



## Syllabus of the educational discipline «Econometrics»

<b>Specialty</b>	073 «Management»
<b>Educational program</b>	073.030 «Logistics»
<b>Level of education</b>	first (bachelor's)
<b>Discipline status</b>	Base
<b>Teaching language</b>	English
<b>Course / semester</b>	2 course, 3 semester
<b>Number of credits ECTS</b>	5
<b>Distribution by types of trainings and hours of study</b>	Lectures – 24 hours. Practical studies (seminars) – 12 hours. Laboratory studies – 12 hours. Independent training – 102 hours.
<b>Form of final assessment</b>	Exam
<b>Department</b>	Economic Cybernetics Department, room 419 (main building), (057)702-06-74 (3-56), <a href="https://ek.hneu.edu.ua/">https://ek.hneu.edu.ua/</a>
<b>Teacher (-s)</b>	Prokopovych Svitlana V., Associate Professor of the Economic Cybernetics Department, Candidate of Economic Sciences, Associate Professor Milevsky Stanislav V., Associate Professor of the Economic Cybernetics Department, Candidate of Economic Sciences, Associate Professor
<b>Teacher's contacts</b>	<a href="mailto:prokopovichsv@gmail.com">prokopovichsv@gmail.com</a> <a href="https://ek.hneu.edu.ua/vykladachi/prokopovych-svitlana-valeriyivna/">https://ek.hneu.edu.ua/vykladachi/prokopovych-svitlana-valeriyivna/</a> <a href="mailto:milevskiysv@gmail.com">milevskiysv@gmail.com</a> <a href="https://ek.hneu.edu.ua/vykladachi/milevskij-stanislav-valerijovych/">https://ek.hneu.edu.ua/vykladachi/milevskij-stanislav-valerijovych/</a>
<b>Days of the classes</b>	<a href="http://services.hneu.edu.ua:8081/schedule/selection.jsf">http://services.hneu.edu.ua:8081/schedule/selection.jsf</a>
<b>Consultations</b>	<a href="https://ek.hneu.edu.ua/">https://ek.hneu.edu.ua/</a>

**The purpose** of the discipline is formation of a system of theoretical knowledge and mastering the ability to build econometric models that quantify the relationship between economic and financial variables, and study the conditions and possibilities of applying econometric methods to solve practical problems in real conditions.

### **Prerequisites for learning**

*Political Economy, Microeconomics, Macroeconomics, Higher Mathematics, Probability Theory and Mathematical Statistics*

### **Content of the educational discipline**

#### **Content module 1. Methods of econometric modeling**

- Theme 1. Econometrics and Econometric Modeling
- Theme 2. Simple Linear Regression
- Theme 3. Multiple Linear Regression
- Theme 4. The Problem of Multicollinearity in Regression

#### **Content module 2. Applied econometrics**

- Theme 5. Autocorrelation
- Theme 6. Heteroskedasticity
- Theme 7. Nonlinear Regression. Production Functions
- Theme 8. Dynamic Econometric Models

### **Material and technical support (software) of the discipline**



<b>Course page on the Moodle platform (personal training system)</b>	<i>MS Excel</i> <i>PNS includes: Syllabus, the technological card, lecture notes, tasks for laboratory work and guidelines for their implementation, a task for individual training objectives for the current and final control</i> <a href="https://pns.hneu.edu.ua/course/view.php?id=6827">https://pns.hneu.edu.ua/course/view.php?id=6827</a>
<b>Recommended literature</b>	
<b>Main</b>	
<ol style="list-style-type: none"><li>1. Гур'янова Л.С. Економетрика : навч. посіб. /Л.С. Гур'янова, Т. С. Клебанова, О. А. Сергієнко та ін.– Харків: Вид. ХНЕУ ім. С. Кузнеця, 2015. – 389 с.</li><li>2. Econometrics. Practicum for Bachelor's (first) degree students of all specialities [Electronic resource] / compil. by L. Guryanova, S. Prokopovych, S. Milevskiy; Simon Kuznets Kharkiv national university of economics. - E-text data (12,5 МБ). - Kh., 2018. - 80 p. - The title screen. Gujarati, D.N. (2003). Basic Econometrics, International Edition - 4th ed.. McGraw-Hill Higher Education.</li></ol>	
<b>Additional</b>	
<ol style="list-style-type: none"><li>3. Pesaran, M, (2015), Time Series and Panel Data Econometrics, Oxford University Press, <a href="https://EconPapers.repec.org/RePEc:oxp:obooks:9780198759980">https://EconPapers.repec.org/RePEc:oxp:obooks:9780198759980</a>.</li><li>4. James H. Stock, Mark W. Watson, (2019) Introduction to Econometrics, 4th Edition. Pearson? 796 p.</li><li>5. Studenmund A. H. (2016) Using Econometrics: A Practical Guide 7th Edition. Occidental College. – Boston : Pearson, 578 p.</li><li>6. . Hansen Bruce E. (2016) Econometrics – Wisconsin : University of Wisconsin, 381 p.</li><li>7. Hubler O. Modern Econometric Analysis: Surveys on Recent Developments / O. Hubler, J. Frohn. – s. l. : Springer, 2006. – 234 p.</li><li>8. Verbeek M. A Guide to Modern Econometrics / M. Verbeek. – 2nd ed. – S. l. : Wiley, 2004. – 446 p</li><li>9. Wooldridge J. M. Introductory Econometrics : A Modern Approach / Jeffry M. Wooldridge. – 4th edition. – Thompson : South-Western College Publishing, 2012. – 912 p</li></ol>	
<b>Information resurses</b>	
<ol style="list-style-type: none"><li>10. Econometrics (6.073.020, 6.073.030, 6.073.040), S Prokopovych, S. Milevskiy <a href="https://pns.hneu.edu.ua/course/view.php?id=6827">https://pns.hneu.edu.ua/course/view.php?id=6827</a></li><li>11. The Econometric Society <a href="https://www.econometricsociety.org/">https://www.econometricsociety.org/</a></li><li>12. The Econometrics Journal <a href="https://academic.oup.com/ectj">https://academic.oup.com/ectj</a></li><li>13. Applied Econometrics and International Development <a href="https://www.usc.gal/economet/ea.htm">https://www.usc.gal/economet/ea.htm</a></li></ol>	
<b>Assessment system of learning outcomes</b>	
<p>The system of evaluation of mastering the knowledge, communication abilities, autonomy and responsibility of students according to the National Qualifications Framework of Ukraine for each discipline includes current, modular (determined in accordance with the Content module), and final evaluation of knowledge. Current control is carried out during the semester on lectures and laboratory sessions and estimated amount of points. Modular control is carried out on the basis of current control of the relevant module contents and aims at an integrated assessment of students' knowledge after studying the logically completed part of the discipline – the content module. Modular control is carried out in the form of a comprehensive reference work for the same content modules. The intermediate test control is conducted at the end of each topic of the discipline. Conducting this test involves identifying students' mastery of the lecture material of the module and the ability to apply it to solve practical situations. This may include a test containing questions on the theoretical material and a small practical problem. Final control of knowledge and competencies of students in the discipline is carried out on the basis of the exam.</p>	
<p>The final grade for the discipline is calculated as the sum of points obtained during the current control of the accumulative system. A student should be considered certified if the sum of points obtained from the final / semester test is equal to or exceeds 60. The minimum possible</p>	



number of points for the current and modular control during the semester - 35 and the minimum possible number of points scored in the exam - 25 The result of the semester exam is evaluated in points (maximum number - 40 points, minimum number of credits - 25 points)

*More detailed information on assessment is given in the technological card of the discipline.*

**Accumulation of rating points in the discipline (example)**

Types of training	Max points
Lectures	4.5
Practical training	3.5
Laboratory classes	4
Tasks by topics	26
Written Test	12
Colloquium	10
Exam	40
<b>Max points</b>	<b>100</b>

**Transference of Simon Kuznets KHNUE Characteristics of Students' Progress into the System of the ECTS Scale**

Total score on a 100-point scale	ECTS assessment scale	Assessment on the national scale	
		for exam, differentiated test, course project (work), practice, training	for pass
90 – 100	A	excellent	pass
82 – 89	B	good	
74 – 81	C	satisfactory	
64 – 73	D		
60 – 63	E		
35 – 59	FX	unsatisfactory	not pass
1 – 34	F		

**Discipline policies**

*Policy of academic integrity* determined by the Code of Academic Integrity of the Simon Kuznets Kharkiv National University of Economic <https://www.hneu.edu.ua/kodeks-akadem-dobrochesnosti>.

*Policy on recognition of learning outcomes obtained in non-formal and informal education:* defined by the Regulations on the procedure for recognition of learning outcomes obtained in non-formal and informal education at KhNEU. S. Kuznets <https://www.hneu.edu.ua/wp-content/uploads/2020/02/Polozhennya-pro-neformalnu-inf-osvitu.pdf>

*Policy to perform tasks later than the deadline:* during the assessment of individual tasks attention is paid to the quality, independence and timeliness of delivery of completed tasks to the teacher, according to the schedule of the educational process. If any of the requirements are not met, the points will be reduced by 50%.

*More detailed information about competencies, learning outcomes, teaching methods, assessment forms, independent training is given in the Syllabus (working plan) of the educational discipline (<https://pns.hneu.edu.ua/course/view.php?id=6827>).*