arising in the analysis of multivariate regression and their solutions, econometric to be able to make predictions using models, know and use methods for solving econometric models;
  - Ability to theoretically describe an economic process, choose the form of an econometric model, choose methods for solving models, analyze an economic solution using econometric models, evaluate its features, apply a solution to any economic process
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5. Modeling and forecasting socio-economic processes.
- Следующие требования предъявляются к знаниям, навыкам и умениям студентов по предмету. Магистр:
- As a result of mastering the subject "Modeling and forecasting socio-economic processes", master:
- have an idea of forecasting and implementing economic growth and development, theoretical and practical foundations of the decision-making mechanism, access to modern information technologies, mathematical methods of forecasting and analysis of macroeconomic and microeconomic processes;
  - be able to conduct econometric analysis and forecasting of the standard of living and the effective use of modern information technologies, to determine the key indicators of the processes of economic forecasting and analysis, to know and use the economic analysis of the results;
  - Masters in the study of economic processes and their role in the development of the national economy, the role of economic forecasting and development research, methods of mathematical models in economic development and analysis, working with the statistical data necessary to create these models and the future development of the republic. have the skills to expand.
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