

<p style="text-align: center;">38.04.01 Economics</p> <p style="text-align: center;">Master's Degree program Regional economy and management of regional development</p>	
<p style="text-align: center;">Econometrics (advanced level) 5 ECTS</p>	
Year/term	Master's degree program, 1/1,2
Lecturers	Associate Professor, Candidate of Sciences Shchekoldin V. Yu.
The main aim	The generalization of knowledge about the possibilities of modern econometric methods, mastering the techniques of econometric models construction assisted by modern information technologies. Application of new econometric analysis methods and results interpretation techniques.
Contents	<p>Linear regression equation (classic model)</p> <p>Least square method and its properties. Multiple determination coefficient. Estimation of linear regression equation whose parameters satisfy the linear constraints specified in the form of equations. The linear regression equation with independent and normally distributed errors. The definition and testing of linear hypotheses on the parameters. Accounting for heterogeneity of a set of observations. Checking of significant structural changes in the equation.</p> <p>The generalized least squares method and its properties. Multicollinearity indicators and methods of dealing with it.</p> <p>The error of the first order autoregression model. Diagnosing of autocorrelation. The estimation of regression in terms of error autocorrelation. Selecting of the "best" linear regression model under the given set of potential factors. The consequences of the choice of the wrong regression equation form.</p> <p>Analysis methods of the primary statistical information. Construction of an adequate regression models, the adequacy criteria, hierarchical ways to search for the best model specification.</p>
Prerequisites	Mathematic analysis, Linear algebra, Probability theory and Mathematical statistics, Informatics, Economic theory (Microeconomics and Macroeconomics), Econometrics (basic level)
The course structure	Lectures – 36 hours, laboratory work – 36 hours, final test, independent work– 54 hours. Total 180 hours.
Assessment, Final control – examination	<p>Point rating system: 0–24 unsatisfactory, without the opportunity of resitting; 25–49 unsatisfactory with the opportunity of resitting; 50–72 satisfactory; 73–86 good; 87–100 excellent.</p> <p>60% – the work during the term, 40% – examination.</p> <p>Final test is assessed in 30 points.</p>
Specifications of training organization and educational resources	<p>Timofeev V. S., Faddeenkov A. V., Shchekoldin V. Yu. <i>Ekonometrika</i> (Econometrics). – Izd. 3-e. – M.: Yurayt, 2014. – 312 s.</p> <p>Babeshko L. O. <i>Osnovy ekonometricheskogo modelirovaniya</i> (The Basics of Economic Modelling). – Izd. 2-e ispr. – M. : KomKniga, 2006. – 432 s.</p> <p>Gujarati D.N. <i>Basic Econometrics</i>. The McGraw-Hill companies, 2004. – 1022 p.</p> <p>Berndt E. R. <i>Praktika ekonometriki: klassika i sovremennost'./ Per. s angl.</i> (Econometrics: Classic and Contemporary./ Trans. from English) – M. : YuNITI-DANA, 2005. – 847 s.</p>

